



CEN/WS XBRL
CEN/WS XBRL - eXtensible Business Reporting Language (XBRL)
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Introduction

The eXtensible Business Reporting Language (XBRL) specification provides a high degree of flexibility in the creation of XBRL instance documents. The following set of rules limits the freedom of choice for the benefit of clear guidance on preparation and validation of instance documents and an increase of interoperability between computer applications. They also facilitate the analysis and comparison of instance documents for preparers as well as receivers of XBRL in the reporting process.

These filing rules intend to decrease the reporting burden for reporting entities in Europe thus amendments to these rules by one or more regulators may contradict this objective.

This guidance is in the form of notes in association with the pertaining requirements clause and uses the terms “MUST” (strong recommendation), “SHOULD” (recommendation) and “MAY” (possibility). Organizations wishing to implement this CWA (CEN Workshop Agreement) would be expected to consider all recommendations where the terms "MUST" and “SHOULD” are used.

Objective

The following set of rules provides guidance on the preparation and validation of instance documents in XBRL format. The rules in this document aim to facilitate the analysis and comparison of reporting data as well as the interoperability of computer applications. The fundamental use case that guides the rules is the submission, by a reporting entity, of its regulatory filings, and the consumption of those regulatory filings by several reporting applications.

Target Audience

This document is intended for a technical audience and assumes that the reader has a working knowledge of the XBRL 2.1 and the XBRL Dimensions 1.0 Specifications and has a basic understanding of XML, Namespaces, and XML Schema. To readers with XML knowledge, many of the guidelines in this document will be familiar however, other rules originate from features that are XBRL-specific and therefore the reasoning behind these rules may be less obvious. Where appropriate, the rules are accompanied by a brief explanation.

To ease understanding for software developers implementing these rules in their reporting system, an UML model has been created to show the relationships between the different XBRL objects mentioned in this document.

Relationship to Other Work

The guidelines in this document pertain to XBRL filings. Parts of this document reiterate for expository clarity certain syntactic and semantic restrictions imposed by XBRL, but this document does not modify XBRL. In the event of any conflicts between this document and XBRL, XBRL prevails. This document does place additional restrictions beyond those prescribed by XBRL.

Scope

The rules in this document have been created for regulatory filings in the context of European supervisory reporting. In this document, “regulatory filings” encompasses European reporting standards that are published by an European supervisory authority and accompanied by an XBRL taxonomy as well as extensions on these taxonomies provided by national supervisors.

Normative references

- [XBRL 2.1](#)
- [XBRL Dimensions 1.0](#)
- [XBRL Registry specification 1.0](#)
- [XBRL Formula specification 1.0](#)

Terms and definitions

Applicable taxonomy

An XBRL taxonomy recognised to use as a base for filings in a given filing system.

Data point

A data point is an information component that is defined by a supervisory authority to be sent in an instance document. In XBRL a data point is represented by a fact, its value and related dimensional combinations.

Dimension

A *dimension* is an `xs:element` in the `substitutionGroup` of `xbrldt:dimensionItem`; it relates to the ability to express multidimensional information;

Example: profit from sales could be presented by products, regions, segments, etc. To express such relations XBRL International developed the Dimension 1.0 Specification, which enriches the general XBRL Specification with rules and procedures on how to construct dimensional taxonomies and instance documents. In a presentation view a dimension can be viewed as an axis in a table.

Entrypoint

An entrypoint is a schema or linkbase in the applicable taxonomy that represents the filing requirements and gets mentioned in the instance by the reporter.

Fact

A fact is an occurrence in an instance document of an element with a mandatory `contextRef` attribute and optional attributes like `unitRef`, `xml:lang` or `xsi:nil`.

Filer

A reporting entity.

Filing

A filing is the fundamental unit of information that is transmitted to a filing system for receipt, validation, and acceptance. It is the conveyance of an XBRL instance document or series of XBRL instance documents.

Filing system

A system in which XBRL instance documents are filed, received, analysed and redistributed.

Footnote

A footnote is used to associate text annotations with particular facts in an XBRL instance document.

Instance document

An instance document is an XBRL file carrying facts. An instance document originating from a filer can only be sent as part of a filing. A filing comprises of one or more instance documents.

Linkbase

A linkbase is an XML file according to the XBRL 2.1 specification, containing relationships between concepts, resources and concepts and resources providing labels and references. There are different kinds of linkbases. One of them is the formula linkbase containing business rules in the syntax as prescribed by the XBRL Formula Specification.

Publisher of the schema

Organisation responsible for publishing a given XBRL taxonomy.

Reporting entity

A reporting entity is an institution or company with an obligation to prepare supervisory reports for national or European supervisory authorities.

Taxonomy

In the XBRL context, an electronic dictionary of business reporting elements relevant for reporting business data. A taxonomy is composed of an XML Schema and one or more linkbases directly referenced by that schema.

Taxonomy creator

see *Publisher of the schema*

XBRL specific terms like context, unit, period, entity, s-equal, v-equal

see [XBRL 2.1](#)

Symbols and abbreviations

UML

Unified Modelling Language

W3C

World Wide Web Consortium

XBRL

eXtensible Business Reporting Language

XML

eXtensible Markup Language

Rules

Filing syntax rules

- **1.01 The file name of an instance document SHOULD follow the rules of the national filing system.**

There is no prescribed general way of handling instance document file names.

Different naming conventions exist around the world, mostly conveying some kind of meaning about the sender, the reported filing or reported period.

- **1.02 Reporting entities SHOULD use one of the taxonomies as specified in the filing system as the applicable taxonomy.**

A listing of all taxonomy files respective modules recognised in the filing system should be provided on a web location.

- **1.03 The encoding of all instance documents SHOULD be "UTF-8".**

Several standards exist on the representation and handling of text. Some of the standards like ISO-8859-1 are widely used in various countries but the standards itself are largely incompatible with each other. UTF-8 is the preferred and most used encoding in HTML documents and therefore defined as Best Practice. It is necessary to specify the encoding attribute in the prologue of an instance document.

- **1.04 Reporting entities SHOULD use only one of endpoint schemas as specified in the applicable taxonomy.**

It is recommended to refer to a single endpoint schema in an instance document and therefore include only one link:schemaRef element.

- **1.05 Instance documents MUST be XBRL 2.1 and XBRL Dimensions 1.0 valid.**

Each instance document in the filing is tested separately for XBRL 2.1 validity. In order to increase the likelihood that instance documents pass validation, filers are encouraged to validate their compliance with the XBRL 2.1 Specification prior to submission.

- **1.06 The instance documents SHOULD be valid with regards to XBRL Formula as defined in the applicable taxonomy.**
Any formula linkbase discovered by the XBRL software from opening the endpoint schema can contain tests on the quality of the reported data. The tests that report an error on these data SHOULD be corrected. There MAY be tests that produce only warnings. Solving these warnings depends on the message content and the filer perspective on them.
- **1.07 Reporter extensions MUST NOT be created.**
XBRL Taxonomies can be extended by anybody with the proper technical knowledge. Filings to European Regulatory Authorities are 'closed form' i.e. all data points allowed by the regulator are in the taxonomy. There can be no extension of the taxonomy by reporting entities to report more data points to the regulator.
- **1.08 Reporters SHOULD send always the full applicable dataset for an endpoint schema in an instance document.**
In case of corrections it is recommended not to send partial data with just the corrected facts. Non-complete submissions could lead to invalid instance documents and might raise conflicts with already processed data in the reporting system of the receiver.

Instance syntax rules

- **2.01 Attribute @xml:base SHOULD NOT appear in any instance document.**
XML processors interpret this attribute differently, so it SHOULD not be used.
- **2.02 link:schemaRef MUST contain the full URL as published on the internet**
The version of any report is represented in folder names, not in URI namespaces. To correctly interpret the reported facts the proper endpoint schema and its taxonomy must be present in the instance by including the full path (including the folder with the version indicator in it) in the link:schemaRef element.
- **2.03 xml version in the instance MUST be 1.0**
Although version 1.1 exists, XBRL instances MUST be based on version 1.0.
- **2.04 Declared namespace prefixes SHOULD be used**
Declaring unused namespaces is uncalled for and clutters the instance document.
- **2.05 Declared namespace prefixes SHOULD mirror the namespace prefixes as defined by schema author(s)**
The W3C, XBRL International and the taxonomy author all assign namespace prefixes to their schema's. Human interpretation of the instance could be confused when these namespace prefixes are not followed in the instance.
- **2.06 There MUST NOT be more than one link:schemaRef in an instance**
Taxonomy authors will make sure that a single endpoint schema needs to be referred to in the instance. This endpoint will refer all required data points.
- **2.07 link:linkbaseRef MUST NOT be used**
Endpoints will be defined by means of a schema. And considering the fact that footnote linkbases are not allowed, there is no use for link:linkbaseRef.
- **2.08 xs:annotation/xs:documentation SHOULD NOT be used.**
Verbose comments inside the instance that do not get reported as a fact will be ignored by the regulator. These comments clutter the instance and have no use to the regulator.
- **2.09 xml comments SHOULD NOT be used.**
Verbose comments inside the instance that do not get reported as a fact will be ignored by the regulator. These comments clutter the instance and have no use to the regulator.

Context related rules

- **2.10 xbrli:xbrl/xbrli:context MUST NOT have duplicates.**
An instance document must not contain equivalent xbrli:context elements. The two sub-elements of xbrl:context xbrli:segment and xbrli:scenario elements are tested for equality of their children without regard to order. Contexts are defined to be equivalent if they have S-equal identifiers, equal dateUnion values for startDate, endDate and instant (respectively), and segment or scenario element children with equal QNames for each explicit dimension.
- **2.11 Id attributes SHOULD NOT contain any semantic meaning.**
Even though there is no limitation on the length of an id attribute it is recommended to keep it as short as possible. Id attributes should also be abstract.
- **2.12 There MUST NOT be unused xbrli:context.**
Unused contexts (contexts which are not referred to by facts) clutter the instance and add no value.
- **2.13 xbrli:identifier/@scheme MUST follow the pattern recognised in the filing system.**
It is recommended to use a proprietary national id code with the scheme referring to the corresponding national central bank.

Example: `<xbrli:identifier
scheme="http://www.kredittilsynet.no">N012345678</xbrli:identifier>`

- **2.14 xbrli:identifier MUST have a number or identifier recognised in the filing system as its content.**
See explanation on rule 2.13
- **2.15 All xbrli:identifier content MUST be identical.**
There can only be one reporting entity of an instance. Even if the content of the instance deals with a group of companies, there is only one entity reporting the instance to the regulator.
- **2.16 All xbrli:identifier/@scheme content MUST be identical.**
The scheme attribute MUST correspond to the identifier of the reporting entity and there can only be one scheme defined for the reporting entity in an instance document.
- **2.17 All xbrli:xbrl/xbrli:context/xbrli:period date elements MUST have ccyy-mm-dd format.**
The XBRL specification of this element has made it possible to enter a date or a dateTime. European regulators only allow dates.
- **2.18 xbrli:xbrl/xbrli:context/xbrli:period/xbrli:forever MUST NOT exist.**
The extreme version of duration is 'forever'. The XBRL specification has created this to solve problems with dates starting 'at the beginning' and ending 'never'. E.g. the name of the filer has in general no end date. The regulator is only interested in the type of data for the reported time segment that has a defined starting and ending date.
- **2.19 xbrli:startDate and xbrli:endDate in the same context MUST NOT have the same date.**
Note that XBRL 2.1 interprets a date used as a context start date as “midnight at the beginning of” that day. A date used as an instant or endDate in a context means “midnight at the end of” that day.

Example: a company reporting at a May 31st, 2009 fiscal year-end will have contexts whose end date-time is midnight at the end of 2008-05-31 (the prior fiscal year) and contexts whose start date-

times are midnight at the beginning of 2008-06-01 (the current fiscal year). It will not have any contexts with start date-time of midnight at the beginning of 2008-05-31, and no contexts with end date-time of midnight at the end of 2008-06-01.

- **2.20 In an instance document reporting a fiscal year, non-numeric facts containing text about any portion of that or a prior year MUST have an @contextRef to an xbrli:context for the reporting period year.**

Example: in a fiscal year 2009 report a company describes litigation settled in fiscal year 2007. Nevertheless, the disclosure text should be in a context for fiscal 2009. A reporting period begins at 00:00:00 of its first day and ends at 24:00:00 of its last day, which is the XBRL 2.1 default for periods. Only the date, not the time part of the ISO 8601 date-times, should be used in contexts.

- **2.21 In an instance document reporting a fiscal year-to-date, the non-numeric facts containing text about any portion of the year-to-date or prior year MUST have an @contextRef to an xbrli:context representing the year-to-date.**

Example: a company completes an acquisition in its second fiscal quarter. In its 3rd quarter fiscal report, the Acquisitions note contains text describing that same acquisition. The 3rd quarter text should be in the context for the first nine months (that is, the year-to-date).

- **2.22 In an instance document the periods defined in the contexts SHOULD refer to the same reporting period.**
The dates defined in instant or duration should not exceed the first or the last day of the reporting period.
- **2.23 xbrli:segment MUST NOT be used.**
As xbrli:scenario and xbrli:segment elements are treated as mutually exclusive, using both of them is prohibited.

Fact related rules

- **2.24 There MUST NOT be two facts having the same element name, equal contextRef attributes, and if they are present, equal unitRef attributes and xml:lang attributes, respectively.**
An instance document must not have more than one fact having S-Equal element names, equal contextRef attributes, and if they are present V-Equal, unitRef attributes and xml:lang attributes, respectively.
The values of the id attribute and the text content of the element are not relevant to detection of duplicate facts. Other rules forbidding equivalent xbrli:context and xbrli:unit elements ensure that duplicate values of the contextRef and unitRef attributes can be detected without dereferencing. The predicate V-Equal is as defined in the XBRL 2.1 specification. The V-Equal test is sensitive to the underlying data type, so the decimals attribute of '-6' is V-Equal to decimals '-06.0'. In unusual cases the same fact may be presented with different levels of detail, such as "123456 Shares with decimals equal to 'INF'", and "120000 Shares with decimals equal to '-3'". Instead of including both facts in the instance, the instance should contain only the more precise one.

- **2.25 @precision MUST NOT be used.**
The decimal attribute must be used instead as it holds equivalent information.
- **2.26 @decimals value MUST NOT cause non-zero digits in the fact value to be changed to zero.**
Instance documents must not contain truncations or roundings that result in reductions of the number of significant figures.
If the decimals attribute of a numeric fact is not equal to “INF”, then the value is interpreted as if certain digits were zero.

Example: The table below illustrates correct and incorrect use:

Fact text	Decimals value	Interpreted value	Result
-2345.45	INF	-2,345.45	
-2345.45	2	-2,345.45	
-2345.45	0	-2,345.00	Error
-2345.45	-2	-2,300.00	Error
-2345.45	-3	-2,000.00	Error
-2345.45	-6	0000.00	Error

This rule is valuable when XBRL Formulas are used to evaluate the correctness of the data.

- **2.27 The @decimals value MUST correspond to the accuracy of the corresponding amount as reported in the regulatory filing.**
The decimals attribute influences how numbers are interpreted in XBRL and any value for the decimals attribute other than the value INF implies rounding or truncation. Use the following table to select the correct value of the decimals attribute for a fact so that it corresponds to the value as presented (most often rounded) in instance documents.

Accuracy of the amount	Value of decimals attribute
Exact monetary, percentage, basis point or any other amount	INF
Rounded to billions	-9
Rounded to millions	-6
Rounded to thousands	-3
Rounded to units	0
Rounded to cents	2
Rounded to a whole percentage	4

Examples: The table below illustrates correct use.

Fact	Value	Value of decimals attribute
A percentage of (exactly) 46%	.46	INF
A (rounded) profit margin of 9.3%	.093	3
A (rounded) amount “in thousands” of 100	100000	-3

A (rounded) amount "in thousands" of 100	100200	-2
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The decimals attribute is not a scale factor. The decimals attribute is not a formatting code; it does not indicate that the digits in the instance must subsequently be presented to a user in any particular way.

- **2.28 The @xsi:nil="true" MUST NOT be used for anything other than conveying a value that is different from both "zero" and not reporting the fact at all.**

Data related to white cells could be reported with the according value, as zero or as unknown. The table below shows the different possible solutions:

zero value	The value of the fact is "0".	<p-cm-ca:CapitalRequirements decimal="0" unitRef="EUR" contextRef="ctx_1">0</p-cm-ca:CapitalRequirements>
nil value	The value of the fact is not known or can't be received.	<p-cm-ca:CapitalRequirements xsi:nil="true" unitRef="EUR" contextRef="ctx_1"></p-cm-ca:CapitalRequirements>
not applicable information	The value is inapplicable.	The fact doesn't appear in the instance.

- **2.29 The content of a numeric fact MUST NOT have a scale factor.**

Examples:

The value "twenty thousand" may appear in a numeric fact as any legal decimal representation of 20,000, such as 20000, 20000.0, or 020000. It must not appear as "20".

The value "20%" may appear in a numeric fact as any legal decimal representation of .2, such as 0.2, 0.20, 000.2000.

The value "20%" must not appear in a numeric fact as "20", "20/100", "20%" or any variation of the integer "20".

- **2.30 For non numeric facts: The language used MUST be clearly identified.**
The language used on string based facts needs to be identified. This can be done by declaring the @xml:lang on the xbrli:xbrl element just once, or on every string based fact individually. No rules have been set for regulators allowing multiple language reportings (choices are to support all languages in a single instance or to require multiple, language based, instances).
- **2.31 @id on individual facts SHOULD NOT be used.**
The @id on individual facts is meant to connect texts in the form of a footnote, which is prohibited.

Unit related rules

- **2.32 xbrli:xbrl/xbrli:unit MUST NOT have duplicates.**
Element xbrli:xbrl must not have equivalent child xbrli:unit elements. Units are equivalent if they have equivalent measures or equivalent numerator and denominator.

Measures are equivalent if their contents are equivalent QNames. Numerators and Denominators are equivalent if they have a set of equivalent measures.

- **2.33 There MUST NOT be unused xbrli:xbrl/xbrli:unit.**
Unused units (units which are not referred to by facts) clutter the instance and add no value.
- **2.34 xbrli:xbrl/xbrli:unit declarations SHOULD adhere to XBRL international unit registry content.**
XBRL 2.1 already enforces the requirement that a fact of type xbrli:monetaryItemType must have a unitRef whose xbrli:measure is an ISO standard currency. A standard numeric data type registry is similar but broader: it has a schema with numeric type declarations, and each numeric data type is associated with consistent unit declaration measures, numerators and denominators.
<http://www.xbrl.org/utr/utr.xml>
- **2.35 xbrli:xbrl/xbrli:unit values MUST NOT imply a scale factor on a currency.**
To express amounts in US Dollars, use only xbrli:unit with one xbrli:measure element whose content is the QName iso4217:USD. Do not define units such as “thousands of USD”, “millions of GBP”, or “pence”.
- **2.36 An instance document SHOULD contain only a single currency unit.**
Amounts that a reported should refer to only to one xbrli:unit with a xbrli:measure that content is a QName starting with iso4217.

Footnote related rules

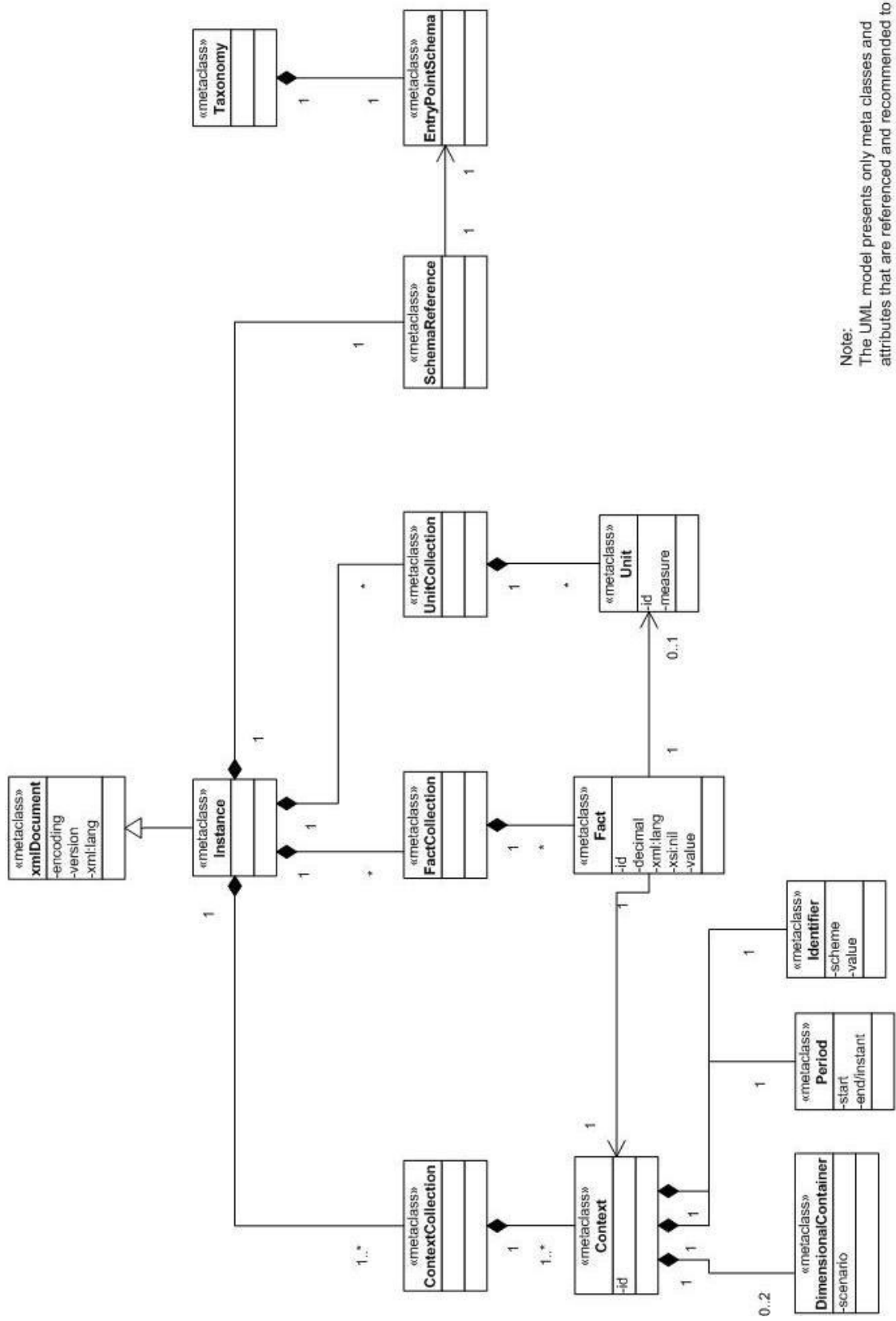
- **2.37 Footnotes MUST NOT be used in instance documents.**
The tables of the European reporting frameworks consist of white, gray and crisscrossed cells. White cells can be reported if data is available and can be retrieved from the database of the reporting entity. Gray cells could be reported but they are not mandatory because the level of detail is excluded from the reporting. Crisscrossed cells make no sense from an economic point of view. Additional information to white cells outsourced in footnotes is not allowed.

Bibliography

- [GFM](#)

Annex

European Filing Rules: UML model



Note:
The UML model presents only meta classes and attributes that are referenced and recommended to be used in the European Filing Rules document.