XBRL US Center for Data Quality

Data Quality Committee Guidance and Validation Rules
Public Exposure and Comment

Comments received as of December 14, 2016

Public review and comment is a critical part of improving the usability of XBRL filed with the SEC. The following proposed rules and guidance address common XBRL input errors and are **available for comment via the public exposure process through December 13, 2016 at https://xbrl.us/public-review**.

This document contains details for all rules and guidance exposed during this period. To post your comments, you will need an XBRL US Web account and will need to agree to these Terms and Conditions for Public Comments as part of the comment process. Comments received can be reviewed without logging in.

When providing feedback about a rule or guidance, please consider the following:

- What is the concern with the proposed rule or guidance? Please be as specific as possible and include examples using data submitted to the SEC.
- How should the rule or guidance be revised?
- How does the revision to the rule or guidance improve the usability of the data?

Use this link for general feedback on all rules and guidance.

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instrument axis. The following guidance provides limitations on the use of certain axis and member combinations that should be adhered to when tagging financial information using the US GAAP Taxonomy.

Negative Values – Additions to Existing Rule DQC_0015

Rule ID: DQC_0015-V3 - https://xbrl.us/dqc_0015-v3/

This rule was initially approved by the Committee on November 18, 2015 – below are additions to the initial release on which the Committee is requesting comment.

Additional Non-negative Elements

See file DQC_0015 List of Elements V3 which provides a list of additional elements that should not be negative. The rule tests whether these elements have a negative value in an XBRL document. The elements are listed in order of most commonly occurring errors.

Please use the General Feedback form to comment on the previously-approved rule.

Comments: https://xbrl.us/data-rule/dqc_0015-v3/#comments

4 comments on "Negative Values – Additions to Existing Rule"

1. *Shelly Wavrin* says:
   Wednesday, October 26, 2016 at 4:21 PM

   Please consider removing us-gaap_ImpairmentOfLongLivedAssetsHeldForUse from the listing of non-negative elements, as a negative value may represent a reversal of an estimate.

2. *Campbell Pryde* says:
   Wednesday, November 2, 2016 at 12:14 AM

   A filers balance sheet can reflect certain negative partners' capital balances due to the application of GAAP to asset dropdown transactions which requires these transactions to be recorded at the parent's historical cost (ASC 805-50-30). The difference between the consideration given and the historical cost received is typically recorded as a debit to partner's capital. When the results of these debit transactions exceeded the natural credit balances of these accounts, this results in negative balances on the filers balance sheets. This treatment, and resulting negative partners' capital account balances, is consistent with companies in the REIT industry.

   1. *Campbell Pryde* says:

Wednesday, November 2, 2016 at 12:14 AM

This comment relates to the element OtherOwnershipInterestsCapitalAccount.

3. *Belayneh Alemayehu* says:
   Monday, November 7, 2016 at 1:59 PM

   Please consider removing us-gaap:NonInvestmentAssetsLessNonInvestmentLiabilitiesPercentOfNetAssets from non-negative concepts. The understanding is that this element is a net (percentage value) of non-investment assets and non-investment liabilities, which can go either way. Also, the corresponding monetary tag us-gaap:NonInvestmentAssetsLessNonInvestment Liabilities is not currently part of Negative Values validation check.

Update - Tagging Axis and Members Using the US GAAP Taxonomy

Guidance - Update - https://xbrl.us/guidance-tagging-v2/

The XBRL US Data Quality Committee (DQC) has developed prescriptive guidance for issuers submitting XBRL files that contain financial statements to the Securities Exchange Commission (SEC). This guidance provides for uniform, consistent tagging of financial data using the US GAAP taxonomy to improve the usability of such data. The DQC has also developed rules that test XBRL files for conformity with the guidance. The additional guidance included in this document is being exposed for public review. Once approved for release, the Committee's Guidance on Tagging Axes and Members will be updated to include this information.

Appropriate Modeling of Axis and Members

In its Staff Observations, the SEC suggested filers utilize the pre-defined table structures included in the US GAAP taxonomy. Certain axes in the US GAAP taxonomy should only have certain members, otherwise consumption of the data is adversely impacted because the resulting axis and member combinations are nonsensical, e.g., reporting a type of currency as a member on a debt instrument axis. The following guidance provides limitations on the use of certain axis and member combinations that should be adhered to when tagging financial information using the US GAAP Taxonomy.

Statement Equity Components [Axis] *(StatementEquityComponentsAxis)*

This axis is used to disaggregate shareholders equity into all its possible components. This axis should only include sub categories of shareholders equity and partnership capital on this axis. This axis can only have those members identified as components of stockholder equity in the US GAAP taxonomy, the additional members identified below and extension members which may be specific to a given company that are not included in the taxonomy. (DCQ_0001.75)

Element Name	Label	Namespace	Documentation
WarrantsNotSettleableInCashMember	Warrants Not Settleable in Cash [Member]	us-gaap	Warrants not settleable in cash that are classified in shareholders' equity.
ContingentConsiderationClassifiedAsEquityMember	Contingent Consideration Classified as Equity [Member]	us-gaap	Contingent consideration in a business combination that is classified in shareholders' equity.
EquityIssuedInBusinessCombinationMember	Equity Issued in Business Combination [Member]	us-gaap	Equity issued by an entity in a business combination that is classified in shareholders' equity.
TrustForBenefitOfEmployeesMember	Trust for Benefit of Employees [Member]	us-gaap	Trust created by the entity that exists for the benefit of its employees, such as pension and profit-sharing trusts that are managed by or under the trusteeship of the entity's management.

Statement Scenario [Axis] *(StatementScenarioAxis)*

This axis is used to indicate different scenarios that can impact a company. This axis can only have those members defined on the Statement Scenario axis in the US GAAP taxonomy and extension members. No other members from the US-GAAP taxonomy should be used on this axis. (DCQ_0001.76)

Range [Axis] *(RangeAxis)*

The range axis was introduced by the FASB to eliminate the need to define multiple line item elements for every concept that has a maximum and a minimum value in a range. Rather than define separate XBRL line items to represent the minimum and maximum values of a concept, a range axis was created. This has the advantage of reducing the number of line items required in the taxonomy and providing the filer with greater flexibility to report ranges of values. The range axis; however, is unlike other axes. Normally an axis is used to subdivide an aggregate population of transactions into smaller groups based on an attribute of the population. For example, Revenues can be subdivided into US and International Revenues based on the attribute of where the goods were physically sold. These two components will add to the total as they still include all sale transactions. The range axis is different, it is used either to identify the maximum amount or minimum amount of a given population or to define the upper or lower limit or a range of possible values. The range axis also contains a third member called WeightedAverageMember, this member is used to report the weighted average of a population. The following general principles should be followed when using the Range Axis

- Do not use the range axis where an element exists that is already explicitly defined as the minimum and maximum. For example the *elementShareBasedCompensationSharesAuthorizedUnderStockOptionPlansExercisePriceRangeLowerRangeLimit* should not use the range axis with the minimum member.
- Do not add extension elements to the range axis, such as median, average mode etc. These change the meaning of the element and should not be used with the range axis. In these cases the company should define a new element.
- Do not add members that represent ranges of values such as maturing in a year, maturing in 2 years, maturing in 3 years etc.
- If element implicitly includes weighted average then do not add the weighted average member.
- Do not use the range axis for earliest and latest dates.[1]

[1] The FASB has issued a FAQ on this which states the following:

Is it appropriate to use RangeAxis for dates?

TheRangeAxis can be used in instances in which the value is useful life. For example, it is common to disclose the useful life of property, plant, and equipment as a minimum and maximum life, and that would be an acceptable use ofRangeAxis.It would not be appropriate to use RangeAxisfor earliest and latest because those terms are not synonymous with minimum and maximum. [Revised 2014-03]

One comment on "Update – Tagging Axis and Members Using the US GAAP Taxonomy"

1. *Shelly Wavrin* says:
   Monday, October 17, 2016 at 4:45 PM

   DQC_0001.75 Equity Components [Axis]

   Arelle is flagging TreasuryStockCommonMember and TreasuryStockPreferredMember as errors on Equity Components [Axis]. Please add these two members (new elements in 2016 taxonomy) as acceptable members.

General Feedback

One comment on "General Feedback on Public Exposure Drafts"

1. *Somnath Ray* says:
   Monday, October 17, 2016 at 4:33 PM

   I apologize for creating additional work for XBRL.

   In addition to the tagging of XBRL Data we need to provide Semantic Notation for Analytics for visualization of Data as well.
   This will enhance the value of Financial Statements periodically filed with SEC and at the same time facilitate comparison of KPIs; In fact many organizations have switched over to the Semantic Notation for visualizing KPIs which makes the lives of the users easier because all these visualizations follow a common Semantic Notation like we have in music. This is the next big wave in Business Intelligence which is taking place now and let us have XBRL Reports leverage this as well to provide better value to its users.
   IBCS (INTERNATIONAL BUSINESS COMMUNICATION STANDARDS (IBCS) has already

developed Semantic Notations for standardization of visualizations so that it is easy to follow the variances or compare KPIs across different industries or within an organization period to period or across different organizations in the same industry.
To provide guidance I have shared the link from IBCS as given below and also shared a document as thumb rule guidance. The XBRL software developers can easily develop this in Inline XBRL.
There are plenty of resources in this website to follow and examples from Financial Reports of top organizations of the World.
http://www.ibcs-a.org/
I have also shared a White Paper on these Semantic Notations as an example as well.
Thank You,
Kind Regards,
Somnath Ray, CPA, Dip IFRS (ACCA UK)
Email: epmray@gmail.com
Cell: (425) 247 8864

Attachment _SAP_IBCS_white_paper_2014-06-18.pdf

APPENDIX

Global Rule Logic

Release date: November 19, 2015

Revised: January 28, 2016

The following guidance applies to all rules, unless the rule documentation specifies otherwise

Rule Numbering Format

The message code of each DQC message is as follows: DQC.US.nnnn.mmm where nnnn is the rule identifier (e.g., 0015 for non-negative rules) and mmm is the index of test within the rule. (The index does not have leading zeros.)

Reporting Period End Date

The reporting period end is the ending date of the Required Context as defined in the SEC EDGAR Filer Manual.

Existence of Components

If one of the components in a comparison does not exist then the comparison will not occur. For example if the rule tests Assets = LiabilitiesAndShareholdersEquity and one of the elements is missing, the test will not run.

Element Name Comparison

When portions of an element name are matched to comparison strings, the comparison is case insensitive unless otherwise stated in the rule. When elements are matched based on their full qualified name (QName), the element name (local part of the QName) comparison is case sensitive and the namespace (URI) comparison follows IETF rules. Element labels are not used for matching unless otherwise stated in the rule.

Decimal Comparison

When comparing two numeric fact values in a rule, the comparison needs to take into account different decimals. Numbers are compared based on the lowest decimal value rounded per XBRL specification. For example, the number 532,000,000 with decimals of -6 is considered to be equivalent to 532,300,000 with a decimals value of -5. In this case the 532,300,000 is rounded to a million and then compared to the value of 532,000,000. (Note that XBRL specifies "round half to nearest even" so 532,500,000 with decimals -6 rounds to 532,000,000, and 532,500,001 rounds to 533,000,000.)

Dimensional Equivalence

All comparisons between fact values occur between facts of equivalent dimensions. A rule will produce a message for each occurrence of the compared facts in equivalent dimensions.

Units

If a non numeric fact is compared with a numeric fact then the rule does not match on units.

Message Format Syntax

The rule message template contains text and parametric reference to arguments of the rule operation, using the syntax ${parameter} to indicate that insertion of a parameter's value is to occur.

Each rule has a dynamic message associated with it that uses ${..} to define the parametric references to elements that may be facts or other data of the filing.

Fact Properties

Facts identified by number
Messages for rules that return facts as model object references can refer to those facts ordinally, beginning with index 1. The references to these facts can include the following properties:

- ${fact1.name} Prefixed name of the fact's concept.
- ${fact1.localName} The local name (without prefix) of the fact's concept.

- ${fact1.label} The label of the fact (standard role, English, although a tool may provide options to select another role, such as terse, and another language). The label is obtained from the extension (filing) taxonomy. If there is no label, the prefixed name is shown instead.
- ${fact1.value} The value of the fact. If numeric, field separators are provided for thousands (comma in en-US locale).
- ${fact1.decimals} The value of the decimals attribute if numeric.
- ${fact1.period} The period (forever, instant date, or start-end dates).
    - ${fact1.period.startDate} Start date
    - ${fact1.period.endDate} End date or instant date
    - ${fact1.period.instant} Instant date
    - ${fact1.period.durationDays} End date – start date, in days
- ${fact1.dimensions} prefixed dimension name = prefixed member name, for each non-defaulted dimension, or "none" if no or all-defaulted dimensions
- ${fact1.unit} non-prefixed unit names, e.g., USD or shares, or "none" if no units.

Facts identified by prefixed name

Facts which are not ordinal arguments may be specified by prefixed name, such as dei:DocumentPeriodEndDate.fact. These are specified as ${dei:DocumentPeriodEndDate.fact.name}, ${dei:DocumentPeriodEndDate.fact.value}, etc. The fields are same as for ordinal fact references, as in the section above. The ".fact." must appear between the prefixed name and property name.

Concepts identified by prefixed name

Concepts may be provided for message argument fact dimensions and their members, for example ${my:FooAxis.label} or ${my:BarMember.label}. Concepts have the following properties:

- ${fact1.name} Prefixed name of the concept.
- ${fact1.localName} The local name (without prefix) of the concept.
- ${fact1.label} The label of the concept (standard role, English, although a tool may provide options to select another role, such as terse, and another language). The label is obtained from the extension (filing) taxonomy. If there is no label, the prefixed name is provided instead.

If there are variable references that can't be resolved, such as missing facts, prefixed named concepts not passed in argument facts or their dimensions, or for any other reason, an error message is logged when using Arelle to indicate the unresolved references. The variable

reference substitutes as “unavailable” in the expanded message text in addition to the error indicating unresolved references.