

Where to start and what to do XBRL Formula



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24th XBRL conference, Abu Dhabi, 21.03.2012

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Agenda

- Objective und short introduction to XBRL formula
- User scenarios

Introduction

background

- Objective of this presentation:
 - Provide guidance to preparers and filers
 - Explain possible application areas of formula linkbase
- Examples are available at the overview section of the XBRL formulas spec website and www.IFRS.org website
- XBRL formula is an extension to XBRL 2.1
- Build as a successor for the calculation linkbase to cover additional validation scenarios
 - Cross period validation
 - Cross instance validation
 - Multi dimensional validations
 - Allow more complex validations than plus minus
- Requires an XBRL processor which does support formula specification

Introduction

background

- Formula is based on generic linkbase
 - Assertion
 - Formula
 - Variable
 - Filter
 - precondition
- Selection of XBRL semantics through so called “aspects”
 - Validation apply when all fact variables do contain values
 - Aspect selection through filters like conceptName, conceptPeriodType, EntityIdentifier, Period,...
- Example: percentage fact ≤ 1

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  <cf:conceptDataType xlink:type="resource" xlink:label="loc_3" id="conceptDataType_2" strict="false">  
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```

Assertion

Variable

Filter

User scenarios

- Cross period validations
- Earnings per share validations
- Axis aggregation validations
- Fact equivalence validations
- Common accounting equivalence validations
- Positive / negative fact validations
- Percentage warning

Cross period validations

	20x2	Aspect
Revenue	6.863.545	
Cost of sales	(5.187.530)	
Gross profit	1.685.015	
Other income	88.850	
Distirbution costs	(175.550)	
Administrative expense	(810.230)	
Other expenses	106.763	
Finance costs	(26.366)	
Profit before tax	654.956	
Income tax expense	(270.250)	
Profit for the year	384.706	Profit, 01.01.20x2 – 31.12.20x2
Retained earnings at start of year	2.171.353	Retained earnings, 01.01.20x2
Dividends	(150.000)	Dividends, 01.01.20x2 – 31.12.20x2
Retained earnings at end of year	2.406.059	Retained earnings, 31.12.20x2

Earnings per share validations

- Scenario: 1 fact with numerator and denominator + single values also available

- Example:

Basic earnings (loss) per share = Profit (loss), attributable to ordinary equity holders of parent entity / Weighted average number of shares

Basic earnings (loss) per share	0.393
Profit (loss), attributable to ordinary equity holders of parent entity	100.000
Weighted average number of shares	254.155

- Rounding !
- $100.000 / 254.155 = 0.39346068\dots$
- *Abs(,Profit (loss), attrib. ...' div ,Weighted average number of shares') – ,Basic earnings (loss) per share' <= Threshold*

Axis aggregation validations

Definition linkbase	
Property, plant and equipment [pi]	
Disclosure of PPE [table]	
Classes of PPE [axis]	
Property, plant and equipment [m]	1.000.000
Land an buildings [m]	800.000
Land [m]	450.000
Buildings [m]	350.000
Machinery [m]	106.000
Vehicles [m]	94.000
Ships [m]	57.000
Aircraft [m]	13.000
Motor vehicles [m]	34.000

Fact equivalence validations

- Dimensional vs. Non-dimensional
- Example:

Aircraft = Aircraft [m] in Property, plant and equipment Axis with primary item „Property plant and equipment

Common accounting equivalence validations

- Common rules to improve quality
- $\text{Assets} = \text{Liabilities} + \text{Equity}$
- $\text{Assets (liabilities)} = \text{Equity}$

- Company specific rules

Positive Negative fact validations

- Simple positive negative rules:
 - Cost of sales has a debit so should be reported as positive number
- Conditional positive / negative rules:
 - Revenue should be positive unless qualified by 'Elimination of intersegment amounts [m] of Operations segments [axis]
- Other company specific rules:
 - Certain concepts bigger as / smaller as

Percentage warning

- Reporting percentages require format 0.XX with unit type pure as defined by XBRL 2.1 spec (equivalent to XX %)
- Still a lot of instances report that wrong

- XBRL formula can also be used as indicator that something might be wrong but not necessarily has to be wrong

Percentage warning

- Websites to start XBRL Formula
- Taxonomy + formula linkbase + sample file
- <http://www.ifrs.org/XBRL/Resources/Resources.htm>
- Formula spec documentation
- <http://www.xbrl.org/WGN/XBRL-formula-overview/PWD-2011-12-21/XBRL-formula-overview-WGN-PWD-2011-12-21.html>



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