



## ESEF validation rules Hands-on experiences

28<sup>th</sup> May 2020

Analysis of the ESEF validation rules 2019. Explanation of the different sources of the validation rules (ESEF taxonomy, IFRS taxonomy and LEI taxonomy) and the common elements between the validation rules and the conformance suite.

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Where to download the ESEF validation rules?

<https://www.esma.europa.eu/document/esma-egef-taxonomy-2019>

 European Securities and Markets Authority

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Home > ESMA ESEF Taxonomy 2019 [!\[\]\(f3ce5336da5a384067b3036f0e1403be\_img.jpg\)](#) [!\[\]\(63640bd3c5dbc67c145299f83d8ba815\_img.jpg\)](#)

# ESMA ESEF TAXONOMY 2019

[ESEF Taxonomy 2019 - entry points !\[\]\(38aa2c6a8eaa118b8f3ac0308865f8cf\_img.jpg\)](#)

**Main document:**

[ESEF Taxonomy 2019 !\[\]\(4de99ad682f0f9ff257c693ddc684ee5\_img.jpg\)](#)

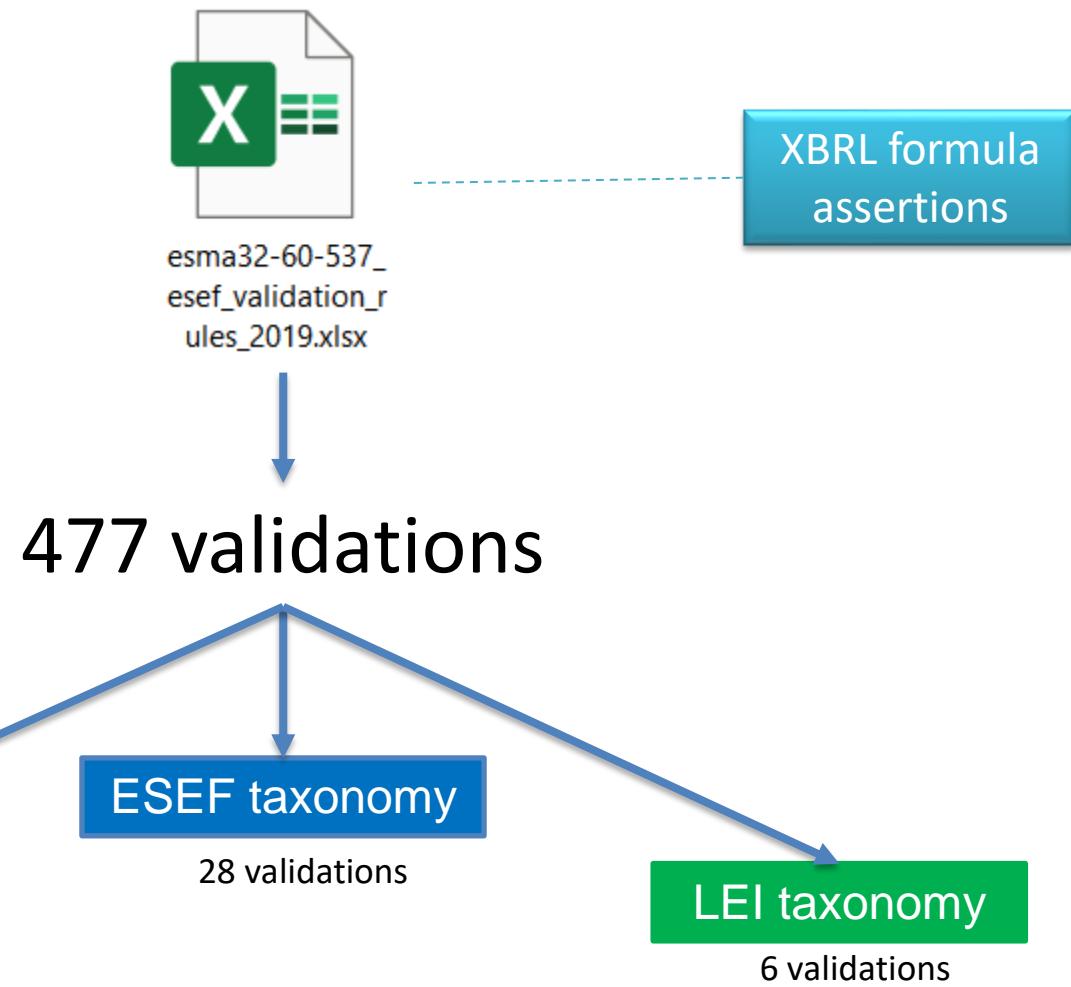
**Related documents:**

[ESMA32-60-534 ESEF XBRL Taxonomy Documentation 2019 !\[\]\(7ec636a40cb3492449798c0c0cbbab91\_img.jpg\)](#)

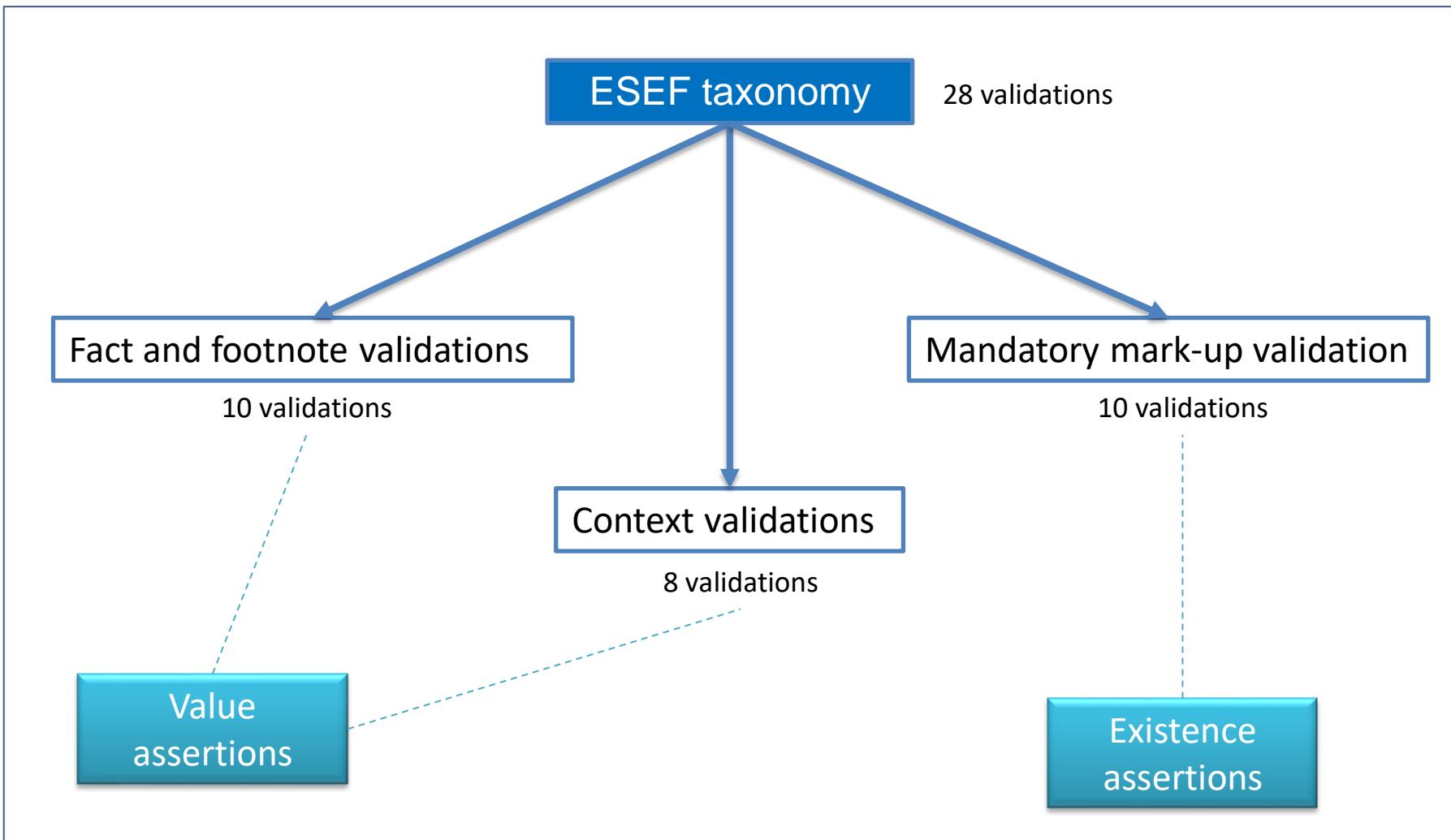
[ESMA32-60-536 ESEF Taxonomy 2019 Architecture !\[\]\(5128fc4ca73964f552a03183d0dfd4e3\_img.jpg\)](#)

[ESMA32-60-537 ESEF Validation Rules 2019 !\[\]\(171f3795fb0331c0eaae859eb1d6a60f\_img.jpg\)](#)  

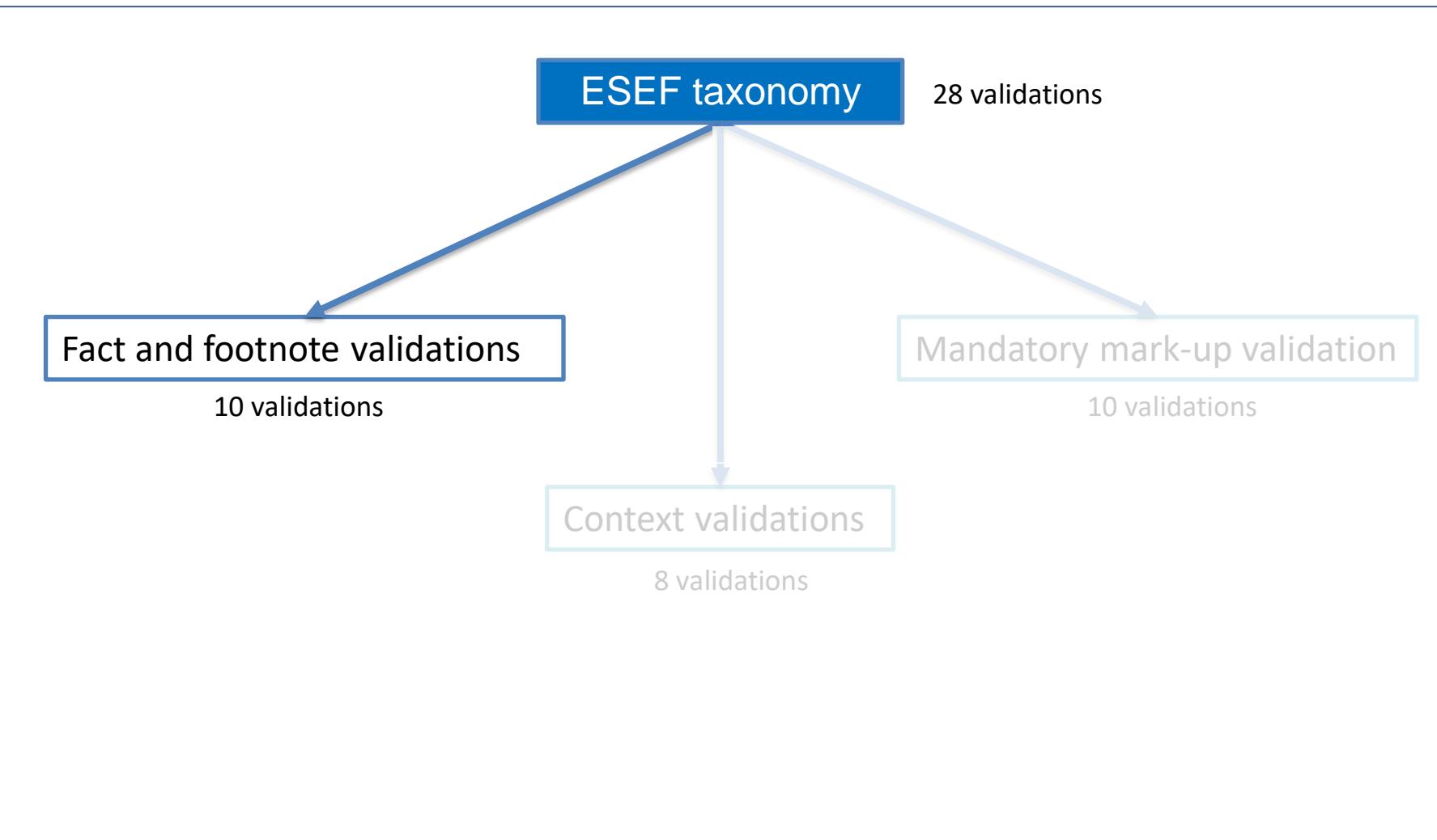
## ESEF VALIDATION RULES 2019



## ESEF TAXONOMY VALIDATION RULES



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use *xml:base* attribute in a report.

1 validation  
**WARNING**

G2-4-2\_1

Code	Reference	Description
G2-4-2_1	G2.4.2	xml:base attribute must not be used in the Inline XBRL document

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use *xml:base* attribute in a report.

1 validation  
**WARNING**

G2-4-2\_1

*Guidance 2.4.2 Other constructs that should be avoided* [last updated: July 2019]  
[new]

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. ESMA recommends software firms to include in their tools appropriate validations ensuring:

The HTML <base> elements and xml:base attributes MUST NOT be used in the Inline XBRL document.

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

## ESEF taxonomy

10 fact and footnote validations

It is recommended to not use *xml:base* attribute in a report.1 validation  
**WARNING**

G2-4-2\_1

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
34	G2.4.2	tests\G2-4-2_1\TC1_valid.zip	xml:base attribute must not be used in the Inline XBRL document	Inline XBRL document without XML base element	Valid
35		tests\G2-4-2_1\TC2_invalid.zip		Inline XBRL document with XML base element	Invalid

```
<ix:references xml:base="http://www.abc.com/base" xml:lang="en">
  <link:schemaRef xlink:href="http://www.abc.com/xbrl/2019/abc.xsd" xlink:type="simple"/>
</ix:references>
```



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to use standard XBRL 2.1 *roles* and *arcroles* while defining footnotes in a report.

G2-3-1\_1

3 validations  
**WARNINGS**

Code	Reference	Description
G2-3-1_1	G2.3.1	xlink:role attribute of a <link:footnote> and <link:footnoteLink> element as well as xlink:arcrole attribute of a <link:footnoteArc> must be defined in the XBRL Specification 2.1

## ESEF CONFORMANCE SUITE

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

## ESEF taxonomy

10 fact and footnote validations

It is recommended that *footnoteLink* element has no children other than *link:loc*, *link:footnote* and *link:footnoteArc*.

G2-3-1\_1

1 validation  
**WARNING**

Code	Reference	Description
G2-3-1_1	G2.3.1	xlink:role attribute of a <link:footnote> and <link:footnoteLink> element as well as xlink:arcrole attribute of a <link:footnoteArc> must be defined in the XBRL Specification 2.1

ESEF CONFORMANCE SUITE

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to use standard XBRL 2.1 *roles* and *arcroles* while defining footnotes in a report.

G2-3-1\_1

3 validations  
**WARNINGS**

It is recommended that *footnoteLink* element has no children other than *link:loc*, *link:footnote* and *link:footnoteArc*.

G2-3-1\_1

1 validation  
**WARNING**

The *xlink:role* attribute of a *link:footnote* and *link:footnoteLink* element as well as *xlink:arcrole* attribute of a *link:footnoteArc* MUST be defined in the XBRL Specification 2.1.

A *link:footnoteLink* element MUST have no children other than *link:loc*, *link:footnote*, and *link:footnoteArc*.

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
17	G2.3.1	tests\G2-3-1_1\TC1_valid.zip	xlink:role attribute of a <link:footnote> and <link:footnoteLink> element as well as xlink:arcrole attribute of a <link:footnoteArc> must be defined in the XBRL Specification 2.1	Inline XBRL document with footnotes having xlink:role and xlink:arcrole defined in the XBRL specification 2.1	Valid
18		tests\G2-3-1_1\TC2_invalid.zip		Inline XBRL document with footnotes having xlink:role not defined in the XBRL specification 2.1 and xlink:arcrole defined in the XBRL specification 2.1	Invalid
19		tests\G2-3-1_1\TC3_invalid.zip		Inline XBRL document with footnotes having xlink:role defined in the XBRL specification 2.1 and xlink:arcrole not defined in the XBRL specification 2.1	Invalid
20		tests\G2-3-1_1\TC4_invalid.zip		Inline XBRL document with footnotes having xlink:role not defined in the XBRL specification 2.1 and xlink:arcrole not defined in the XBRL specification 2.1	Invalid

```
<ix:relationship fromRefs="fact1" toRefs="footnote"/>
<p>*<ix:footnote xml:lang="en" id="footnote">
```



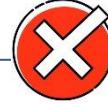
```
<ix:relationship fromRefs="fact1" toRefs="footnote"/>
<p>*<ix:footnote footnoteRole="http://www.abc.com/role/1/BalanceSheet">
```



```
<ix:relationship arcrole="http://www.xbrl.org/2009/arcrole/fact-explanatoryFact">
<p>*<ix:footnote xml:lang="en" id="footnote">
```



```
<ix:relationship arcrole="http://www.xbrl.org/2009/arcrole/fact-explanatoryFact">
<p>*<ix:footnote footnoteRole="http://www.abc.com/role/1/BalanceSheet">
```



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended that footnote element must be linked to at least one fact.

G2-3-1\_2

1 validation  
**WARNING**

Code	Reference	Description
G2-3-1_2	G2.3.1	Every non-empty <link:footnote> element MUST be linked to at least one fact

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended that footnote element must be linked to at least one fact.

G2-3-1\_2

1 validation  
**WARNING**

Orphaned footnotes (i.e. footnotes that are not linked to any tagged data) may cause interpretation problems. ESMA therefore recommends software firms to include in their tools appropriate validations ensuring:

**Every nonempty link:footnote element MUST be linked to at least one fact.**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended that footnote element must be linked to at least one fact.

G2-3-1\_2

1 validation  
**WARNING**

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
21	G2.3.1	tests\G2-3-1_2\TC1_valid.zip	Every non-empty <link:footnote> element MUST be linked to at least one fact	Inline XBRL document with each footnote linked to at least one fact	Valid
22		tests\G2-3-1_2\TC2_invalid.zip		Inline XBRL document with footnote not linked to any fact	Invalid



<ix:relationship fromRefs="fact1" toRefs="footnote"/>

<p>\*<ix:footnote xml:lang="en" id="footnote">Raw material used in production of cars - shifting from steel to aluminum</ix:footnote></p>



<p>\*<ix:footnote xml:lang="en" id="footnote">Raw material used in production of cars - shifting from steel to aluminum</ix:footnote></p>

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use fraction items in a report.

1 validation  
**WARNING**

G2-4-1\_3

#### Description

ix:fraction element must not be used in the Inline XBRL document

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use fraction items in a report.

1 validation  
**WARNING**

G2-4-1\_3

*Guidance 2.4.1 Inline XBRL constructs that should be avoided [last updated: July 2019]*

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. ESMA recommends software firms to include in their tools appropriate validations ensuring:

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

## ESEF taxonomy

10 fact and footnote validations

It is recommended to not use fraction items in a report.

1 validation  
**WARNING**

G2-4-1\_3

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
32		tests\G2-4-1_3\TC1_valid.zip	ix:fraction element must not be used in the Inline XBRL document without fractions	Inline XBRL document without fractions	Valid
33	G2.4.1	tests\G2-4-1_3\TC2_invalid.zip	ix:fraction element must not be used in the Inline XBRL document with fractions	Inline XBRL document with fractions	Invalid

```
<ix:fraction name="abc:DebtToAssetsRatio" unitRef="pure" contextRef="E2019">
    <ix:denominator>40</ix:denominator>/<ix:denominator>49</ix:denominator>
</ix:fraction>
```



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to use *@decimals* attribute rather than the *@precision* attribute on numeric facts to define their accuracy.

1 validation  
**WARNING**

G2-2-1

Code	Reference	Description
G2-2-1	G2.2.1	The accuracy of numeric facts SHOULD be defined with the 'decimals' attribute rather than the 'precision' attribute

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to use *@decimals* attribute rather than the *@precision* attribute on numeric facts to define their accuracy.

1 validation  
**WARNING**

G2-2-1

*Guidance 2.2.1 Attributes to define the accuracy of numeric facts* [last updated: July 2019]

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<sup>7</sup>. Therefore ESMA recommends software firms to include in their tools appropriate validations ensuring:

The accuracy of numeric facts **SHOULD** be defined with the 'decimals' attribute rather than the 'precision' attribute.

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended to use `@decimals` attribute rather than the `@precision` attribute on numeric facts to define their accuracy.

1 validation  
**WARNING**

G2-2-1

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
9		tests\G2-2-1\TC1_valid.zip	The accuracy of numeric facts SHOULD be defined with the 'decimals' attribute rather than the 'precision' attribute	Inline XBRL document with all numeric facts having <code>@decimals</code>	Valid
10	G2.2.1	tests\G2-2-1\TC2_invalid.zip		Inline XBRL document with numeric facts having <code>@precision</code>	Invalid

```
<td class="nonfraction">
  <ix:nonFraction name="ifrs-full:Equity" format="ixt:numcommadecimal" contextRef="E2017" decimals="-3" unitRef="EUR" scale="3">330</ix:nonFraction>
</td>

<td class="nonfraction">
  <ix:nonFraction name="ifrs-full:Equity" format="ixt:numcommadecimal" contextRef="E2017" precision="3" unitRef="EUR" scale="3">330</ix:nonFraction>
</td>
```



## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended that a language attribute is assigned to all textual facts.

1 validation  
**WARNING**

G2-5-2

Code	Reference	Description
G2-5-2	G2.5.2	Each text fact must have the xml:lang attribute, ideally on the root html element of the XHTML file and additionally on the ix:references

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

### ESEF taxonomy

10 fact and footnote validations

It is recommended that a language attribute is assigned to all textual facts.

1 validation  
**WARNING**

G2-5-2

*Guidance 2.5.2 Indication of the language used in textual mark ups* [last updated: July 2019]

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 xrbl:xbrl element of the resulting XBRL instance document.

Each tagged text fact<sup>14</sup> 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.

To enable automatic checks whether all tags in the report are provided in at least the language of the report, ESMA recommends software firms to include in their tools appropriate validations ensuring:

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
40	G2.5.2	tests\G2-5-2\TC1_valid.zip	Each text fact must have the xml:lang attribute, ideally on the root html element of the XHTML file and additionally on the ix:references	Inline XBRL document with text facts having xml:lang attribute assigned	Valid
41		tests\G2-5-2\TC2_valid.zip		Inline XBRL document with text facts having xml:lang attribute inherited	Valid
42		tests\G2-5-2\TC3_invalid.zip		Inline XBRL document with text facts not having xml:lang attribute assigned or inherited	Invalid
43		tests\G2-5-2\TC4_invalid.zip		Inline XBRL document with text fact having different xml:lang attribute than a report	Invalid
		<p>	<ix:nonNumeric xml:lang="en" id="id1" name="ifrs-full:NameOfReportingEntityOrOtherMeansOfIdentification">		
		</p>			
		<p>	<xml:lang="en">		
			<ix:nonNumeric id="id1" name="ifrs-full:NameOfReportingEntityOrOtherMeansOfIdentification">		
		</p>			
		<p>	<ix:nonNumeric id="id1" name="ifrs-full:NameOfReportingEntityOrOtherMeansOfIdentification">		
		</p>			
		<p>	<ix:nonNumeric id="id1" name="ifrs-full:NameOfReportingEntityOrOtherMeansOfIdentification" contextRef="D2019" xml:lang="de">		
		</p>			

## ESEF TAXONOMY VALIDATION RULES - Fact and footnote validations

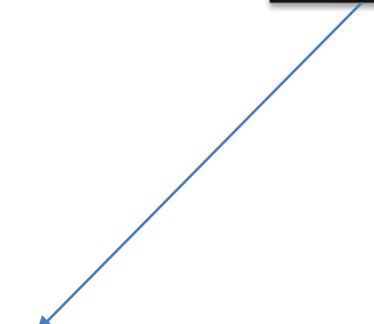
### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use tuples in a report.

1 validation  
**WARNING**

G2-4-1\_2



Code	Reference	Description
G2-4-1_2	G2.4.1	ix:tuple element must not be used in the Inline XBRL document

**ESEF CONFORMANCE SUITE**

## ESEF CONFORMANCE SUITE 2020 – G2.4.1 (II)

### ESEF taxonomy

10 fact and footnote validations

It is recommended to not use tuples in a report.

1 validation  
**WARNING**

G2-4-1\_2

*Guidance 2.4.1 Inline XBRL constructs that should be avoided [last updated: July 2019]*

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. ESMA recommends software firms to include in their tools appropriate validations ensuring:

## ESEF CONFORMANCE SUITE 2020 – G2.4.1 (II)

## ESEF taxonomy

10 fact and footnote validations

It is recommended to not use tuples in a report.

1 validation  
**WARNING**

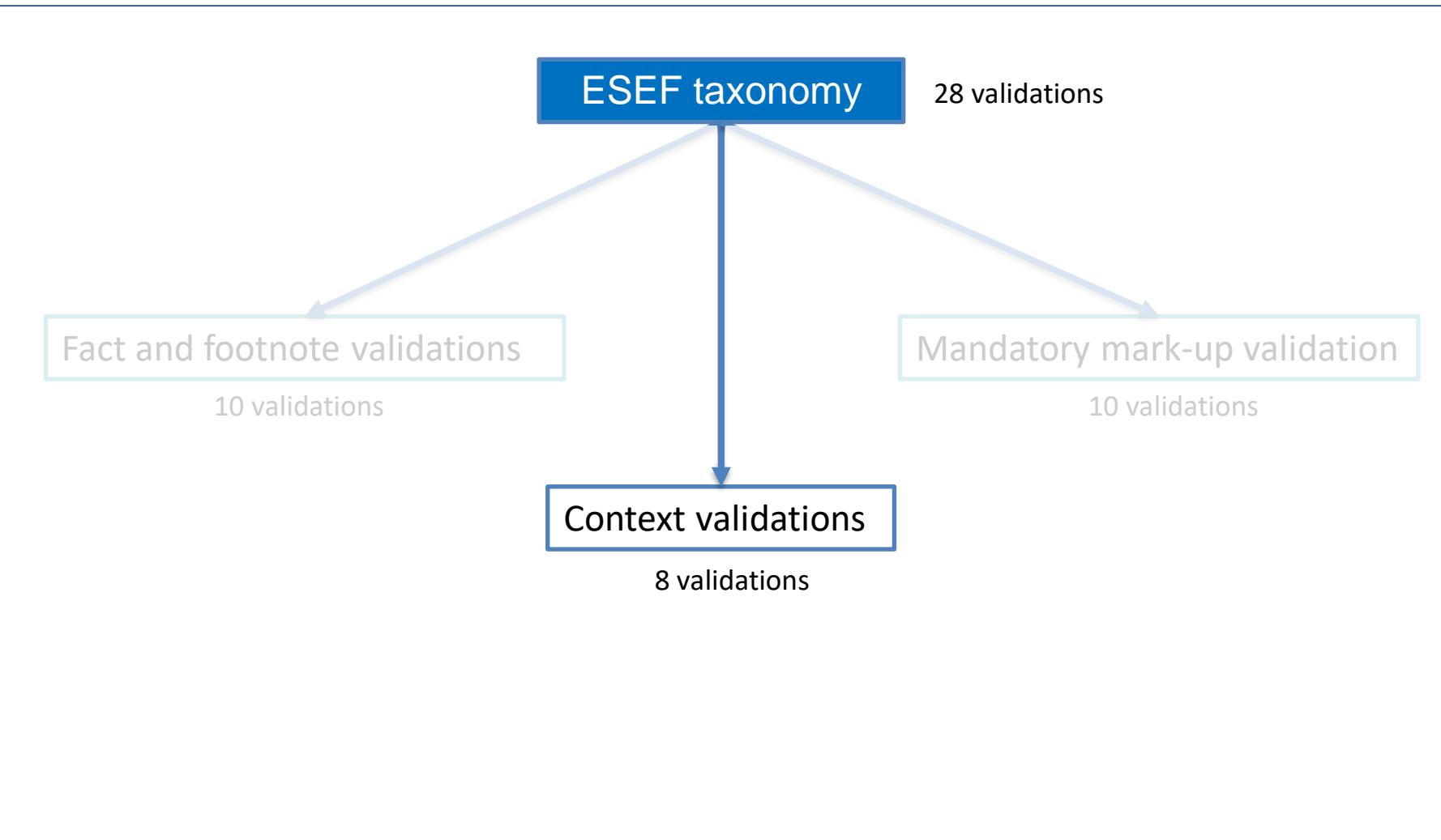
G2-4-1\_2

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
30	G2.4.1	tests\G2-4-1_2\TC1_valid.zip	ix:tuple element must not be used in the Inline XBRL document	Inline XBRL document without tuples	Valid
31		tests\G2-4-1_2\TC2_invalid.zip		Inline XBRL document with tuples	Invalid

```
<ix:tuple name="abc:InventoriesValuationMethod" tupleID="t1"/>
<ix:tuple name="abc:InventoriesValuationMethod" tupleID="t2"/>
```



## ESEF TAXONOMY VALIDATION RULES - Context validations



## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

Comparative information must be disclosed in respect of the previous period for all amounts reported in the financial statements.

2 validations  
**WARNINGS**

## ESEF TAXONOMY VALIDATION RULES - Context validations

ESEF taxonomy

8 context validations

All issuers shall identify themselves using ISO 17442 LEIs on the XBRL context entity identifiers and schemes.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_2\_G2-1-1

Code	Reference	Description
RTS_Annex_IV_Par_2_G2-1-1	RTS Annex IV Par 2; G2.1.1	<xbrli:identifier> value must conform to ISO 17442 standard

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## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

All issuers shall identify themselves using ISO 17442 LEIs on the XBRL context entity identifiers and schemes.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_2\_G2-1-1

*Guidance 2.1.1 Use of the LEI to identify the issuer* [last updated: July 2019]

According to Annex IV of the RTS on ESEF, issuers shall identify themselves in the Inline XBRL 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.

Example (from <http://codes.eurofiling.info/>):

```
<xbrli:entity>
  <xbrli:identifier
    scheme="http://standards.iso.org/iso/17442">KGCEPHLVVKVRZYO1T647</xbrli:identifier>
</xbrli:entity>
```

2. Issuers shall identify themselves in the Inline XBRL instance document using ISO 17442 legal entity identifiers on the XBRL context entity identifiers and schemes.

## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

All issuers shall identify themselves using ISO 17442 LEIs on the XBRL context entity identifiers and schemes.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_2\_G2-1-1

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
127		tests\RTS_Annex_IV_Par_2_G2-1-1\TC1_valid.zip		inline XBRL document with <xbrli:identifier> provided with valid LEI identifier (technical validation of the pattern only - no statuses checked)	Valid
128	RTS Annex IV Par 2; G2.1.1	tests\RTS_Annex_IV_Par_2_G2-1-1\TC2_invalid.zip	<xbrli:identifier> value must conform to ISO 17442 standard	inline XBRL document with <xbrli:identifier> provided with invalid LEI - not within the LEI pattern	Invalid
129		tests\RTS_Annex_IV_Par_2_G2-1-1\TC3_invalid.zip		inline XBRL document with <xbrli:identifier> provided with invalid LEI - incorrect LEI sum check characters	Invalid

```

<xbrli:entity>
  <xbrli:identifier scheme="http://standards.iso.org/iso/17442">ARU0VC1WY6GJ71</xbrli:ident
</xbrli:entity>
<xbrli:period>
  |
<xbrli:entity>
  <xbrli:identifier scheme="http://standards.iso.org/iso/17442">254900ARU0VC1WY6GJ11</xbrli:ident
</xbrli:entity>
<xbrli:period>
  |

```

## ESEF TAXONOMY VALIDATION RULES - Context validations

ESEF taxonomy

8 context validations

All entity identifiers in contexts shall have identical content.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_1\_G2-1-4

Code	Reference	Description
RTS_Annex_IV_Par_1_G2-1-4	RTS Annex IV Par 1; G2.1.4	<xbrli:identifier> element must have the same value and the same scheme attribute for all contexts defined in an instance document

ESEF CONFORMANCE SUITE

## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

All entity identifiers in contexts shall have identical content.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_1\_G2-1-4

*Guidance 2.1.4 The Inline XBRL document should only contain data of the issuer*  
[last updated: July 2019]

It should be ensured that the Inline XBRL document contains data only of a single issuer. ESMA recommends software firms to include in their tools appropriate validations ensuring:

**All entity identifiers and schemes in contexts MUST have identical content**

In case of violation, the following message is recommended to be used:

**Violation: “multipleIdentifiers”**

1. Issuers shall ensure that the Inline XBRL instance document contains data of a single issuer, so that all entity identifiers in contexts shall have identical content.

## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

All entity identifiers in contexts shall have identical content.

1 validation  
**ERROR**

RTS\_Annex\_IV\_Par\_1\_G2-1-4

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
116	RTS Annex IV Par 1; G2.1.4	tests\RTS_Annex_IV_Par_1_G2-1-4\TC1_valid.zip	<xbrli:identifier> element must have the same value and the same scheme attribute for all contexts defined in an instance document	inline XBRL document with consistent <xbrli:identifier> values in all contexts	Valid
117		tests\RTS_Annex_IV_Par_1_G2-1-4\TC2_invalid.zip		inline XBRL document with inconsistent <xbrli:identifier> values in some contexts	Invalid

```

<xbrli:context id="E2017_IssuedCapitalAndSharePremiumMember">
  <xbrli:entity>
    <xbrli:identifier scheme="http://standards.iso.org/iso/17442">254900ARU0VC1WY6GJ71</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2017-12-31</xbrli:instant>
  </xbrli:period>
  <xbrli:scenario>
    <xbrldi:explicitMember dimension="ifrs-full:ComponentsOfEquityAxis">abc:IssuedCapitalAndSharePremiumMember</xbrldi:explicitMember>
  </xbrli:scenario>
</xbrli:context>

<xbrli:context id="E2017_RetainedEarningsMember">
  <xbrli:entity>
    <xbrli:identifier scheme="http://standards.iso.org/iso/17442">506700GE1G29325QX363</xbrli:identifier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2017-12-31</xbrli:instant>
  </xbrli:period>
  <xbrli:scenario>
    <xbrldi:explicitMember dimension="ifrs-full:ComponentsOfEquityAxis">ifrs-full:RetainedEarningsMember</xbrldi:explicitMember>
  </xbrli:scenario>

```



## ESEF TAXONOMY VALIDATION RULES - Context validations

## ESEF taxonomy

8 context validations

It is recommended to present the period element in the YYYY-MM-DD format without the time component.

G2-1-2

3 validations  
**WARNINGS**

Code	Reference	Description
G2-1-2	G2.1.2	<xbrli:period> element should contain values in YYYY-MM-DD format without time component

ESEF CONFORMANCE SUITE

## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

It is recommended to present the period element in the YYYY-MM-DD format without the time component.

G2-1-2

3 validations  
**WARNINGS**

*Guidance 2.1.2 Formatting of the period element in the context of the Inline XBRL document [last updated: July 2019]*

ESMA recommends presenting the period element in the yyyy-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.

ESMA recommends software firms to include in their tools appropriate validations ensuring that:

The `xbrli:startDate`, `xbrli:endDate` and `xbrli:instant` elements MUST identify periods using whole days (i.e. specified without a time content and time zone).

## ESEF TAXONOMY VALIDATION RULES - Context validations

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
1	G2.1.2	tests\G2-1-2\TC1_valid.zip	<xbrli:period> element should contain values in YYYY-MM-DD format without time component	Inline XBRL document with <xbrli:period> defined in YYYY-MM-DD format without time component	Valid
2		tests\G2-1-2\TC2_invalid.zip		Inline XBRL document with <xbrli:period> defined in YYYY-MM-DD format with time component disclosed without a time zone	Invalid
3		tests\G2-1-2\TC3_invalid.zip		Inline XBRL document with <xbrli:period> defined in YYYY-MM-DD format with time component disclosed in default UTC time zone	Invalid
4		tests\G2-1-2\TC4_invalid.zip		Inline XBRL document with <xbrli:period> defined in YYYY-MM-DD format with time component disclosed in other time zone (as UTC offset)	Invalid

`<xbrli:period>`

`<xbrli:instant>2017-12-31</xbrli:instant>`

`</xbrli:period>`



`<xbrli:period>`

`<xbrli:instant>2017-12-31T24:00:00</xbrli:instant>`

`</xbrli:period>`



`<xbrli:period>`

`<xbrli:instant>2017-12-31T24:00:00Z</xbrli:instant>`

`</xbrli:period>`



`<xbrli:period>`

`<xbrli:instant>2017-12-31T24:00:00-01:00:00</xbrli:instant>`

`</xbrli:period>`



## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

It is recommended to use only scenario container in context elements of XBRL instance document.

G2-1-3\_1

1 validation  
**WARNING**

Code	Reference	Description
G2-1-3_1	G2.1.3	<xbrli:scenario> element must be used instead of <xbrli:segment>

**ESEF CONFORMANCE SUITE**

## ESEF TAXONOMY VALIDATION RULES - Context validations

### ESEF taxonomy

8 context validations

It is recommended to use only scenario container in context elements of XBRL instance document.

G2-1-3\_1

1 validation  
**WARNING**

*Guidance 2.1.3 Use of segment and scenario containers in the context elements of Inline XBRL documents [last updated: July 2019]*

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.

ESMA recommends to use `xbrli:scenario` for this purpose, therefore ESMA encourages software firms to include in their tools appropriate validations ensuring:

Extension taxonomy **MUST** set `xbrli:scenario` as context element on definition arcs with <http://xbrl.org/int/dim/arcrole/all> and <http://xbrl.org/int/dim/arcrole/notAll> arcroles.

`xbrli:segment` container **MUST NOT** be used in contexts.

## ESEF TAXONOMY VALIDATION RULES - Context validations

## ESEF taxonomy

It is recommended to use only scenario container in context elements of XBRL instance document.

G2-1-3\_1

1 validation  
**WARNING**

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
5	G2.1.3	tests\G2-1-3_1\TC1_valid.zip	<xbrli:scenario> element must be used instead of <xbrli:segment>	Inline XBRL document with context using <xbrli:scenario> element	Valid
6		tests\G2-1-3_1\TC2_invalid.zip		Inline XBRL document with context using <xbrli:segment> element	Invalid

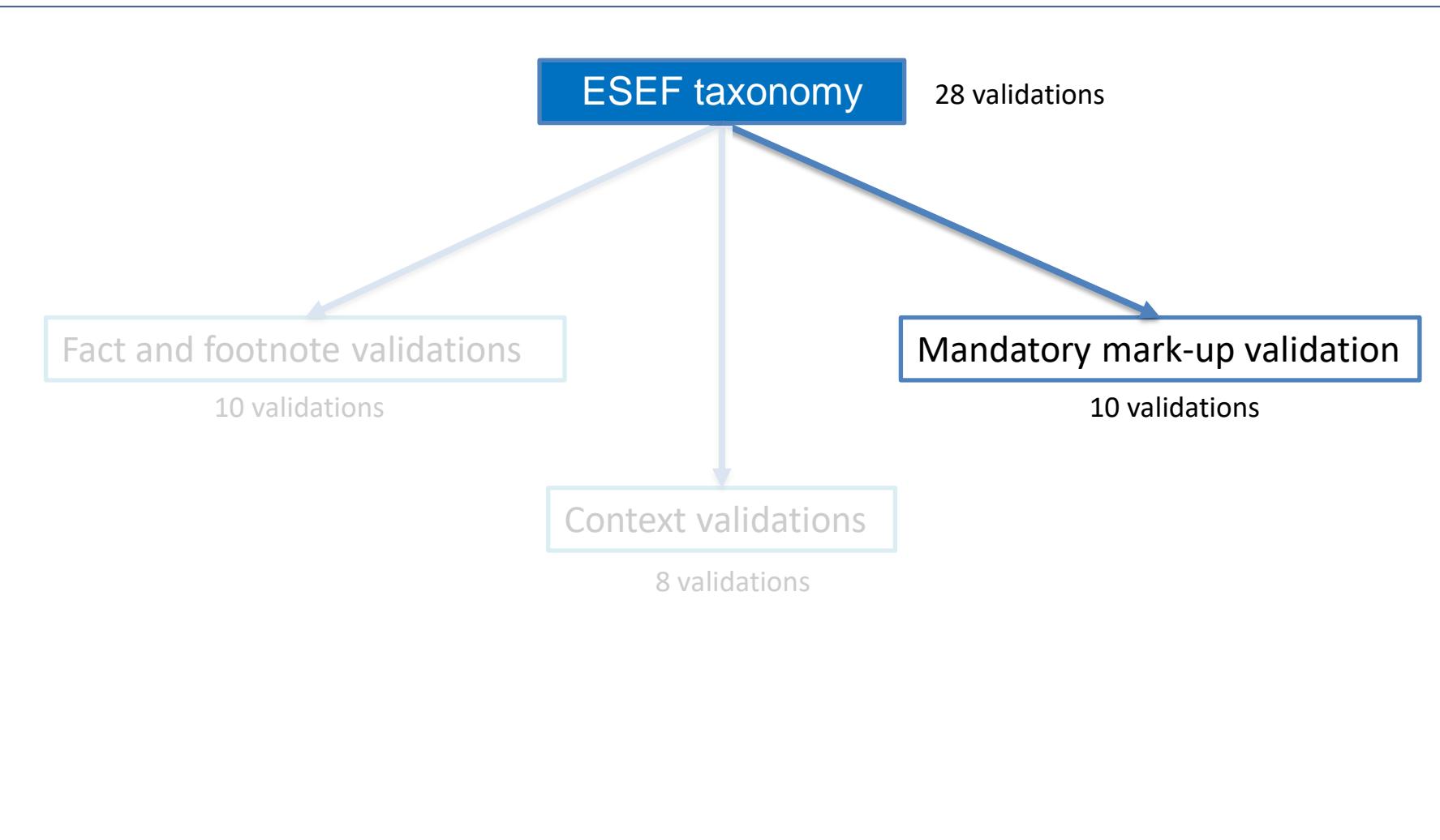
```
<xbrli:scenario>
  <xbrldi:explicitMember dimension="ifrs-full:ComponentsOfEquityAxis">abc:IssuedCapitalAndSharePremiumMember</xbrldi:explicitMember>
</xbrli:scenario>
```



```
<xbrli:segment>
  <xbrldi:explicitMember dimension="ifrs-full:ComponentsOfEquityAxis">abc:IssuedCapitalAndSharePremiumMember</xbrldi:explicitMember>
</xbrli:segment>
```



## ESEF TAXONOMY VALIDATION RULES - Mandatory mark-up validation



## ESEF TAXONOMY VALIDATION RULES - Mandatory mark-up validation

### ESEF taxonomy

10 mandatory mark-up validation

RTS\_Annex\_II\_Par\_2

Address of entity's registered office **WARNING**

Country of incorporation **WARNING**

Description of nature of entity's operations and principal activities **WARNING**

Domicile of entity **WARNING**

Explanation of change in name of reporting entity or other means of identification from end of preceding reporting period **WARNING**

Legal form of entity **WARNING**

Name of parent entity **WARNING**

Name of reporting entity or other means of identification **ERROR**

Name of ultimate parent of group **WARNING**

Principal place of business **WARNING**

## ESEF TAXONOMY VALIDATION RULES - Mandatory mark-up validation

ESEF taxonomy  
10 mandatory mark-up validation

RTS\_Annex\_II\_Par\_2

Code	Reference	Description
RTS_Annex_II_Par_2	RTS Annex II Par 2	All elements listed in Annex II Tables 1 must be marked up/tagged if present in a report

### ESEF CONFORMANCE SUITE

2. Issuers shall mark up all disclosures made in IFRS consolidated financial statements or made by cross-reference therein to other parts of the annual financial reports for financial years beginning on or after 1 January 2020 that correspond to the elements in Table 1 of this Annex.

## ESEF TAXONOMY VALIDATION RULES - Mandatory mark-up validation

### ESEF taxonomy

RTS\_Annex\_II\_Par\_2

10 mandatory mark-up validation

Code	Reference	Description
RTS_Annex_II_Par_2	RTS Annex II Par 2	All elements listed in Annex II Tables 1 must be marked up/tagged if present in a report

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
104	RTS Annex II Par 2	tests\RTS_Annex_II_Par_2\TC1_valid.zip	All elements listed in Annex II Tables 1 must be marked up/tagged if present in a report	inline XBRL document with all elements from T1 tagged	Valid
105	RTS Annex II Par 2	tests\RTS_Annex_II_Par_2\TC2_invalid.zip		inline XBRL document with some elements from T1 not tagged	Invalid

Concept		2019-12-31	Concept		2019-12-31
<input checked="" type="checkbox"/> Balance sheet			<input checked="" type="checkbox"/> Balance sheet		
<input checked="" type="checkbox"/> Changes in equity			<input checked="" type="checkbox"/> Changes in equity		
<input checked="" type="checkbox"/> General information			<input checked="" type="checkbox"/> General information		
<input checked="" type="checkbox"/> esef_cor:NotesAccountingPoliciesAndMandatoryTags			<input checked="" type="checkbox"/> esef_cor:NotesAccountingPoliciesAndMandatoryTags		
Name of reporting entity or other means of identification	ABC PLC		Name of reporting entity or other means of identification	formerly XYZ PLC	formerly XYZ PLC
Explanation of change in name of reporting entity or other means of identification	formerlly XYZ PLC		Explanation of change in name of reporting entity or other means of identification	formerlly XYZ PLC	formerlly XYZ PLC
Domicile of entity	Brandenburg, Ger		Domicile of entity	Brandenburg, Ger	Brandenburg, Ger
Legal form of entity	public listed com		Country of incorporation	Germany	Germany
Country of incorporation	Germany		Address of entity's registered office	Potsdar	Potsdar
Address of entity's registered office	Germany, Potsda		Principal place of business	Europe	Europe
Principal place of business	Europe		Description of nature of entity's operations and principal activities	produces and sell	produces and sell
Description of nature of entity's operations and principal activities	produces and sell		Name of parent entity	DEF PLC	DEF PLC
Name of parent entity	DEF PLC		Name of ultimate parent of group	GHI Group	GHI Group
Name of ultimate parent of group	GHI Group				



## LEI TAXONOMY VALIDATION RULES

LEI taxonomy

6 validations

Value assertions

RTS\_Annex\_IV\_Par\_2\_G2-1-1

Not a valid Legal Entity Identifier (invalid checksum).

2 validations

Not a valid Legal Entity Identifier (contains invalid check digits 00, 01, or 99).

2 validations

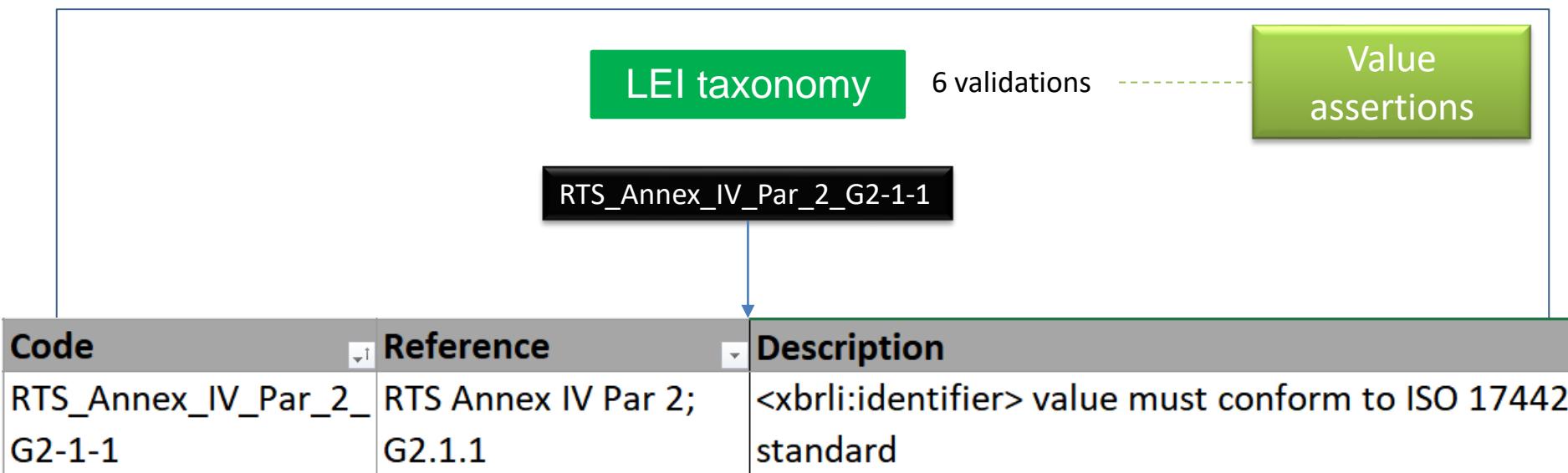
Not a valid Legal Entity Identifier (invalid format).

1 validation

Not the standard LEI scheme ('<http://standards.iso.org/iso/17442>')

1 validation

## LEI TAXONOMY VALIDATION RULES



ESEF CONFORMANCE SUITE

## IFRS TAXONOMY VALIDATION RULES - Fact equivalence validations

imported in  
esef\_cor.xsd  
entry point

IFRS taxonomy

443 validations

Value  
assertions

**Fact equivalence validations.** Reported values for alternative tagging of same economic concept should be equal.

124 validations  
**WARNINGS**

**Fact equivalence validations**—test that two facts tagged using different IFRS Taxonomy line items or line items and members, that represent the same concept, are equal. This most commonly occurs where one fact is a dimensionally qualified concept and the other one is not (eg '*Aircraft*' = '*Aircraft [member]*' in '*Property, plant and equipment [axis]*' with primary item '*Property, plant and equipment*').



## IFRS TAXONOMY VALIDATION RULES - Negative and positive fact validations

imported in  
esef\_cor.xsd  
entry point

IFRS taxonomy

443 validations

Value  
assertions

**Negative fact validations.** Reported value should not exceed 0.

2 validations  
**WARNINGS**

**Positive fact validations.** Reported value should not be below 0.

1 validation  
**WARNING**

## IFRS TAXONOMY VALIDATION RULES - Percentage warnings

imported in  
esef\_cor.xsd  
entry point

IFRS taxonomy

443 validations

Value  
assertions

Percentage warnings. Reported value should not exceed 100%.

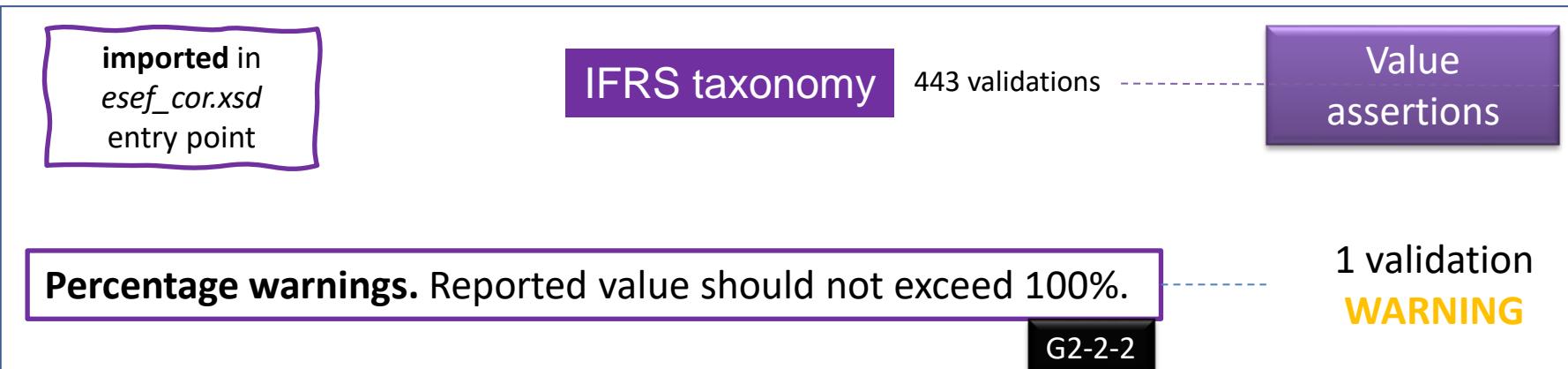
1 validation  
**WARNING**

G2-2-2

Code	Reference	Description
G2-2-2	G2.2.2	All elements of num:percentItemType should be less or equal to 1

ESEF CONFORMANCE SUITE

## IFRS TAXONOMY VALIDATION RULES - Percentage warnings



*Guidance 2.2.2 Representation of rates, percentages and ratios* [last updated: July 2019] [new]

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<sup>8</sup>.

As an example following the above-mentioned specifications, if an issuer wants to tag a percentage value of 81%, this shall be tagged with ix:nonFraction element with a unit of *pure*<sup>9</sup> and a scale attribute set to -2, resulting in XBRL representation of the value correct notation, i.e. as 0.81.

## IFRS TAXONOMY VALIDATION RULES - Percentage warnings

imported in  
esef\_cor.xsd  
entry point

IFRS taxonomy

443 validations

Value  
assertions

**Percentage warnings.** Reported value should not exceed 100%.

G2-2-2

1 validation  
**WARNING**

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
11	G2.2.2	tests\G2-2-2\TC1_valid.zip	All elements of num:percentItemType should be less or equal to 1	Inline XBRL document with percentages expressed between 0 and 1	Valid
12		tests\G2-2-2\TC2_invalid.zip		Inline XBRL document with percentages expressed as greater than 1	Invalid

```
<ix:nonFraction name="abc:ShareOfAluminium" contextRef="E2019" unitRef="pure" scale="-2" decimals="2">70</ix:n
```



```
<ix:nonFraction name="abc:ShareOfAluminium" contextRef="E2019" unitRef="pure" decimals="2">70</ix:n
```



## IFRS TAXONOMY VALIDATION RULES - Technical validations

imported in  
esef\_cor.xsd  
entry point

IFRS taxonomy

443 validations

Value  
assertions

**Technical validations.** Inconsistent duplicated facts should not be reported.

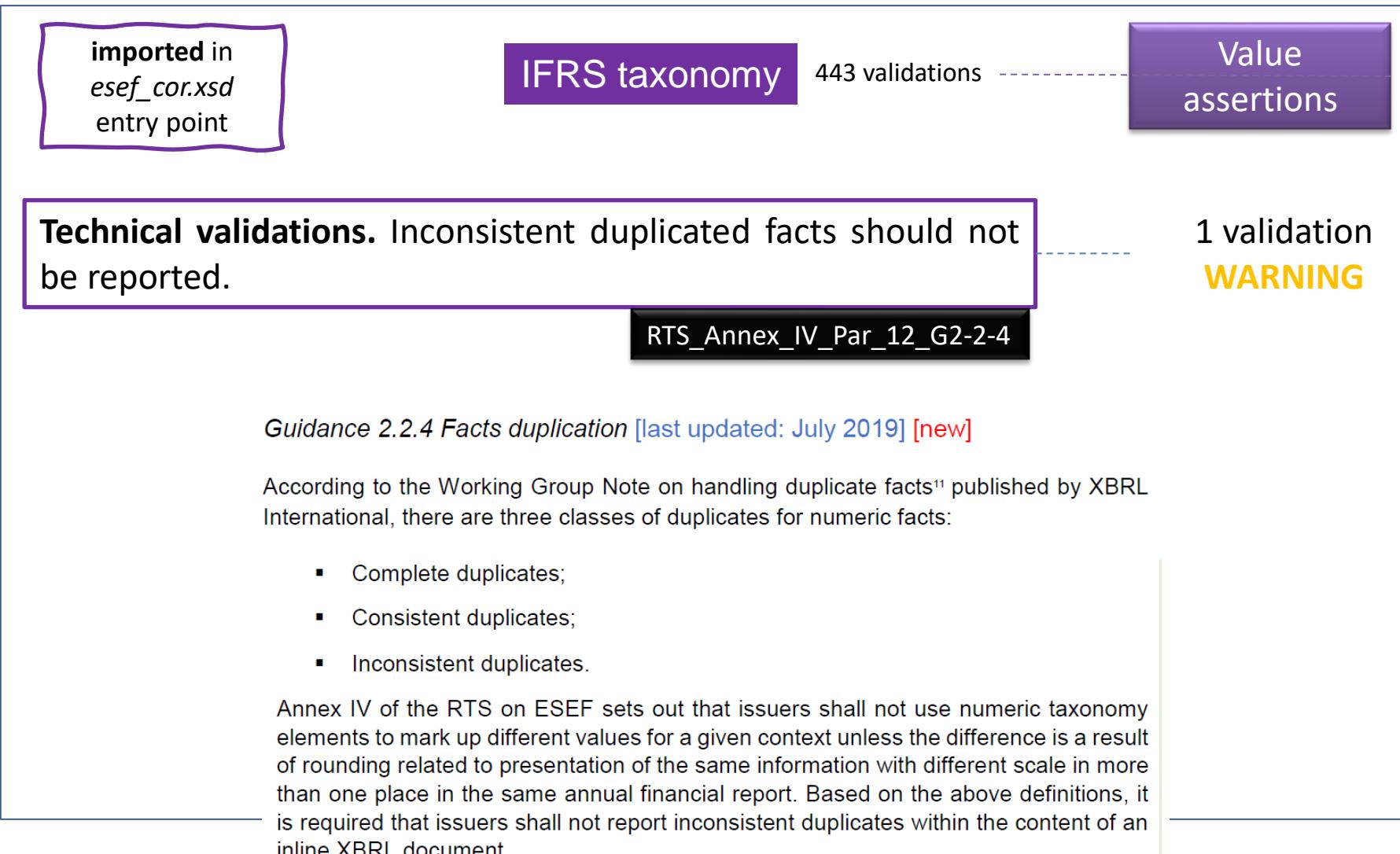
1 validation  
**WARNING**

RTS\_Annex\_IV\_Par\_12\_G2-2-4

Code	Reference	Description
RTS_Annex_IV_Par_12_G2-2-4	RTS Annex IV Par 12; G2.2.4	Inconsistent duplicates must not appear in an inline XBRL report

ESEF CONFORMANCE SUITE

## IFRS TAXONOMY VALIDATION RULES - Technical validations



## IFRS TAXONOMY VALIDATION RULES

# Test case	Reference	Taxonomy package path	Description	Variation description	Expected result
121	RTS Annex IV Par 12; G2.2.4	tests\RTS_Annex_IV_Par_12_G2-2-4\TC1_valid.zip	Inconsistent duplicates must not appear in an inline XBRL report	Inline XBRL document without duplicates	Valid
122		tests\RTS_Annex_IV_Par_12_G2-2-4\TC2_valid.zip		Inline XBRL document with complete duplicates	Valid
123		tests\RTS_Annex_IV_Par_12_G2-2-4\TC3_valid.zip		Inline XBRL document with consistent duplicates	Valid
124		tests\RTS_Annex_IV_Par_12_G2-2-4\TC4_invalid.zip		Inline XBRL document with inconsistent duplicates	Invalid

ORIGINAL

```
<ix:nonFraction name="ifrs-full:NoncurrentAssets" format="ixt:numcommadecimal"
    contextRef="E2018" decimals="-3" unitRef="EUR" scale="3">
    1 234
</ix:nonFraction>
```

COMPLETE

```
<ix:nonFraction name="ifrs-full:NoncurrentAssets" format="ixt:numcommadecimal"
    contextRef="E2018" decimals="-3" unitRef="EUR" scale="3">
    1 234
</ix:nonFraction>
```



CONSISTENT

```
<ix:nonFraction name="ifrs-full:NoncurrentAssets" format="ixt:numcommadecimal"
    contextRef="E2018" decimals="-5" unitRef="EUR" scale="6">
    1,2
</ix:nonFraction>
```

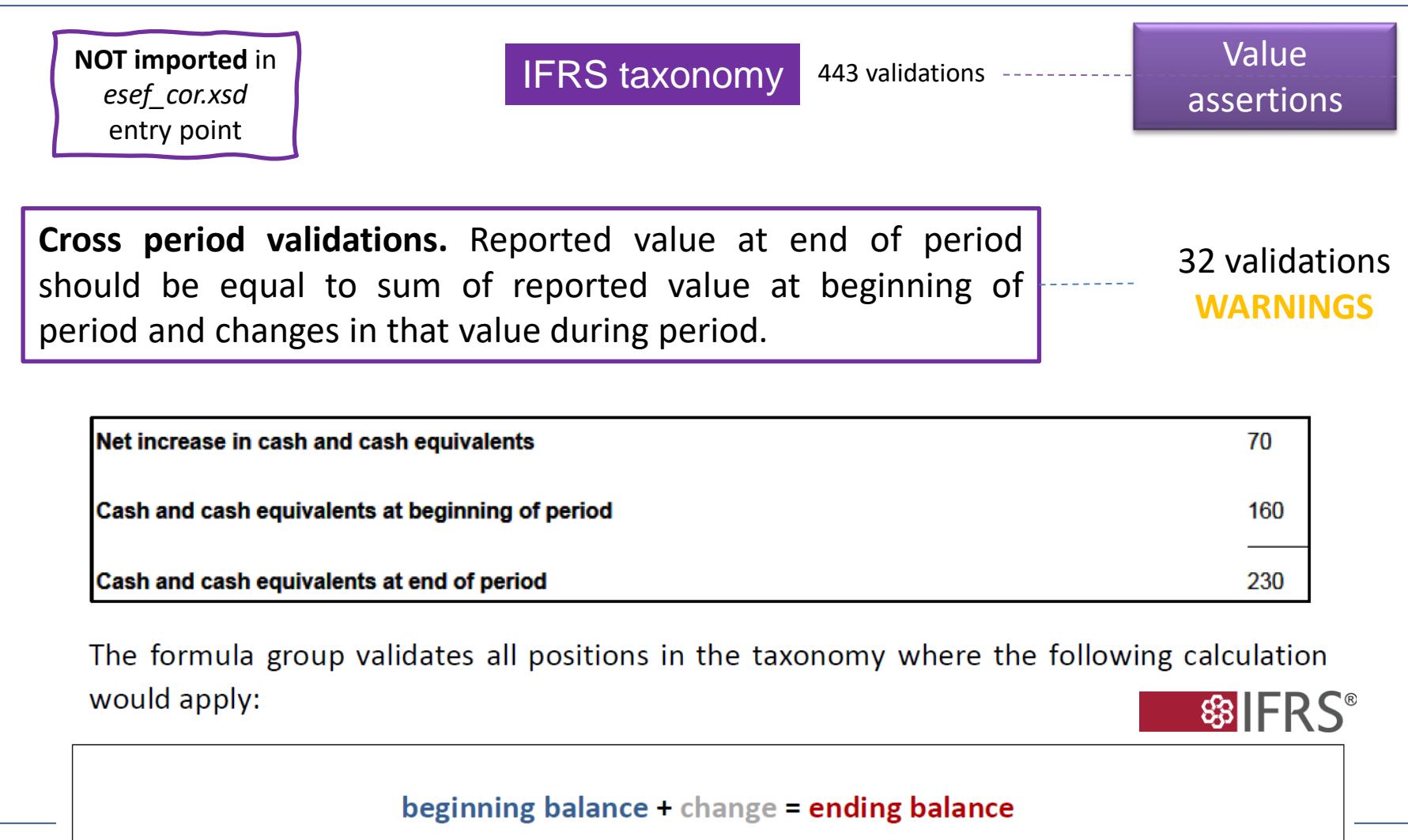


INCONSISTENT

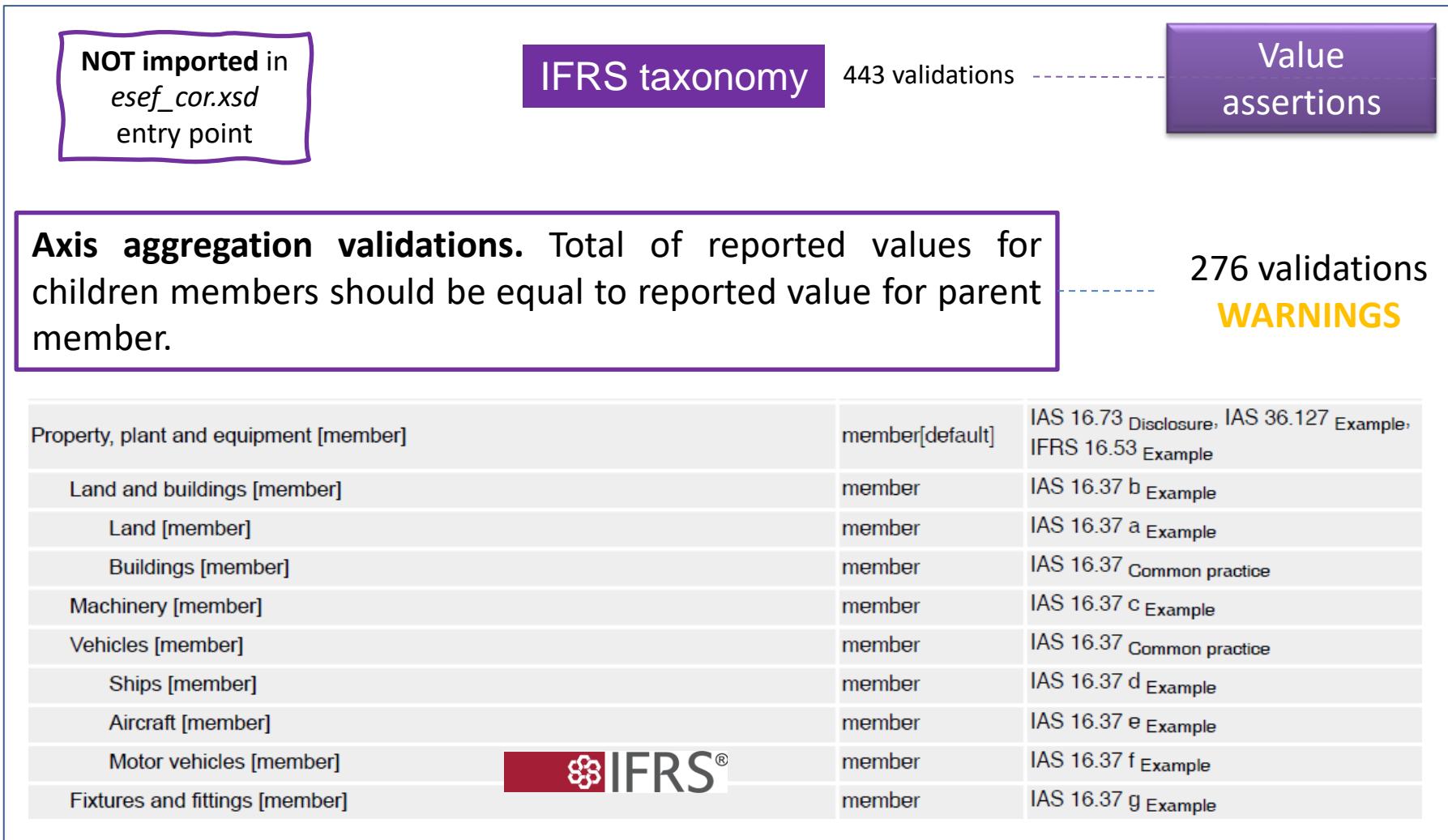
```
<ix:nonFraction name="ifrs-full:NoncurrentAssets" format="ixt:numcommadecimal"
    contextRef="E2018" decimals="-3" unitRef="EUR" scale="3">
    9 999
</ix:nonFraction>
```



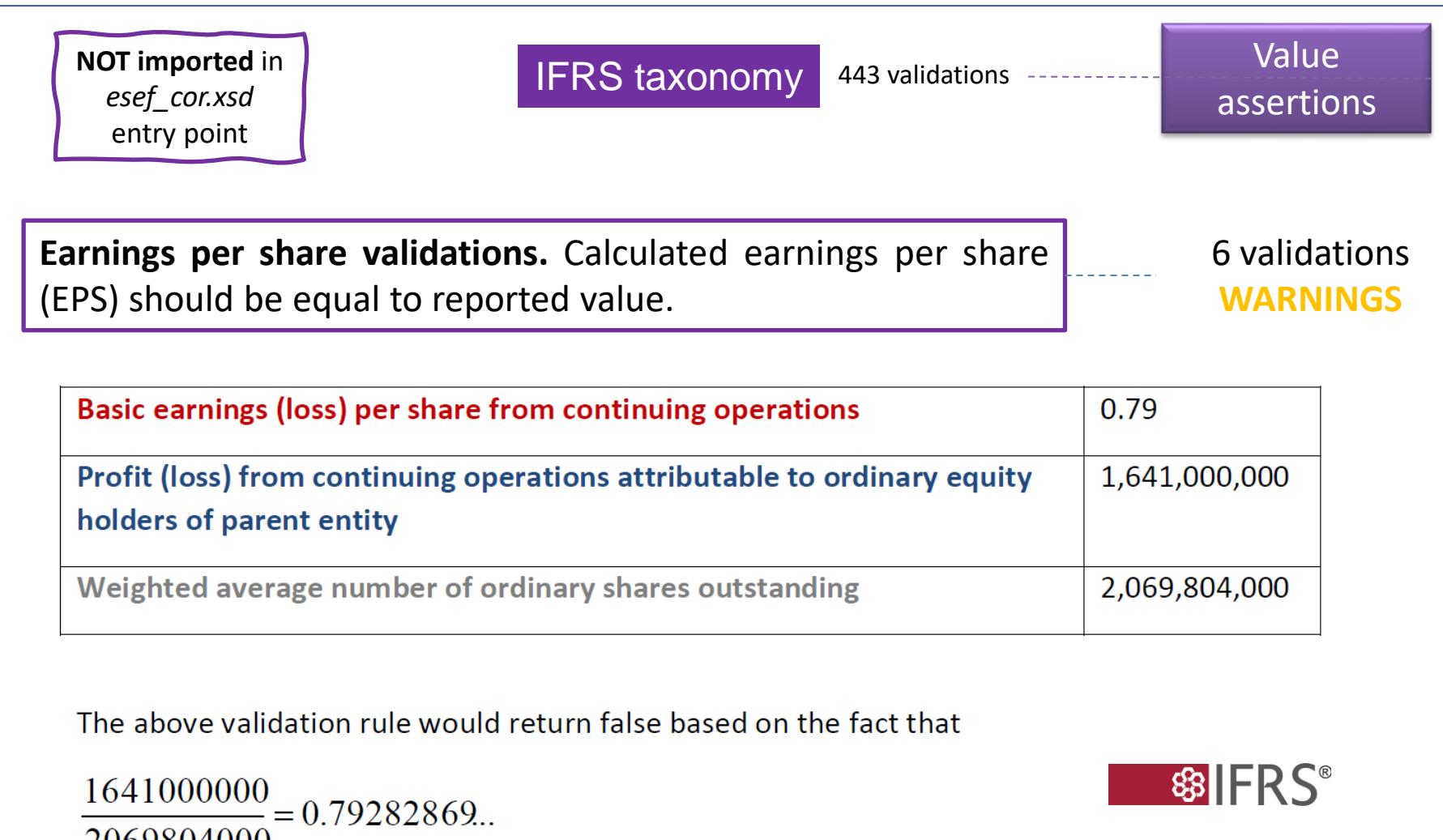
## IFRS TAXONOMY VALIDATION RULES - Cross period validations



## IFRS TAXONOMY VALIDATION RULES - Mandatory mark-up validation



## IFRS TAXONOMY VALIDATION RULES - Mandatory mark-up validation



Thanks!