

ESMA Meet the Market

Workshop for FPI software providers









Purpose of this Workshop

- From 2020, FPIs will need to comply both with the ESEF and the EDGAR iXBRL reporting requirements
 - filing to the relevant EU NCA and to the US SEC
- This workshop will:
 - explore similarities and differences between the ESEF and the EDGAR;
 - support software vendors to understand what adjustments need to be made in order to comply to both sets of requirements
- Objective: minimise the cost and efforts in complying with both sets of requirements
 - From the technical perspective conversion from an ESEF to an EDGAR filing can be an entirely mechanical process, requiring no additional tagging effort.



Structure of this workshop

- High level comparison between
 - ESMA's ESEF requirements & guidance; and
 - the US SEC filing requirements to the EDGAR system
- Looking at each Guidance in the ESEF Reporting Manual and its closest equivalent in the EDGAR Filer Manual
- Requirements are classified as either:
 - "consistent";
 - "mainly consistent requiring minor tweaks";
 - "not in line but not mutually exclusive";
 - "not in line"
- No expectations that any discrepancy will have impact on the FPIs tagging efforts



Main findings of ESMA's analysis:

- the ESEF requirements are mainly consistent with the EDGAR requirements
- almost 90% of the ESEF requirements will create no or low additional burden on software vendors

ESMA highlights however that some differences that may demand some additional effort from vendors do exist, in particular with regards to:

- the architecture of the taxonomy extensions (application of segment/scenario containers)
- the identification of filers within the inline XBRL instance documents;
- the structure of the taxonomy packages to be submitted
- the taxonomy reference to be used (ESEF taxonomy as published by ESMA vs IFRS taxonomy as published by the IASB)



From the perspective of XII

- XBRL specifications permit different technical decisions by different regulators
- Serious and ongoing discussions between ESMA and the SEC → but not full convergence (yet?)
- However:
 - → Existing differences are almost entirely syntactic
 - → Absolutely no need for issuers to "Tag Twice" or purchase two different pieces of software.
 - → Vendors serving dual filers should be able to develop export modules that permit the creation of both an SEC EDGAR and an ESEF Inline XBRL document
 - → Confident that some of the required differences will be removed (e.g. EDGAR will be able to accept extensions with anchoring in them), but there will remain a requirement for separate reports and extension taxonomies.
- The technical and syntactic variations set out in this presentation have been analysed by ESMA and reviewed by XBRL International in good faith, but without validation in both environments, not possible to capture every syntactic issue. Today's presentation should describe the vast majority of what's required.



From the perspective of XII - Implementation recommendations

- Generate two filings from a common source
- Prepare for ESEF, convert to SEC
 - SEC custom transforms required by SEC, not permitted by ESEF
 - Base taxonomy labels required to match line item descriptions for SEC
- Prepare for SEC, convert to ESEF
 - Wider-narrower required by ESEF, not currently permitted by SEC
 - Use of "placeholder" dimensional constructs required by ESEF, not currently permitted by SEC



From the perspective of XII - Priorities

- Ensure that all necessary information is collected at tagging time:
 - CIK & I FI
 - Tags using SEC custom transforms
 - Anchoring information
 - Conformant labels for base taxonomy concepts
- Generate separate reports and extension taxonomies
- Validate!
 - Use a certified validator to check for specification and taxonomy conformance
 - Use the SEC test service
 - Use ESEF test services as they become available



ESEF Reporting Manual vs EDGAR Filers Manual MAIN RESULTS OF ANALYSIS



ESEF G3.1.2: Taxonomy files published by ESMA

Guidance 3.1.2 Taxonomy files published by ESMA: As set out in Article 7 of the RTS on ESEF, ESMA aims to facilitate the implementation of ESEF by providing XBRL taxonomy files that are compliant with all relevant technical and legal requirements in the RTS. Issuers are encouraged to use the published ESEF taxonomy as a starting point to create extension taxonomies. The XBRL taxonomy with accompanying supportive documentation and list of available entry points for use by issuers in their taxonomies is freely available for download at the following link: https://www.esma.europa.eu/policy-activities/corporate-disclosure/european-single-electronic-format under section "ESEF XBRL Taxonomy files".



ESEF G3.1.2: Taxonomy files published by ESMA

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.1.2	6.3.9
Consistency between Manuals	not in line	
Differences	Requires referencing ESEF taxonomy as published by ESMA	 Allows referencing taxonomies listed in the standards taxonomies website ESEF taxonomy not listed
Considerations for software providers	 To ensure the produced outputs are referencing the correct taxonomy → import of the ESEF taxonomy for ESEF; import the IFRS taxonomy for EDGAR 	



ESEF G3.1.2: Taxonomy files published by ESMA

ESEF

```
<xsd:import namespace=
"http://www.esma.europa.eu/taxonomy/2019-03-27/esef_cor" schemaLocation=
"http://www.esma.europa.eu/taxonomy/2019-03-27/esef_cor.xsd"/>
```

EDGAR

```
<xsd:import namespace=
"http://xbrl.ifrs.org/taxonomy/2019-03-27/ifrs-full"
schemaLocation=
"http://xbrl.ifrs.org/taxonomy/2019-03-27/full_ifrs/full_ifrs-
cor_2019-03-27.xsd" />
```



ESEF G1.3.2: Mark-up of disclosures

Guidance 1.3.2 Markup of disclosures if the ESEF taxonomy only contains an element that is wider in scope or meaning: It is possible and recommended to use an element in the ESEF taxonomy that is wider in scope or meaning than the marked up information if the marked up report does not contain another disclosure that fully or partially corresponds to the respective taxonomy element. For example, an issuer which discloses in its statement of cash flows an item that represents cash outflows relating to the purchase of property, plant and equipment and intangibles other than goodwill can use the taxonomy element 'purchase of property, plant and equipment, intangible assets other than goodwill, investment property and other non-current assets' to mark up the disclosure, even though the cash outflows do not relate to investment property or other non-current assets. This however is only appropriate if the issuer does not disclose in a separate item in the statement of cash flows cash outflows relating to the purchase of investment property or other noncurrent assets.



ESEF G1.3.2: Mark-up of disclosures

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.3.2	6.8.4
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 Only ESEF taxonomy is to be used for marking up disclosures 	 Taxonomies other than IFRS can be used
Considerations for software providers	 Taxonomies other than the IFRS taxonomy (e.g. SRT or US-GAAP) should be used for tagging for SEC purposes Such elements need to be created as issuer-specific extension elements in case of ESEF filings 	



ESEF G1.3.2: Mark-up of disclosures

ESEF

```
<xs:element id="abc_LifeInsuranceInForceNet" name=
"LifeInsuranceInForceNet" nillable="true"
substitutionGroup="xbrli:item" type=
"xbrli:monetaryItemType" xbrli:balance="credit"
xbrli:periodType="instant"/>
```

EDGAR

```
<xs:element id="srt_LifeInsuranceInForceNet" name=
"LifeInsuranceInForceNet" nillable="true"
substitutionGroup="xbrli:item" type=
"xbrli:monetaryItemType" xbrli:balance="credit"
xbrli:periodType="instant"/>
```

esma ESEF G1.1.1: Language of labels

Guidance 1.1.1 Language of labels: The RTS on ESEF does not alter the language regime set out in Article 20 of the TD. Therefore, the labels of the elements used for marking up the annual financial report including the issuers' extension taxonomy elements should be in the same language in which the annual financial report is prepared. Issuers are not required to provide labels in other languages. However, ESMA encourages issuers to provide, for the extension taxonomy elements, labels in a language customary in the sphere of international finance, as it would be highly beneficial for users.



ESEF G1.1.1: Language of labels

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.1.1	6.10.1, 6.10.3, 6.11.9
Consistency between Manuals	no	t in line
Differences	 Issuers' labels required for extension elements Labels to be provided in language of the report 	 Issuer's labels required for all elements used in taxonomy Labels to be provided in US English
Considerations for software providers	 To ensure relevant transformations for EDGAR report resulting in having labels with xml:lang="en-US" To take into consideration xml:lang attributes applied outside of label linkbase (e.g. root element of XHTML doc) To think of solutions for multi-lingual reports 	



ESEF G1.1.1: Language of labels

ESEF

EDGAR

```
"label_ProposedDividend" xlink:role=
"http://www.xbrl.org/2003/role/label" xml:lang="pl"
id="label_ProposedDividend">Proponowana dywidenda
</link:label>

\link:label xlink:type="resource" xlink:label=
"label2_ProposedDividend" xlink:role=
"http://www.xbrl.org/2003/role/label" xml:lang="en-US"
    id="label2_ProposedDividend">Proposed dividend
</link:label>
```



ESEF G1.4: Anchoring of extension elements

Guidance 1.4.1 Anchoring of extension elements to elements in the ESEF taxonomy that are wider in scope or meaning: Annex IV of the RTS on ESEF sets out that extension taxonomy elements marking-up the IFRS consolidated financial statements' statement of financial position, statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows have to be anchored to elements of the ESEF taxonomy, except for elements corresponding to subtotals. This principle can be illustrated with an example. An issuer issued equity and it received one part of the capital increase in kind and another part in cash. It disclosed in its statement of changes of equity the two components separately. The ESEF taxonomy includes an element 'issue of equity' but it does not include separate elements for capital increases in kind and capital increases in cash. Therefore, the issuer creates extension taxonomy elements 'capital increases in kind' and 'capital increases in cash'. Capital increases in kind and in cash are narrower in scope than the element 'issue of equity' and represent disaggregation of it. Therefore, the two extension elements are anchored to the wider base taxonomy element 'issue of equity'. It is not necessary to anchor the two extension taxonomy elements to narrower elements in the ESEF taxonomy except for the case outlined in Guidance 1.4.2.

Please note that the RTS on ESEF does not set an anchoring requirement for the Notes to the financial statements. Therefore, if issuers decide on a voluntary basis to create detailed tag extension elements to mark-up their Notes, there is no obligation to anchor such extension elements.

Guidance 1.4.2 Anchoring of extension elements that are combinations: Annex IV of the RTS on ESEF sets out that where an extension taxonomy element combines a number of elements of the ESEF taxonomy, issuers shall anchor that extension taxonomy element to each of the elements in the ESEF taxonomy it combines, except where these elements are reasonably deemed insignificant.

This principle is best illustrated with an example. An issuer discloses in its IFRS statement of financial position an item 'issued capital and share premium'. The ESEF taxonomy does not include such an item. Therefore, it is necessary to create an extension taxonomy element. However, the taxonomy includes the elements 'issued capital' and 'share premium'. The extension taxonomy element represents a combination of the two elements that are available in the ESEF taxonomy. The extension taxonomy element 'issued capital and share premium' shall be anchored to these two elements, indicating that it is wider in scope than these two elements.



ESEF G1.4: Anchoring of extension elements

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.4	closest: 6.9.6
Consistency between Manuals	consistent	
Differences	 New arc role for anchoring 'Wider-narrower' registered in the LRR with acknowledged status 	 edgartaxonomies.xml does not yet contain 'wider- narrower', but expected to be included in due course
Considerations for software providers	 To ensure issuers are aware that anchoring relationships are required for the ESEF filings and EDGAR will not reject such relationships in the submissions to the US SEC To ensure issuers are aware/notified in-tool that all extension elements are anchored 	



ESEF G3.3.1-2 Anchoring relationships

Guidance 3.3.1 Relationships to anchor extension taxonomy elements to elements in the ESEF taxonomy: The RTS on ESEF sets out that extension taxonomy elements should be anchored to elements in the ESEF taxonomy and that the relationship between the extension taxonomy elements should be identified.

Guidance 3.3.2 Where to define the anchoring relationships: It should be ensured that the anchoring relationships do not interfere with other content in the definition linkbase.



ESEF G3.3.1-2 Anchoring relationships

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.3.1-2	closest: 6.9.6
Consistency between Manuals	consistent	
Differences	 'Wider-narrower' linkrole to be used for defining anchoring relationships for extension elements 	 No specific requirements and guidelines on anchoring extension elements
Considerations for software providers	 To ensure relevant taxonomy extension elements are anchored To ensure anchoring relationships are maintained in a separate ELR in the definition linkbase 	



ESEF G3.3.1-2 Anchoring relationships

wider

```
<link:definitionLink xlink:type="extended" xlink:role=</pre>
"http://www.abc.com/taxonomy/2018-12-31/role/Anchoring">
  <link:loc xlink:type="locator" xlink:href=</pre>
  "http://xbrl.ifrs.org/taxonomy/2017-03-09/full ifrs/full ifr
  s-cor 2017-03-09.xsd#ifrs-full DeferredIncome" xlink:label=
  "DeferredIncome"/>
 <link:loc xlink:type="locator" xlink:href=</pre>
  "abc-2018-12-31.xsd#abc ShortTermDeferredIncome"
 xlink:label="ShortTermDeferredIncome"/>
  <link:definitionArc xlink:type="arc" xlink:arcrole=</pre>
  "http://www.esma.europa.eu/xbrl/esef/arcrole/wider-narrower"
   xlink:from="DeferredIncome" xlink:to=
  "ShortTermDeferredIncome" order="1.0"/>
```

narrower

```
<link:loc xlink:type="locator" xlink:href=</pre>
"abc-2018-12-31.xsd#abc CurrentReceivablesFromTaxes"
xlink:label="CurrentReceivablesFromTaxes"/>
<link:loc xlink:type="locator" xlink:href=</pre>
"http://xbrl.ifrs.org/taxonomy/2017-03-09/full ifrs/full ifr
s-cor 2017-03-09.xsd#ifrs-full CurrentReceivablesFromTaxesOt
herThanIncomeTax" xlink:label=
"CurrentReceivablesFromTaxesOtherThanIncomeTax"/>
<link:definitionArc xlink:type="arc" xlink:arcrole=</pre>
"http://www.esma.europa.eu/xbrl/esef/arcrole/wider-narrower"
 xlink:from="CurrentReceivablesFromTaxes" xlink:to=
"CurrentReceivablesFromTaxesOtherThanIncomeTax"/>
```



ESEF G3.4.2 Dimensional validity of line items

Guidance 3.4.2 Defining the dimensional validity of line items in the definition linkbase: Dimensional validation may be defined using 'all' and 'notAll' arcroles linking to positive and negative hypercubes respectively. In all cases, positive hypercubes are sufficient to define the dimensional validation. Although in some cases it may be more efficient to apply negative hypercubes, it is encouraged to use the positive hypercubes instead. [...]

Furthermore, each line item used in the report to tag data should be valid according to at least one hypercube in the extension taxonomy's definition linkbase. In particular, ESEF taxonomy provides a dedicated extended link role [999999] Line items not dimensionally qualified that shall be used to link items that do not require any dimensional information to tag data in the issuer's report to a predefined hypercube, i.e. esef_cor:LineItemsNotDimensionallyQualified.



ESEF G3.4.2 Dimensional validity of line items

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.2	6.16.6
Consistency between Manuals	not in	line
Differences	 Discourages the use of negative hypercubes in extension taxonomies (but not forbids) All line items to be linked to at least one hypercube (has a dedicated placeholder) 	 Allows (and restricts) the use of negative hypercubes in extension taxonomies
Considerations for software providers	 Vendors need to produce two taxonomy outputs as the ESEF dedicated placeholder for linking line items to an empty hypercube is outside of EDGAR standards taxonomies list, hence shall not be used for EDGAR purposes 	



esma | ESEF G3.4.3 Default members

Guidance 3.4.3 Definition of default members of extension taxonomy dimensions: Issuers are required to assign a default member for each dimension defined in the issuer extension taxonomy. For this purpose, the ESEF taxonomy provides a dedicated extended link role [990000] Axis – Defaults to be used to link default members to a particular dimension with use of dimension-default arcrole. Moreover, a set of default members is globally assigned in the ESEF taxonomy for each ESEF taxonomy dimension item defined and must not be modified in issuer extension taxonomy.



ESEF G3.4.3 Default members

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.3	FAQ E.16
Consistency between Manuals	not in	line
Differences	 Default members to be linked to corresponding dimensions in a dedicated placeholder 	 No specific placeholders set for default members
Considerations for software providers	 Vendors need to produce two taxonomy outputs as the ESEF dedicated placeholder for linking default members with dimensions is outside of EDGAR standards taxonomies list, hence shall not be used for EDGAR purposes 	



Guidance 2.1.3 Use of segment and scenario containers in the context elements of XBRL instance documents: The XBRL 2.1 specification defines two open containers in context elements of XBRL instance documents. These are xbrli:segment/and xbrli:scenario. According to the XBRL Dimensions 1.0 specification, a taxonomy prescribes which of the two shall be applied in XBRL instance documents to contain dimension members [...]

When using the xbrli:scenario in contexts, it should not contain any content other than that defined in XBRL Dimensions specification. Consequently, custom XML should not be used in xbrli:scenario. [...]



	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.1.3	6.5.4
Consistency between Manuals	no	t in line
Differences	 Forbids the application of xbrli:segment in <context> elements of XBRL instance documents</context> 	 Forbids the application of xbrli:scenario in <context> elements of XBRL instance documents</context>
Considerations for software providers	 To ensure relevant transformation is provided on the output report files depending on specific container requirements of EDGAR / ESEF To ensure not only <context> elements are transformed in the XBRL instance document but also the underlying taxonomy (xbrldt:contextElement on definition link arcs)</context> 	



ESEF

```
<definitionArc xlink:type="arc" xlink:arcrole=
"http://xbrl.org/int/dim/arcrole/all" order="1" xlink:from=
"ifrs-full_StatementOfChangesInEquityLineItems" xlink:to=
"ifrs-full_StatementOfChangesInEquityTable" use="optional"
xbrldt:contextElement="scenario" xbrldt:closed="true"/>
```



EDGAR

```
<definitionArc xlink:type="arc" xlink:arcrole=
"http://xbrl.org/int/dim/arcrole/all" order="1" xlink:from=
"ifrs-full_StatementOfChangesInEquityLineItems" xlink:to=
"ifrs-full_StatementOfChangesInEquityTable" use="optional"
xbrldt:contextElement="segment" xbrldt:closed="true"/>
```



ESEF G2.1.1: Use of the LEI to identify the issuer

Guidance 2.1.1 Use of the LEI to identify the issuer: According to Annex IV of the RTS on ESEF, issuers shall identify themselves in the Inline XBRL instance document using ISO 17442 legal entity identifiers.

This should be implemented in such way that an xbrli:identifier element has a valid Legal Entity Identifier (LEI) as its content. The taxonomy files prepared by ESMA include validity checks of pattern and check sum digit of the LEI. The scheme attribute of the xbrli:identifier element should have "http://standards.iso.org/iso/17442" as its content.



ESEF G2.1.1: Use of the LEI to identify the issuer

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.1.1	6.5.1; 6.5.2
Consistency between Manuals	not in line	
Differences	 Requires use of Legal Entity Identifier (LEIs) to identify the issuer The scheme attribute of the xbrli:identifier element must be: http://standards.iso.org/is o/17442 	 Requires use of Central Index Key [CIK] to identify the issuer The scheme attribute of the xbrli:identifier element must be: http://www.sec.gov/CIK
Considerations for software providers	 To ensure <context> elements of inline XBRL document are assigned with the correct identifier (and scheme)</context> 	



ESEF G2.1.1: Use of the LEI to identify the issuer

ESEF

EDGAR

esma ESEF G2.2.3: Transformation of facts

Guidance 2.2.3 Transformation of facts: Whenever a string or numeric text used in an issuer's report is not following the format based on the predefined data type of taxonomy element used to mark up such string or numeric text, a transformation rule shall be applied.

ESMA recommends applying the latest available version of the Transformation Rules Registry marked with 'Recommendation' status, as published by XBRL International on a dedicated website



ESEF G2.2.3: Transformation of facts

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.2.3	5.2.5.12
Consistency between Manuals	mainly consistent -	- requiring minor tweaks
Differences	 Requires the application of latest transformation registry marked as "recommendation" – currently TR3 (soon may change to TR4) 	 Requires application of TR3 Provides for additional SEC-specific custom transformations that are not allowed in ESEF
Considerations for software providers	 To ensure correct version of the transformation registry is applied (some software tools are still using TR2) To ensure no SEC-specific transformations are applied in ESEF (such facts may be moved to the hidden section) To ensure facts eligible for SEC transformation are not moved to the hidden section (2 separate outputs required) 	



ESEF G2.2.3: Transformation of facts

ESEF & EDGAR

EDGAR only

e.g. durationItemType not eligible for transformation in ESEF as per TR3 – should go to the hidden section

ESEF G2.6.1-3: Report packages

Guidance 2.6.1 Including Inline XBRL document in taxonomy packages: ESMA recommends issuers to follow the recommendations of XBRL International Working Group Note, which indicates how Inline XBRL documents should be included within a taxonomy package. Furthermore, the Inline XBRL document should have a .html extension when submitted as packaged report.

Guidance 2.6.2 Including multi-html Inline XBRL documents and multiple Inline XBRL document sets in taxonomy packages: For multiple Inline XBRL documents within a taxonomy package it is recommended to follow the approach proposed in the Working Group Note on report packages.

Guidance 2.6.3 Naming convention for report packages: The report packages, as well as all the files included in those report packages, should ideally follow predefined naming conventions to facilitate the processing of issuers' reports by end-users. Whilst ESMA did not define in the RTS on ESEF a unique naming convention for ESEF files, issuers should refer to their Officially Appointed Mechanism and / or National Competent Authorities for indications of any naming conventions which may be required at national level.



ESEF G2.6.1-3: Report packages

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.6.1-3	various sections of the EFM
Consistency between Manuals	not in line	
Differences	 Taxonomy Packages 1.0 specification shall be used for submission format 	 Separate taxonomy and report files with relevant naming convention as a submission format
Considerations for software providers	 To ensure software will output separate submission packages according to the prescribed rules of both Manuals To ensure Taxonomy Packages 1.0 specification & Working Group Note is followed in the preparation of the ESEF output 	



ESEF G3.1.3 Taxonomy packages

Guidance 3.1.3 Taxonomy packages: Annex III of the RTS on ESEF sets out that the issuers shall submit the Inline XBRL document and the issuer's XBRL extension taxonomy files as a single reporting package, where XBRL taxonomy files are packaged according to the Taxonomy Packages specifications. ESMA recommends applying the latest version of the Taxonomy Packages specification, marked with 'Recommendation' status, as published by XBRL International on the dedicated website21. Moreover, issuers should follow the specification Working Group Note on report packages in the preparation of the taxonomy package for submission.



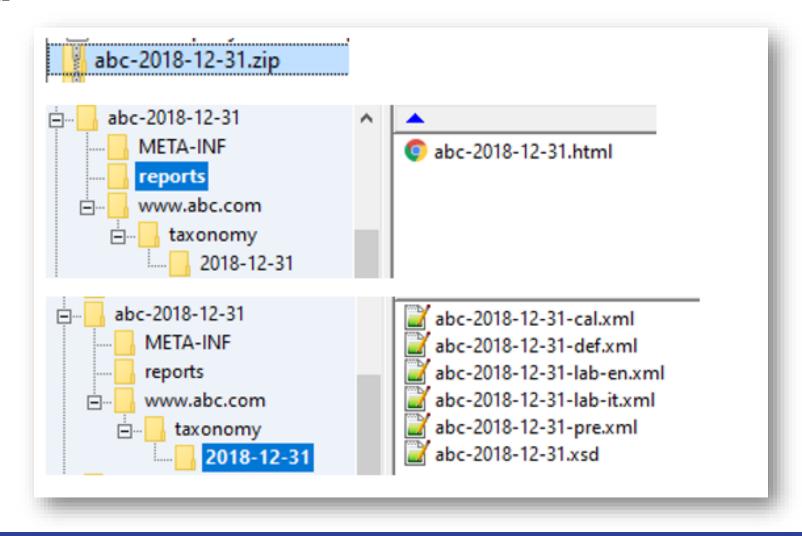
ESEF G3.1.3 Taxonomy packages

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.1.3	various sections of the EFM
Consistency between Manuals	no	t in line
Differences	 Taxonomy Packages 1.0 specification shall be used as a submission format 	 Separate taxonomy and report files applied with specific naming convention as a submission format
Considerations for software providers	 To ensure software outputs separate submission packages according to the prescribed rules of both Manuals To ensure Taxonomy Packages 1.0 specification + Working Group Note is followed in the preparation of the ESEF output 	



ESEF G2.6.1-3: Report packages ESEF G3.1.3 Taxonomy packages

ESEF





ESEF G2.6.1-3: Report packages ESEF G3.1.3 Taxonomy packages

EDGAR

Seq	Description	Document	Туре	Size
1	10-K	len-20191130x10k.htm iXBRL	10-K	6040928
2	EXHIBIT 3.1	lenex31.htm	EX-3.1	7059
3	EXHIBIT 4.1	len-2019x1130x10kxexh41.htm	EX-4.1	26856
4	EXHIBIT 21	len-2019x1130x10kxexh21.htm	EX-21	969090
5	EXHIBIT 23	len-20191130x10kxexh23.htm	EX-23	3305
6	EXHIBIT 31.1	len-20191130x10kxexh311.htm	EX-31.1	10402
7	EXHIBIT 31.2	len-20191130x10kxexh312.htm	EX-31.2	10763
В	EXHIBIT 32	len-20191130x10kxexh32.htm	EX-32	6917
Seq	Description	Document	Type	Size
9	XBRL TAXONOMY EXTENSION SCHEMA DOCUMENT	len-20191130.xsd	EX-101.SCH	122578
10	XBRL TAXONOMY EXTENSION CALCULATION LINKBASE DOCUMENT	len-20191130_cal.xml	EX-101.CAL	203897
11	XBRL TAXONOMY EXTENSION DEFINITION LINKBASE DOCUMENT	len-20191130_def.xml	EX-101.DEF	951209
12	XBRL TAXONOMY EXTENSION LABEL LINKBASE DOCUMENT	len-20191130_lab.xml	EX-101.LAB	1372437
13	XBRL TAXONOMY EXTENSION PRESENTATION LINKBASE DOCUMENT	len-20191130_pre.xml	EX-101.PRE	1111493
138	EXTRACTED XBRL INSTANCE DOCUMENT	len-20191130x10k_htm.xml	XML	6655962



ESEF G2.7.1: Ensuring validity with XBRL specs

Guidance 2.7.1 Ensuring report validity against XBRL specifications: Annex III of the RTS on ESEF sets out that the issuers must ensure that the Inline XBRL document is valid with respect to a set of listed XBRL specifications. Furthermore, ESMA is of the opinion that it would be beneficial to issuers to also validate their reports against the assertions (validation rules) defined in the ESEF taxonomy, prepared according to the Formula 1.0 specification and its modular extensions.



ESEF G2.7.1: Ensuring validity with XBRL specs

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.7.1	5.2.5.2, 6.2
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 ESMA recommends to run formula validations based on assertions defined in the ESEF taxonomy (as per Formula 1.0) 	 Formula 1.0 specification is not listed in the supported specifications
Considerations for software providers	 To ensure submissions to the US SEC are stripped of any formula linkbase that may be attached to the FPI extension taxonomy Issuers using ESEF_COR.XSD entry point automatically import the assertions defined in the ESEF taxonomy → this taxonomy should only be imported in the ESEF filings; for US SEC reports → core IFRS taxonomy 	







ESEF Reporting Manual vs EDGAR Filers Manual OTHER CONSIDERATIONS



ESEF G1.2: Use of IFRS taxonomy elements

Guidance 1.2.1 Use of taxonomy elements corresponding to IFRS standards or interpretations that are not yet adopted in the EU: The ESEF taxonomy contains all elements of the IFRS taxonomy regardless of the endorsement status of the IFRSs in the European Union.

Taxonomy elements corresponding to IFRS not endorsed by the EU, but considered equivalent to IFRS on the basis of Commission Decision 2008/961/EC are exclusively provided for facilitating compliance with the ESEF Regulation by third country issuers listed in the EU which may prepare their consolidated financial statements in accordance with IFRS as issued by the International Accounting Standards Board ('IASB'), whereby such issuers could apply standards or interpretations that are not yet endorsed for use in the Union.

European issuers are reminded that under no circumstances they should use taxonomy elements corresponding to IFRS not endorsed by the EU for tagging their consolidated financial statements because doing so would, by definition, breach the requirements contained in Annex IV.3 of the RTS on ESEF.

Guidance 1.2.2 Use of elements available in the IFRS Taxonomy that were not yet included in the ESEF taxonomy: The IFRS Foundation regularly updates the IFRS Taxonomy. If an issuer determines that the IFRS Taxonomy includes an element that corresponds to a disclosure of the issuer in its IFRS financial statements and that this element is not yet included in the ESEF taxonomy, then the issuers should define an extension taxonomy element whose name and label corresponds to name and label of the element in the IFRS Taxonomy.



ESEF G1.2: Use of IFRS taxonomy elements

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.2.1; G1.2.2	closest: 6.3.9
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 For EU issuers tags from IFRS taxonomy are limited to endorsed standards Elements not yet included in the ESEF taxonomy as extensions 	No limitations on use of IFRS taxonomy elements as published by the IASB
Considerations for software providers	 To ensure that only tags corresponding to endorsed standards are used for EU issuers (e.g. include indication within the GUI) Any IFRS elements not yet available in the ESEF taxonomy must be created as issuer-specific extension elements (but may be used as is for the SEC) 	



ESEF G1.2: Use of IFRS taxonomy elements

ESEF

```
"abc_AdjustmentsForCurrentTaxOfPriorPeriod" name=
"AdjustmentsForCurrentTaxOfPriorPeriod" nillable="true"
substitutionGroup="xbrli:item" type=
"xbrli:monetaryItemType" xbrli:balance="debit"
xbrli:periodType="duration"/>
```

EDGAR

```
"ifrs-full_AdjustmentsForCurrentTaxOfPriorPeriod" name=
"AdjustmentsForCurrentTaxOfPriorPeriod" nillable="true"
substitutionGroup="xbrli:item" type=
"xbrli:monetaryItemType" xbrli:balance="debit"
xbrli:periodType="duration"/>
```



ESEF G1.3.3: Mark-up of the notes

Guidance 1.3.3 Markup of the notes: Annex II, paragraph 3 of the RTS on ESEF sets out the so called "block tagging" requirement, whereby issuers shall mark up all disclosures that correspond to the elements in Table 2 of Annex II if those disclosures are present in the issuer's financial statement. Consequently, there is no obligation to create an extension to tag the notes to the Financial Statements if an issuer's disclosure does not correspond to any of the elements in Table 2 of Annex II. Nevertheless, ESMA encourages issuers to create extension block tags since this information is useful to end users. As noted in Guidance 1.4.1, there is no obligation to anchor extensions in the Notes to the financial statements However, if multiple pieces of text corresponding to one block tag are disclosed in different sections of the Notes, issuers should tag such disclosures with one block tag by using the Inline XBRL constructs which allow the concatenation of text content within a document (see Guidance 2.5.5).



ESEF G1.3.3: Mark-up of the notes

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.3.3	6.6.16; 6.6.19-22
Consistency between Manuals	not in line but not mutually exclusive	
Differences	 Detailed tagging of PFS from 2020; block tagging of the Notes from 2022 Only notes that have corresponding taxonomy elements to be tagged More tagging allowed 	 Level 1-4 tagging required All notes and accounting policies must be tagged
Considerations for software providers	 To ensure issuers are aware that level 3 and level 4 tagging is accepted in ESEF regime Extension elements in the Notes (to fulfil level 3 and 4 tagging of EDGAR), do not need to be anchored 	



ESEF G1.3.3: Mark-up of the notes

3.5 Subsidies and donations			
	Jan. to Dec. 2018	Jan. to Dec. 2017	
	US\$	US\$	
Subsidy granted in 2015	15,656	20,359	
Subsidy granted in 2016	24,826	41,095	
Income from subsidies and donations	40,482	61,454	

In 2016 and 2015, GLEIF received assistance from a government authority of the region of Hesse, Germany ("Hessisches Ministerium für Wirtschaft, Verkehr und Landesentwicklung,"). The assistance was limited to a maximum of EUR 250,000 in each year. In order to receive the assistance GLEIF was required to incur certain qualifying expenditure. GLEIF complied fully with the terms of the subsidy and in turn received the full amount of EUR 250,000 US\$ 260,725 in 2016 and US\$ 274,400 in 2015). GLEIF has not benefited from any other form of government assistance. There are no unfulfilled conditions or other contingencies attaching to government assistance that have been recognized.

The portions of the subsidies attributable to capital expenditures (tangible and intangible fixed assets), advance payments and deferred expenses have been deferred, and are amortized over the useful life of the related fixed assets.

ESEF

EDGAR



ESEF G2.5.2: Indication of language for textual facts

Guidance 2.5.2 Indication of the language used in textual mark ups: ESMA recommends to apply the 'xml:lang' attribute identifying the language of the report on the root html element of the XHTML file. Additionally it is recommended to apply it also on the ix:references tag from which it shall be transformed to the root xbrli:xbrl element of the resulting XBRL instance document.

Each tagged text fact should have an 'xml:lang' attribute that is assigned to the fact or inherited e.g. from the root element. Its value must correspond to the language of text in the content of a tag.



ESEF G2.5.2: Indication of language for textual facts

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.5.2	6.5.13
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 Textual facts should be assigned with or inherit xml:lang attribute set to the language of the report 	 Textual facts should be assigned with or inherit xml:lang attribute set US English
Considerations for software providers	 To ensure relevant transformations for EDGAR report resulting in having xml:lang="en-US" for all textual facts To take into consideration xml:lang attributes applied globally (e.g. on the root element of the report) 	

5 February 2020 | Milan



ESEF G2.5.2: Indication of language for textual facts

ESEF

```
<html xmlns="http://www.w3.org/1999/xhtml"</pre>
      [...]
      xmlns:ix="http://www.xbrl.org/2013/inlineXBRL"
      xmlns:ixt="http://www.xbrl.org/inlineXBRL/transformation/2010-04-20"
      xmlns:ifrs-full="http://xbrl.ifrs.org/taxonomy/2016-03-31/ifrs-full"
      xml:lang="en">
      [...]
<ix:header>
    <ix:resouces xml:lang="en">
        <xbrli:context id="FD2016Q2YTD">
            <xbrli:entity>
                <xbrli:identifier scheme="http://standards.iso.org/iso/17442">
                969500MCOONR8990S771</xbrli:identifier>
            </xbrli:entity>
            <xbrli:period>
                <xbrli:startdate>2015-12-01</xbrli:startdate>
                <xbrli:enddate>2016-05-31</xbrli:enddate>
            </xbrli:period>
        </xbrli:context>
    [...]
    </ix:resources>
    [\ldots]
</ix:header>
```



ESEF G2.5.2: Indication of language for textual facts

EDGAR

```
<html xmlns="http://www.w3.org/1999/xhtml"</pre>
      [...]
      xmlns:ix="http://www.xbrl.org/2013/inlineXBRL"
      xmlns:ixt="http://www.xbrl.org/inlineXBRL/transformation/2010-04-20"
      xmlns:ifrs-full="http://xbrl.ifrs.org/taxonomy/2016-03-31/ifrs-full"
      xml:lang="en-US">
      1...1
<ix:header>
    <ix:resouces xml:lang="en-US">
        <xbrli:context id="FD201602YTD">
            <xbrli:entity>
                <xbrli:identifier scheme="http://www.sec.gov/CIK">
                0000920760</xbrli:identifier>
            </xbrli:entity>
            <xbrli:period>
                <xbrli:startdate>2015-12-01</xbrli:startdate>
                <xbrli:enddate>2016-05-31</xbrli:enddate>
            </xbrli:period>
        </xbrli:context>
    [\ldots]
    </ix:resources>
    [...]
</ix:header>
```



ESEF G2.5.1: Inclusion of other content in the report

Guidance 2.5.1 Inclusion of other content than XHTML and XBRL in the Inline XBRL document: The inclusion of executable code is a potential threat and may cause security issues. [...]

ESMA is of the opinion that it would be beneficial to include images in the XHTML document unless their size exceeds support of browsers in which case they may be separate files. [...]

Images appearing within an Inline XBRL tag should not be referenced to external files regardless of their size. [...]

ESMA recommends that preparers do not embed images carrying financial information in the Inline XBRL document. Images should only be used for content such as branding information, graphical layout, photographs, etc.



ESEF G2.5.1: Inclusion of other content in the report

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.5.1	5.2.5.10
Consistency between Manuals	not in line but not mutually exclusive	
Differences	 No external files with images should be referenced in the inline report; images should be embedded 	allows local references to JPEG and GIF graphics
Considerations for software providers	 To ensure all images and graphics are embedded within the inline XBRL report rather than referenced from external files (even if they are placed within the package) 	



ESEF G1.3.1: Use of labels to select elements

Guidance 1.3.1 Use of labels to select appropriate elements: Element labels provide humanreadable descriptions of the accounting meaning of a taxonomy element. Each element in the taxonomy has a standard label. Standard labels normally match the wording of the Standards. For common practice content, the standard label of an element normally reflects the wording that is most commonly used in practice or alternatively describes the accounting meaning of an element more precisely.

The standard label of an element is often longer and more detailed or may be phrased differently to the label being reported in practice within IFRS financial statements. This by itself is not a sufficient reason for an issuer to decide against using a particular taxonomy element. A preparer has to consider the accounting meaning of a taxonomy element when making this judgement. For example, a disclosure described by an entity as 'issue of share capital' and presented in the Statement of cash flows as a cash inflow could be marked up using the taxonomy line item with the standard label 'Proceeds from issuing shares'.

Furthermore, the line items, axes and members of the taxonomy files made available on ESMA's website have a documentation label, which provides a definition of the element. Moreover, they contain at least one cross-reference to the relevant Standard(s). The documentation label and the reference to the relevant Standard(s) should be considered to determine whether the accounting meaning of an element corresponds to a specific disclosure.



ESEF G1.3.1: Use of labels to select elements

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.3.1	6.6.29
Consistency between Manuals	COI	nsistent
Differences	No priorities set	 Priorities assigned to constructs/relationships for better selection of appropriate elements
Considerations for software providers	 To ensure issuers are clearly presented with all relevant information about a given taxonomy elements, e.g. element labels and documentation, reference to the IFRS standards, implementation notes, occurrence in relationships (presentation, definition, calculation), etc. 	



esma ESEF G1.5.1: Line items and/or domain members

Guidance 1.5.1 Determination of whether a disclosure should be marked up with a line item or a domain member: XBRL taxonomies contain line items and domain members which are both elements used to markup disclosures. Line items normally represent the accounting concepts being reported. They are used to markup numeric accounting information as well as qualitative (non-numeric) disclosures. Line items are stand-alone, but can be used either individually or in a table (in combination with axis and axis members)

Axes and domain members (also sometimes referred to as 'axis members' or 'members') are elements that are mainly used to disclose information for line items from different aspects, such as the disaggregation of the information for line items into different product types, categories, classes and maturities. The axis is the specific aspect being considered. An axis includes one or more components (called members) which share the common accounting or economic meaning defined by that axis. [...]

In order to facilitate consistent use of line items and domain members despite the flexibility offered by the XBRL standard, extension elements should be defined as line items unless the applicable taxonomy envisages in a particular statement or disclosure the use of domain members. [...]



ESEF G1.5.1: Line items and/or domain members

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.5.1	6.8.*
Consistency between Manuals	COI	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 rather than domain membing imposed by the modelling the taxonomy Although not specifically contents of the extension 	



ESEF G1.6.1: Use of positive and negative values

Guidance 1.6.1 Use of positive and negative values: Line items should be assigned with an appropriate signage and balance attribute in order to correctly convey the meaning of the particular element. Most XBRL numeric elements are designed to be 'normally' reported with a positive value. A negative value is only used when the opposite meaning is required, e.g. loss rather than profit. By appropriately submitting XBRL numeric disclosures as positive values, issuers can ensure the accuracy of their calculation relationships.

In particular, elements representing assets should be assigned with the debit balance attribute value and reported as a positive figure. Similarly, the credit balance attribute value should be used for elements that represent equity and liabilities.

Revenue and other income should be defined using the credit balance attribute value and reported as a positive number. Elements representing costs and expenses should be assigned with the debit balance attribute value and reported as positive figures. In the calculation linkbase, costs and expenses should be subtracted from revenues and other income.

Cash inflows reported in the cash flow statement should be defined as debit items and cash outflows as credit items and in both cases reported as positive figures. ESMA would like to draw attention in this regards to section 5 of the Preparer's Guide published by the IFRS Foundation regarding the expression of tagged values as positive or negative in XBRL filings.



ESEF G1.6.1: Use of positive and negative values

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.6.1	6.6.30
Consistency between Manuals	cor	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 To ensure issuers are aware of how to properly apply positive and negative values as per both Manuals To consider using the formula linkbase in ESEF taxonomy (comprehensive set of checks for positive/negative values provided by the IASB) 	



ESEF G1.7.1: Use of standard units of measure

Guidance 1.7.1 Use of standard units of measure: As per the XBRL 2.1 and Inline XBRL 1.1 specifications, each numeric tag must be associated with a unit of measure. To achieve consistency in the use of units of measure (e.g. EUR for Euro, GW for Gigawatt, km for Kilometre, etc.) in Inline XBRL documents, issuers should check in the XBRL specifications and unit registry6 whether a required unit exists before defining a custom unit. Custom unit measures should not be created if a standard unit defined in the XBRL Specification or XBRL unit registry can be used. Preparers are discouraged to define and use units that imply a scale factor on a given measure (e.g. millions of EUR) because the Inline XBRL specifications already provides a scale attribute which indicate the required scaling value



ESEF G1.7.1: Use of standard units of measure

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G1.7.1	6.5.35; 6.6.34
Consistency between Manuals	mainly consistent – requiring minor tweaks	
Differences	 Recommends not using custom units 	 Provides guidance on custom unit definition
Considerations for software providers	 To ensure issuers are fully consistent with both Manuals To consider issue warnings to preparers in case custom units are created 	



Guidance 1.8.1 Marking up footnotes: If an issuer discloses numbers in a declared currency in a footnote to the Primary Financial Statements, on the basis of the requirements set out by Annex III.1 of the RTS on ESEF, those numbers shall be marked-up with the appropriate tag available in the ESEF taxonomy, or with an extension taxonomy element, since they effectively belong to the Primary Financial Statements. If an extension element is created, then such extension shall be anchored as per the requirements set out by Annex IV.8 of the RTS on ESEF.

Please note that the term "footnote" is not understood in this context to be a synonym of the term "Notes", which is used to indicate exclusively the Notes to the Primary Financial Statements.

In addition, issuers may apply on a voluntary basis XBRL footnotes to mark up the entire text of a footnote related to any portion of their financial statements or of the annual financial report (see rules defined in Guidance 2.3.1.).



	ESEF reporting Manual	EDGAR filers Manual	
Requirement / guidance	G1.8.1	6.6.39	
Consistency between Manuals	mainly consistent – requiring minor tweaks		
Differences	 Requires tagging monetary facts appearing within footnote text of PFS only If extension created in PFS, those should be anchored 	 Requires tagging of entire text footnotes with XBRL footnote elements 	
Considerations for software providers	To ensure issuers fulfil requirements of tagging footnotes		



ESEF

Consolidated statement of cash flows for the year ended 31 December			
	_	2016	2015
	Notes	€000	€000
Operating activities		0.400	(45.447)
Profit before tax Adjustments to reconcile profit before tax to net cash flows:		9,166	(<mark>15,417</mark>)
Depreciation and impairment of tangible assets.	11	16.909	15.823
Amortization and and impairment of intangible assets	12	632	26,531
Disposal of fixed assets	11	3	1,979
Deferred revenue recognition	22	(<mark>23</mark>)	(683)
Finance income	9.6	(<mark>21</mark>)	(41)
Finance costs	9.5	9,948	11,249
Share of profit of an associate	6	(74)	(<mark>243</mark>)
Capitalised revenue (test period)	11	1,957	0
Working capital adjustments: Decrease (increase) in trade and other receivables*	16,17, 18, 22	14.514	(<mark>14,516</mark>)
Increase in inventories	10,17, 10, 22	(2,376)	(397)
Increase (decrease) in trade and other payables	22,23	(4.601)	4.681
moreuse (decrease) in trade and other payables		46.034	28,966
		,	
*Restricted Escrow account from bond issue in amount of EUR 56		4,952 thousa	nd), aimed
at specific investments, has been excluded from the year-end cash amount.			

<div style="...">*Restricted Escrow account from bond issue in amount
of EUR <ix:nonFraction</pre>

name="ifrs-full:OtherDifferencesToCashAndCashEquivalentsInStatementOfCa shFlows" contextRef="PAsOn12_31_2016" unitRef="EUR" decimals="0" format="ixt:numdotdecimal" scale="3">56</ix:nonFraction> thousand

(2015: EUR <ix:nonFraction

name="ifrs-full:OtherDifferencesToCashAndCashEquivalentsInStatementOfCa shFlows" contextRef="PAsOn12_31_2015" unitRef="EUR" decimals="0" format="ixt:numdotdecimal" scale="3">14,952</ix:nonFraction>



EDGAR

Consolidated statement of cash flows for the year ended 31 December			
	_	2016	2015
	Notes	€000	€000
Operating activities			
Profit before tax		9,166	(15,417)
Adjustments to reconcile profit before tax to net cash flows:			
Depreciation and impairment of tangible assets.	11	16,909	15,823
Amortization and and impairment of intangible assets	12	632	26,531
Disposal of fixed assets	11	3	1,979
Deferred revenue recognition	22	(<mark>23</mark>)	(<mark>683</mark>)
Finance income	9.6	(<mark>21</mark>)	(<mark>41</mark>)
Finance costs	9.5	9,948	11,249
Share of profit of an associate	6	(74)	(243)
Capitalised revenue (test period)	11	1,957°	` <mark>0</mark>
Working capital adjustments:			_
Decrease (increase) in trade and other receivables*	16,17, 18, 22	14,514	(14.516)
Increase in inventories		(2.376)	(397)
Increase (decrease) in trade and other payables	22.23	(4.601)	4.681
,	_	46,034	28,966

*Restricted Escrow account from bond issue in amount of EUR 56 thousand (2015: EUR 14,952 thousand), aimed at specific investments, has been excluded from the year-end cash amount.

<div style="..."><ix:footnote id="idfootnote4">*Restricted Escrow
account from bond issue in amount of EUR <ix:nonFraction
name="ifrs-full:OtherDifferencesToCashAndCashEquivalentsInStatementOfCa
shFlows" contextRef="PAsOn12_31_2016" unitRef="EUR" decimals="0"
format="ixt:numdotdecimal" scale="3">56</ix:nonFraction> thousand
(2015: EUR <ix:nonFraction
name="ifrs-full:OtherDifferencesToCashAndCashEquivalentsInStatementOfCa
shFlows" contextRef="PAsOn12_31_2015" unitRef="EUR" decimals="0"
format="ixt:numdotdecimal" scale="3">14,952</iix:nonFraction>
thousand), aimed at specific investments, has been excluded from the
year-end cash amount.</ix:footnote></div>



ESEF G2.1.2: Formatting of the period element

Guidance 2.1.2 Formatting of the period element in the context of the XBRL instance document: ESMA recommends presenting the period element in the yvvy-mm-dd format, i.e. without the time component (an example of a period element including a time component would be: 2017-01-01T00:00:00:00). A time component is not expected to be necessary to tag annual reports. Moreover, it may result in inappropriate application and invalidity of defined calculation checks.



ESEF G2.1.2: Formatting of the period element

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.1.2	6.5.19
Consistency between Manuals	consistent	
Differences	 Recommends not to include time component for the period element in the context of XBRL document 	 Does not forbid the use of time component on period elements in the context of XBRL document
Considerations for software providers	 To ensure no time component is included for the period element in the context of XBRL document (apply periods only in YYYY-MM-DD format) 	



ESEF G2.1.2: Formatting of the period element

ESEF

</period>



ESEF G2.1.4: Data of a single issuer in a report

Guidance 2.1.4 The Inline XBRL instance document should only contain data of the issuer: It should be ensured that the Inline XBRL instance document contains data only of a single issuer.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.1.4	6.5.3
Consistency between Manuals	COI	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 To ensure all <context> elements are equipped with the same identifier value (and corresponding scheme attribute)</context> To validate the output using formula linkbase defined in the ESEF taxonomy (there are checks for this rule included) 	



ESEF G2.2.1: Attributes to define accuracy

Guidance 2.2.1 Attributes to define the accuracy of numeric facts: There should be consistent use of a single attribute describing the precision of facts, as indicated in the working group note published by XBRL International.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.2.1	6.5.17
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	 To favour using decimals To validate the output using formula linkbase defined in the ESEF taxonomy (checks included for this rule) 	



ESEF G2.2.2: Rates, percentages and ratios

Guidance 2.2.2 Representation of rates, percentages and ratios: Issuers should ensure a consistent XBRL representation of rates, percentages and ratios in decimal notation. For that purpose, ESMA recommends to follow the provisions of XBRL 2.1 specification published by XBRL International.

As an example following the above-mentioned specifications, if an issuer wants to tag a percentage value of 81%, this shall be tagged with <u>ix:nonFraction</u> element with a unit of pure and a scale attribute set to -2, resulting in XBRL representation of the value correct notation, i.e. as 0.81.



ESEF G2.2.2: Rates, percentages and ratios

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.2.2	6.8.14
Consistency between Manuals	cor	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 To ensure values representing rates, percentages and ratios are reported in decimals notation To validate the output using formula linkbase defined in the ESEF taxonomy (checks included for this rule, but may not cover all potential cases) 	



ESEF G2.2.4: Facts duplication

Guidance 2.2.4 Facts duplication: According to the Working Group Note on handling duplicate facts published by XBRL International, there are three classes of duplicates for numeric facts:

- Complete duplicates;
- Consistent duplicates;
- Inconsistent duplicates.

Annex IV of the RTS on ESEF sets out that issuers shall not use numeric taxonomy elements to mark up different values for a given context unless the difference is a result of rounding related to presentation of the same information with different scale in more than one place in the same annual financial report. Based on the above definitions, it is required that issuers shall not report inconsistent duplicates within the content of an inline XBRL document.



ESEF G2.2.4: Facts duplication

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.2.4	6.5.12
Consistency between Manuals	cor	nsistent
Differences	 Forbids reporting inconsistent duplicates of numeric facts 	 Forbids reporting inconsistent duplicates of numeric and textual facts
Considerations for software providers	 To follow the recommendation of XII WGN on handling duplicate facts To ensure no inconsistent duplicates are reported in FPIs' submission (both numeric and textual) To utilize the formula linkbase validation check for duplicates and highlight warnings to customers if any duplicate facts occur in an instance 	



ESEF G2.3.1: XBRL footnotes in the reports

Guidance 2.3.1 Appropriate use of XBRL footnotes in the reports: XBRL footnotes may be used to provide additional information about the tagged data. The XBRL Specification and the XBRL Link Roles Registry define syntactical constructs and explain the semantics in the context of applying footnotes in instance documents. It is not expected that any other syntax and semantics will be needed to provide footnotes included in the financial statements. [...]

Furthermore, the placeholder for footnotes should be restricted only to the expected content. [...]

Orphaned footnotes (i.e. footnotes that are not linked to any tagged data) may cause interpretation problems. [...]

As defined in XBRL 2.1 and Inline XBRL 1.1 specifications, to enable automatic checks whether all footnotes in the report are provided in at least the language of the report [...]



ESEF G2.3.1: XBRL footnotes in the reports

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.3.1	6.5.13; 6.5.27 – 6.5.33
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 xml:lang attribute to be set to the language of the report (ad minimum) 	 xml:lang attribute to be set to 'en-US'
Considerations for software providers	 To follow the XBRL footnotes mechanisms/constructs as prescribed by the specifications To ensure relevant transformations are made in between the EU and US outputs, so that proper xml:lang attribute value is set 	



ESEF G2.3.1: XBRL footnotes in the reports

ESEF

```
<div style="..."><ix:footnote id="idfootnote4" xml:lang="en">
*Restricted Escrow account from bond issue in amount of EUR 56
thousand (2015: EUR 14,952thousand), aimed at specific investments,
has been excluded from the year-end cash amount. </ix:footnote></div>
```

EDGAR

<div style="..."><ix:footnote id="idfootnote4" xml:lang="en-US"> *Restricted Escrow account from bond issue in amount of EUR 56 thousand (2015: EUR 14,952thousand), aimed at specific investments, has been excluded from the year-end cash amount. </ix:footnote></div>



ESEF G2.4.1-2: Constructs that should be avoided

Guidance 2.4.1 Inline XBRL constructs that should be avoided: It is not expected that tuples nor fraction items are required to reflect the content of financial statements. Therefore, these items should not be used unless strictly necessary [...]

Moreover, ESMA is of the opinion that for the ESEF reporting scenario the only relevant use case for inclusion of Inline XBRL constructs in the ix:hidden section (i.e. where content is not intended for display) is for facts that are not eligible for transformation (i.e. there is no transformation rule for a given format in the latest recommended Transformation Rules Registry).

In such case, the visible text in the report corresponding to the hidden fact shall have applied a custom style property "-esef-ix-hidden" which value follows the @id attribute of that fact.

For example:

TEXT

where 'abc' is the value of @id attribute on the fact in the hidden section and TEXT corresponds to its value in the report (that would have been transformed to the fact value should a transformation rule be available).

Guidance 2.4.2 Other constructs that should be avoided: Application of the HTML <base> element or 'xml:base' attribute makes the processing of the Inline XBRL document more complex and may impact references to other files, images or CSS styles. Therefore, these items should not be used



ESEF G2.4.1-2: Constructs that should be avoided

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.4.1-2	5.2.5.11, 5.2.5.14
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 Name of the custom style property is expected to be "-esef-ix- hidden:" 	 Name of the custom style property is expected to be "-sec-ix-hidden:"
Considerations for software providers	 To ensure relevant transformations are made with regards to the custom style property used to mark corresponding (to the hidden fact) text visible in the report 	



ESEF G2.4.1-2: Constructs that should be avoided

ESEF

EDGAR



ESEF G2.5.3: Use of target attribute

Guidance 2.5.3 Use of more than one target XBRL document for an Inline XBRL Document Set (IXDS): Only one XBRL instance document is expected in a filing, therefore only one target XBRL document should be set for an IXDS

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.5.3	5.2.5.11
Consistency between Manuals	COI	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 To ensure target attribute is not used in the produced output for either ESEF or EDGAR report To validate the output using formula linkbase defined in the ESEF taxonomy (checks included for this rule) 	



ESEF G2.5.5: Continuation/Exclude elements

Guidance 2.5.5 Application of ix:continuation and ix:exclude elements: Further to Guidance 1.3.3, ESMA recommends that application of ix:continuation or ix:exclude element should be applied for marking-up multiple pieces of text to a single text block tag.

In this regards, ESMA draws preparers' attention to the existing provisions on application of ix:continuation (Section 4 of the Inline XBRL 1.1 specification) and of ix:exclude (Section 5 of the Inline XBRL 1.1 specification).

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G2.5.5	5.2.5.11
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	 To ensure both ix:continuation and ix:exclude mechanisms are applied accordingly to the Inline XBRL 1.1 specification 	



ESEF G3.1.1: Required components of taxonomies

Guidance 3.1.1 Required components of extension taxonomies and reference to the taxonomy files prepared by ESMA: According to the RTS on ESEF, issuers shall ensure that XBRL extension taxonomies contain the following structures:

- a) Presentation and calculation linkbase, which group the elements and express arithmetic relationships between the used elements;
- b) Label linkbase, which describes the meaning of each applied element;
- c) Definition linkbase, which ensures dimensional validity of the resulting XBRL instance document against the taxonomy.



ESEF G3.1.1: Required components of taxonomies

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.1.1	5.2.4, 6.18.1
Consistency between Manuals	mainly consistent -	requiring minor tweaks
Differences	 Requires submitting taxonomies with at minimum label, presentation, definition and calculation linkbases References may be provided for all elements 	 Requires submitting taxonomies with label, presentation and calculation linkbases at minimum References shall not be provided for extension elements
Considerations for software providers	 To ensure all relevant links produced outputs To ensure no references a elements in the FPIs taxor 	are assigned for extension



ESEF G3.1.4: Taxonomy validity against XBRL specs

Guidance 3.1.4 Ensuring taxonomy validity against XBRL specifications: Annex III of the RTS on ESEF sets out that issuers must ensure that their extension taxonomy is valid with respect to a set of listed XBRL specifications.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.1.4	6.2
Consistency between Manuals	COI	nsistent
Differences	• N/A	• N/A
Considerations for software providers	 To ensure standard valida taxonomies 	tion is performed on the output



ESEF G3.2.1 Naming conventions for elements

Guidance 3.2.1 Naming conventions for extension taxonomy elements: Extension taxonomy element names should represent the standard label of this element in the Label CamelCase Concatenation [LC3] convention unless it violates XML element naming rules. If multiple standard labels exist for extension taxonomy element (i.e. in various languages), then any of those labels may be used as the basis for constructing the extension taxonomy element name. This is to follow the conventions applied in the ESEF taxonomy and the underlying IFRS Taxonomy.



ESEF G3.2.1 Naming conventions for elements

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.2.1	6.7.17; 6.7.29; 6.7.23-24, 6.7.26-27
Consistency between Manuals	COI	nsistent
Differences	• N/A	 Specific naming conventions, for example: Element name must not be equal to any element defined in the standard taxonomy Applies length restrictions Specific conventions for dimensions and members
Considerations for software providers	 To ensure element names follow the conventions imposed by the EDGAR Monitor any future developments from EU regulators 	



ESEF G3.2.2 Data types to be used on extensions

Guidance 3.2.2 Data types to be used on extension concepts: The type attribute value of an extension concept shall reflect the type of information that is marked up in the Inline XBRL document. To ensure consistency in the use of data types in issuers' extension taxonomies, extension taxonomy schemas should not define and apply on elements a custom type if a suitable type is already defined by the XBRL Specifications or in the XBRL data types registry. Issuers should check the XBRL data types registry to see whether a required date type exists before they define a custom data type. [...]

Specifically, domain members in extension taxonomies should be defined using 'domainItemType' data type.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.2.2	6.8.16; 6.8.17
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	To ensure that the rules from both Manuals are followed in assigning data types for extension elements	



ESEF G3.2.3 Data types to be used on extensions

Guidance 3.2.3 Use of typed dimensions in issuers' extension taxonomies: As it is allowed to extend the ESEF taxonomy, ESMA does not deem that it is necessary to define typed dimensions. Therefore, ESMA recommends not defining typed dimensions in the extension taxonomy, but creating explicit elements to tag information in the annual financial report instead.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.2.3	6.7.20
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	 To ensure that typed dimensions are not defined in the FPIs' extension taxonomies 	



ESEF G3.2.4 Identification of extension elements

Guidance 3.2.4 Identification of extension taxonomy element: Every element is defined in a namespace represented as a Universal Resource Identifier (URI) that identifies the organization that maintains the element definitions. The elements included in the taxonomy files prepared by ESMA therefore include ESMA's namespace for ESEF-specific extension elements and IFRS's namespace for elements imported from the IFRS taxonomy. Also the creator of the extension taxonomy elements of an issuer should be identified by the issuer's namespace.

Issuers may refer to their Officially Appointed Mechanism and / or National Competent Authorities for indications of any extension taxonomy namespace.



ESEF G3.2.4 Identification of extension elements

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.2.4	6.7.3 – 6.7.7
Consistency between Manuals	consistent	
Differences	 No specific restrictions or naming conventions applied on namespaces 	 Requires to include a version component in the namespace identifying the release date of the schema
Considerations for software providers	 To ensure a valid URI is used to represent the extension taxonomy namespace (URI must identify the FPI) To ensure a version component is included in the namespace URI (e.g. release date following YYYY-MM-DD format) 	



ESEF G3.2.5 Definition of abstract concepts

Guidance 3.2.5 Definition of abstract concepts in extension taxonomies: In general, it is not required and ESMA therefore discourages issuers to define abstract concepts in their extension taxonomy. The abstract concepts included in the applicable taxonomy should be sufficient to structure the relationships in the presentation or definition linkbases. Nevertheless, should another grouping item be needed to better reflect the structures of elements used to tag information in the annual financial report, issuers might define abstract headers in the extension taxonomy.



ESEF G3.2.5 Definition of abstract concepts

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.2.5	6.8.8
Consistency between Manuals	consistent	
Differences	 Discourages defining abstract elements in extension taxonomies (but does not forbid) 	 Allows for defining abstract elements in extension taxonomies (but does not require)
Considerations for software providers	 To ensure FPIs are aware that there is no specific need for creation of abstract elements to arrange presentation relationships – existing abstract elements can be used from the IFRS taxonomy 	



ESEF G3.4.1 Modelling of issuers' linkbases

Guidance 3.4.1 Modelling of the issuers' extension taxonomies' linkbases: XBRL 2.1 specification enables to document in the calculation linkbase arithmetic relationships between elements referring to the same context, i.e. same period and identical dimensional qualifiers. Therefore, the calculation linkbase is limited to calculations with a single context. [...]

As the calculation linkbase cannot be used to effectively define data quality checks on cross-period relationships, the presentation linkbase should be used to document these cross-period and crossdimension arithmetical dependencies which shall enable the execution of at least semi-automated validations. [...]

Furthermore, parent-child relationships between domain members in presentation linkbases should be defined as if they were calculation linkbase links between line items (i.e., lower level elements contribute to upper level element with weight +1). If different weights apply, all domain members should be presented on the same level. [...]



ESEF G3.4.1 Modelling of issuers' linkbases

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.1	N/A
Consistency between Manuals	consistent	
Differences	 Provides examples on modelling approaches to be followed by issuers in the preparation of their taxonomies 	No specific requirements set in the EDGAR Filing Manual
Considerations for software providers	 To ensure FPIs are aware of the modelling approaches recommended by ESMA in the ESEF Manual, specifically about workarounds for modelling arithmetical relationships between cross-period elements and domain members 	



ESEF G3.4.4 Use of preferred labels

Guidance 3.4.4 Use of preferred labels on presentation links in extension taxonomies: Extension taxonomies should apply preferred labels on presentation links when applicable. This concerns in particular total and period start and end labels. Labels defined in other label roles (e.g. terse, net, negated etc.) may be assigned to preferred labels. Extension concepts may be defined with and assigned to preferred labels.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.4	6.11.4; 6.11.6; 6.11.7
Consistency between Manuals	consistent	
Differences	 Recommends applying preferred labels in the presentation linkbase 	 Detailed requirements for using specific preferred labels (i.e. for total, period start/end and negating)
Considerations for software providers	 To ensure preferred labels are used; applying guidance in the EDGAR Manual requirements is fully compatible with ESEF requirements 	



ESEF G3.4.5 Multiple labels on taxonomy elements

Guidance 3.4.5 Use of labels on elements in extension taxonomies: It is possible for an element in the extension taxonomy of an issuer to be assigned with multiple label resources defined with different 'xlink:role' attributes, as listed by the XBRL 2.1 specification or Link Role Registry. Custom roles are not recommended to be used for labels, unless strictly necessary. Each taxonomy extension element shall be defined with at most one label for any combination of 'xlink:role' and 'xml:lang attribute. ESMA recommends applying at least one label defined in the standard label role, i.e. http://www.xbrl.org/2003/role/label, for each taxonomy extension element.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.5	6.10.2
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	 To ensure that all elements in extension taxonomies have at most one label for any combination of xlink:role attribute and language 	



ESEF G3.4.6 Restrictions on taxonomy relationships

Guidance 3.4.6 Restrictions on taxonomy relationships: The presentation linkbase shall mirror the content and structure of the human-readable layer of the issuer's report. That means that a line item must only appear in the presentation linkbase if it is associated with a reported value in the year of reference (i.e. it must not appear, for example, if it was used in the past but it is no longer used).

Reportable (i.e. non-abstract) concepts that are not used for tagging the financial statements shall not be applied in presentation, calculation or definition (with exception of anchoring) linkbases of an issuer-specific extension taxonomy.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.4.6	6.12.3
Consistency between Manuals	consistent	
Differences	• N/A	• N/A
Considerations for software providers	 To ensure that the presentation linkbase mirrors the content and structure of the human-readable layer of the issuer's report 	



ESEF G3.5.1 Resources outside of reporting package

Guidance 3.5.1 References pointing to resources outside the reporting package: The Inline XBRL document should be a standalone, self-explanatory and complete set of information. [...]

Inline XBRL documents MUST NOT contain any reference pointing to resources outside the reporting package.

	ESEF reporting Manual	EDGAR filers Manual
Requirement / guidance	G3.5.1	5.2.2.1
Consistency between Manuals	consistent	
Differences	 No external references are allowed 	 No external references are allowed except to the SEC website
Considerations for software providers	 To ensure that no references to the external files (outside of reporting package) are present in the submitted report 	



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