# Financial Statement Tables Calculation Check of Required Context

Rule ID: DQC\_0118

### Rule function

This rule identifies inconsistent calculations defined for the Financial Statements. The rule covers the Cash Flow Statement, Statement of Financial Position and the Income Statement. The rule does not apply to the Statement of Changes in Shareholders Equity.

The rule only applies to those financial statements that are defined using a hypercube.

The rule evaluates each line in the financial statements representing an aggregation based on the elements defined in the calculation linkbase.

For each aggregated amount the rule selects the child elements and retrieves the value from the instance document. If the child value does not have a value in the default the rule checks if dimensional values are reported for the element and derives a value by aggregating the dimension. The aggregation is only done for those dimensions that comprise the financial statement table. The rule works on the assumption that each dimension is a well behaved dimension. This means that the dimensional breakdown of the amount is complete and does not represent a portion of the default value for the line item. If a value can be derived from adding two different dimensions, then the dimension which results in the highest value is used.

If the sum of the child elements does not equal the value reported for the aggregation then an error is reported.

The rule will only run for the period representing the required context. This ensures that no false positives are generated for periods that are only partially reported.

### Problem solved by the rule

The intent of the rule is to check that the filer has calculated values correctly. Errors will typically occur for the following reasons:

#### Missing Calculation Child

In these cases the filer has excluded a calculation relationship in the filing. This will result in a calculation inconsistency. All components of a calculation have to be reported in the calculation linkbase.

#### Incorrect Addition

In some cases the components of a value are incorrect because one of the numbers comprising the calculation is entered incorrectly.

#### Dimensional Misalignment

A line item has calculation children but one of the children is the parent line with a dimensional component. Because the calculation components of the parent can not include the parent itself there is no child element defined to capture the value in the calculation tree.

Example rule message

The statement 00200 - Statement - Condensed Consolidated Statements of Operations includes an inconsistent calculation. The value of the concept us-gaap:OperatingIncomeLoss of -89,202,000 in the default should be equal to the sum of its child components defined in the calculation linkbase. The sum of these child components is -89,341,000. The values of the addends is determined by adding the values of the child concepts. If a value is not available then the values associated with the members of the dimension are used to complete the calculation. The values reported in the financial statement in the current reporting period of 2021-01-01 to 2021-03-31 should be complete if the financial statement is to be mathematically accurate and complete. The components of us-gaap:OperatingIncomeLoss that should add to -89,202,000 are comprised of the following:

- CostOfRevenue 139,000

- OperatingExpenses 89,995,000

+ Revenues 793,000

The addends are calculated based on the calculation linkbase defined for 00200 - Statement - Condensed Consolidated Statements of Operations. If addends are missing then the calculation tree should be amended. The rule will add dimension components as well, so if the calculation is correct and the breakdown is a dimension, then check to ensure that the dimensions are defined correctly. Values calculated by adding a dimension member are shown in the calculation.

Total Element : us-gaap:OperatingIncomeLoss

Total Value : -89,202,000

Total period : 2021-01-01 to 2021-03-31

Dimensions :

Rule Element Id:9575

Rule version: 16.0.0

## **For Developers**

The Global Rule Logic document contains general guidelines for implementation of rules.

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.

### **General message template**

The statement {$cube.drs-role.description} includes an inconsistent calculation. The value of the concept {$concept\_item} of {$sum2} {if length($sum2.dimensions.values) > 0 'for ' + $sum2.dimensions.values.join(',') else "in the default"} should be equal to the sum of its child components defined in the calculation linkbase. The sum of these child components is {$addend}. The values of the addends is determined by adding the values of the child concepts. If a value is not available then the values associated with the members of the dimension are used to complete the calculation. The values reported in the financial statement in the current reporting period of {$sum2.period} should be complete if the financial statement is to be mathematically accurate and complete. The components of {$concept\_item} that should add to {$sum2} are comprised of the following:

{$addend\_string}

The addends are calculated based on the calculation linkbase defined for {$cube.drs-role.description}. If addends are missing then the calculation tree should be amended. The rule will add dimension components as well, so if the calculation is correct and the breakdown is a dimension, then check to ensure that the dimensions are defined correctly. Values calculated by adding a dimension member are shown in the calculation.

Total Element : {$concept\_item}

Total Value : {$sum2}

Total period : {$sum2.period}

Dimensions : {$sum2.dimensions.join(', ','=')}

Rule Element Id:{$rule\_id}

Rule version: {$ruleVersion}

### Rule element ID index

The rule element id is used to identify unique elements or combinations of elements tested in the rule.

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| --- | --- |
| Rule Element ID | Elements |
| DQC.US.0118.9575 | Various |