

# Avoiding Common Errors in XBRL Creation

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XBRL US, Inc.

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## Overview

Public companies have submitted over 1,400 financial filings in XBRL format to date to the Securities and Exchange Commission's (SEC) EDGAR system since the mandate for public company reporting in XBRL became effective in June 2009. Over 5,000 problems related solely to the use of the US GAAP Taxonomy have been identified in those filings, ranging from incorrect signs to missing concepts.

This paper explains the kind of common problems that arise and that can be avoided by following rules pertaining to the use of the XBRL US GAAP Taxonomy. These issues are problematic because they ultimately lead to 1) mistakes in how public company financial data is reported and presented, and 2) a lack of comparability in financial fundamentals from company to company. XBRL US has developed a set of checks that can be performed on a public company's XBRL financial statement to highlight these errors and determine how to correct them. The table below shows a portion of the Consistency Checks report that companies would receive on the left-hand side with an explanation of the message outlined in the box on the right-hand side.

### XBRL Consistency Suite – Consistency Checks Reports

Severity	Error Code	URL	Description
ERROR	xbrius-cc.cf.nonneg.4170		Value for concept InterestPaid [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD ] must be zero or positive. The value is -122000000. (id:94170) {InterestPaid [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD ]}
ERROR	xbrius-cc.cf.nonneg.4248		Value for concept PaymentsForOriginationOfMortgageLoansHeldForSale [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD ] must be zero or positive. The value is -80000000. (id:94248) {PaymentsForOriginationOfMortgageLoansHeldForSale [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD ]}
ERROR	xbrius-cc.she.nonneg.1077		Value for concept AdjustmentsToAdditionalPaidInCapitalStockSplit [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD, StatementEquityComponentsAxis=AdditionalPaidInCapitalMember ] must be zero or positive. The value is -48000000. (id:91077) {AdjustmentsToAdditionalPaidInCapitalStockSplit [ entity=entity('http://www.sec.gov/CIK', 'XXXXXXXXXX'), period=duration('2007-01-01', '2007-12-31'), unit=USD, StatementEquityComponentsAxis=AdditionalPaidInCapitalMember ]}

Interest paid should be positive. If it is negative, it implies it is interest received. The company should change the sign or use Interest Received.

This item should be positive. If it is negative, the item Repayments of Mortgages should be used.

This checks that stock split results in an increase in shares and not a decrease in shares issued and outstanding.

## Decision Points in Using the XBRL US GAAP Taxonomy

Transforming US GAAP financial statements into XBRL format requires numerous decision points along the way, regardless of whether one is using a tool in-house or outsourcing to a service provider.

Questions the external reporting executive must answer include:

- Which concept to choose out of the 17,000 available?
- Does my company have a unique reporting situation that may require me to create an extension?
- Should a concept be input as a positive or a negative value?
- Should a concept use a negated label<sup>1</sup> so that the reported data appear the way the company prefers?
- Am I using dimensions<sup>2</sup> correctly?

Problems in XBRL filings are not surprising given the relative newness of the XBRL market and the complexity of XBRL transformation. Public companies should not be penalized for these errors – they should be given the tools and the information to establish best practices and create the highest quality data.

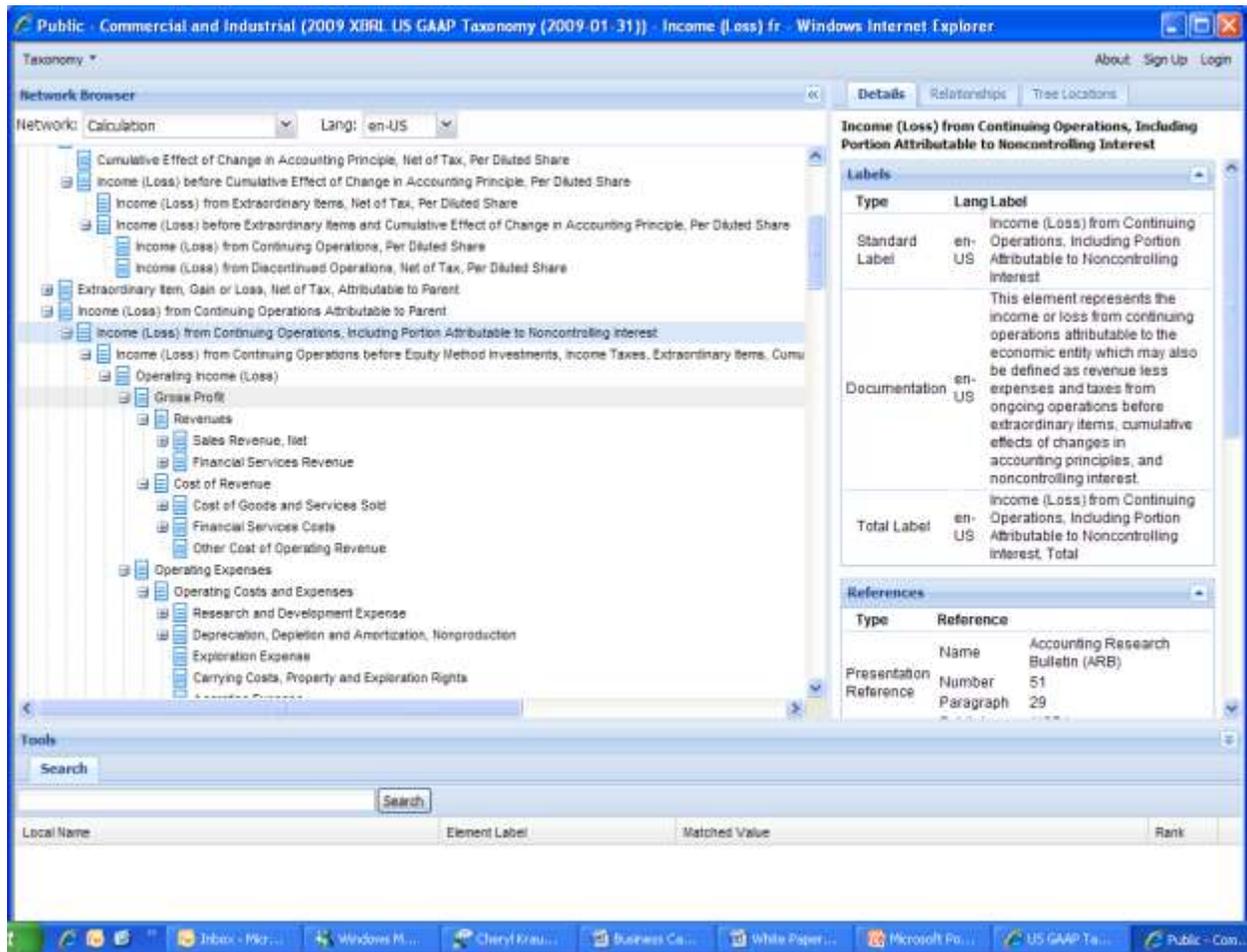
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1 A negated label is one that causes numeric values of an element to be displayed with their sign flipped.

2 Dimensions are the XBRL architecture used to define tables within document.

The digital dictionary or “taxonomy” for US GAAP reporting contains around 17,000 concepts and external reporting managers must identify the elements from within that collection that best match their own financial statement captions. The taxonomy is structured into industry-specific entry points so that preparers can select their own industry group and then narrow the taxonomy down into type of statement, e.g., Statement of Cash Flows, Income Statement, and then into individual disclosures. Taxonomy concepts are presented in a hierarchy so that preparers can identify parent-child relationships and understand which elements roll up into an aggregate. The diagram below shows the hierarchy of terms in the XBRL US GAAP Taxonomy.

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## The Role of XBRL US

XBRL US is the organization that developed the architecture and concepts for the taxonomy used for US GAAP reporting. As the non-profit consortium for XML business reporting standards in the U.S., its mission is to support the implementation of XBRL in US markets through development, working with a goal of interoperability between sectors, and by promoting adoption of XBRL through the collaboration of all business reporting supply chain participants. The Financial Accounting Foundation (FAF) is responsible for ongoing maintenance of the taxonomy. XBRL US supports this by acting as a focal point for all industry participants to provide guidance and best practice on the creation of consistent public company data and by ensuring that companies work with the taxonomy in such a way that the XBRL data reported is an accurate reflection of their financial position. Only by establishing and encouraging public companies to follow a consistent set of rules can we be comfortable that the highest quality data will be created.

To that end, XBRL US has analyzed the filings submitted to date to determine where companies have made errors in building their XBRL financial statements and established “rules” that help public companies navigate successfully through the decision points needed. These rules can be applied to an XBRL-formatted financial statement before it is submitted to the SEC to enable the company to catch problems and correct them before they are submitted.

## Establishing an XBRL Process to Maximize Efficiency, Reduce Risk

Public companies typically follow a strict controls process when it comes to creating and publishing their financial statements. Processes have been established to enable greater efficiency, timeliness, and accuracy and to guard against errors and omissions. Common broad categories of tasks in this process include preparing the closing of accounting records, creating the first draft of financial statements, preparing financial statement footnote disclosures and information, and drafting financial statements. The SEC’s interactive data adopting release provides that controls and procedures with respect to interactive data (XBRL) fall within the scope of “disclosure controls and procedures.”

In a world where XBRL is part of the compliance process, companies today must add “XBRL creation” as the last step in that process. Eventually, companies will begin creating XBRL financials earlier in their internal process for a seamless transition; today most companies complete their financial statements, and then begin transforming them into XBRL.

The table below outlines the typical process for XBRL once the financial statements have been completed.

## XBRL Creation Process

1. Map financial statement to XBRL US GAAP Taxonomy elements
2. Create extension elements as deemed necessary
3. Review element selection to determine best judgment/selection
4. Prepare/update extension taxonomy (.xsd)– including replacing concepts that have been superseded or that were selected improperly in the prior period, selecting and implementing elements to replace those that were removed since the last release of the taxonomy and implementing new elements.
5. Prepare XBRL-formatted document (instance (.xml))
6. Run validation tools for XBRL and SEC compliance purposes
7. Review instance in SEC previewer
8. Final review against published financial statements.

Validation (step 6 in the process above), which performs “checks” against an XBRL-formatted document, is a critical step. Most companies rely on their tool or service provider to validate their XBRL documents for XBRL and SEC compliance. XBRL validation reviews the document to see that it follows the correct XML specification which helps to ensure interoperability between different software tools for originating and consuming XBRL data. SEC validation is a series of checks against the entity information about the document. The XBRL Consistency Checks is not the same – it is a set of more than 6,000 rules or checks created by XBRL US that performs tests specifically related to the structure of the US GAAP Taxonomy.

The over 10,000 errors found in filings submitted to date can be broken down into the following categories:

<b>Type of Error</b>	<b>Potential Consequences</b>
Negative value when should be positive	XBRL data produced by the company will be incorrect sign.
Value required to be reported when another value is reported	Could result in incorrect data.
Value reported when the value should be zero or not disclosed	Could result in incorrect data.
Value should be zero or not disclosed if another value is not reported	Could result in incorrect data.
Required Value is not Reported	Could result in incorrect data.
A concept that has been removed from the taxonomy is used	Results in use of inappropriate tags
Positive value reported for a negative Item	Could result in incorrect data.
Duplicated values do not match	Could result in incorrect data.

The XBRL Consistency Checks highlights these errors. If the companies submitting the filings had run the checks prior to submission, they would have been able to note the error, identify and correct the problem before submitting it to the SEC.

## Incorrect Negative Value

The most common problem, which comprised 64% of all errors, occurs when companies use signs on values incorrectly. Here is an example of a plastic materials and chemical company that reported "DividendsCommonStockCash" as a negative value when it should have been submitted as an absolute, positive value. The company tagged the values based on how they wanted it to be rendered, not on how the data should be input. They formatted the XBRL data with presentation in mind. It's critical to remember that XBRL formatting produces "data" not "reports". If data is incorrectly signed, the computer-readable data will not be correct even if it renders the way the company wants. The US GAAP taxonomy is structured to interpret "DividendsCommonStockCash" as a reduction to retained earnings (e.g., negative), so that when a company inputs the value as a negative, it becomes an *increase* to retained earnings. This creates a "double negative", essentially flipping the sign so that it becomes positive. The company used a negated label to make the data appear negative when rendered. In the screen shot below showing the SEC's Interactive Data Viewer, the figure appears with the correct sign (negative) but the machine-readable XBRL data is incorrectly signed and anyone extracting this data for analytical purposes would be pulling incorrect information.

U.S. Securities and Exchange Commission

View Filing Data

COMPANY NAME AND CIK

UNAUDITED CONSOLIDATED STATEMENTS OF EARNINGS, COMPREHENSIVE INCOME AND RETAINED EARNINGS	STATEMENT OF STOCKHOLDER EQUITY (USD \$) In Millions	Common Stock [Member]	Additional Paid in Capital [Member]	Retained Earnings [Member]	Accumulated Other Comprehensive Income [Member]	Treasury Stock [Member]	Total
Stockholders Equity at Dec. 31, 2008		\$ 1	\$ 638	\$ 2,563	\$ (335)	\$ (1,314)	\$ 1,553
Net Earnings		0	0	188	0	0	188
Cash dividends declared		0 [1]	0 [1]	(98) [1]	0 [1]	0 [1]	(98)
Other Comprehensive Income Loss Net Of Tax Period Increase Decrease		0	0	0	9	0	9
Share-based Compensation Expense, Value		0 [2]	13 [2]	0 [2]	0 [2]	0 [2]	13 [2]
Other Items		0 [2]	(2) [2]	0 [2]	0 [2]	0 [2]	(2) [2]
Stockholders Equity at Sep. 30, 2009		\$ 1	\$ 649	\$ 2,635	\$ (328)	\$ (1,314)	\$ 1,645

[1] Includes cash dividends declared, but unpaid.  
 [2] The fair value of equity share-based awards recognized under GAAP for share-based payments.  
 [3] The tax benefits relating to the difference between the amounts deductible for federal income taxes over the amounts charged to income for book value purposes have been credited to paid-in capital.

The company data produced will have an incorrect sign which will provide incorrect data to investors and regulators who extract the data from the XBRL filing.

**Making Corrections**

The XBRL Consistency Checks show companies when they have made this mistake. Public company preparers who encounter this error should consider:

- Should a negated label have been used to show the fact with a negative sign in the SEC viewer?
- Is the concept appropriate to the financial statement it is located in (for example, a cash flow item is unlikely to appear in the Statement of Changes in Shareholders Equity)?
- Is the calculation weight correct? You may need to change the weight from a positive to a negative.
- Have you selected the correct concept?
- Is the concept dimensionally qualified<sup>3</sup> in a manner that makes what would normally be a negative fact a positive fact?

**Value is Required if Another Value is Reported**

17% of the errors identified occurred when companies reported one fact but neglected to report another fact required when the first one was reported. An example of this kind of mistake was identified in the XBRL-formatted financial statement from an energy company that reported “StockRedeemedOrCalledDuringPeriodValue” used with the member (column header) “AdditionalPaidInCapital in their Statement of Equity”. It is expected that the company would have reported the same concept (StockRedeemedOrCalledDuringPeriodValue) with the member (column header) “Preferred Stock”, but they did not. The XBRL Consistency Checks highlighted this error. If the company had run the checks prior to submission, they would have been able to note the error, identify and correct the problem before submitting it to the SEC.

A second example can be found in the filings submitted by a food conglomerate where they reported purchases of additional shares of a subsidiary but their XBRL financial statement reported no impact on the non-controlling interest (subsidiary) – clearly, one would expect to see a change in their ownership interest. The table below shows where the values should have appeared.

	Additional Paid in Capital	Non-controlling Interest
Purchase of Additional Shares	XXX	NA

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<sup>3</sup> Dimensionally qualified refers to the dimension or table where the concept resides which could have an impact on the sign.

A third example shows an energy company that reported “DividendsPreferredStock” and associated that line item with the concept “Additional Paid In Capital” as part of a table:

	Additional Paid in Capital
Dividend, Preferred Stock	XXX

After reviewing this situation, we found that the company had a (retained) deficit. It is likely that they should not have used the concept “DividendPreferredStock”; instead, the concept that should have been used was “AdjustmentsToAdditionalPaidInCapitalDividendsInExcessOf RetainedEarnings”. A cash dividend line item would generally not be expected to be qualified (i.e., characterized, described) by an APIC member.

In some cases, this could result in missing data points that could cause confusion among investors about the true intent of the company.

### **Making Corrections**

When preparers uncover an error of this type, they should consider:

- Has the correct concept or line item been selected?
- Has the correct axis and member been selected?

### **Value Reported When the Value Should be Zero or Empty**

This error occurred 8% of the time. An example of this is in the Statement of Shareholders Equity, the value of new stock issued should not be comprised of a treasury stock component. 8% of the errors reported fall into this category.

The resulting data produced from this XBRL document could confuse users of the data.

## Required Value is not Reported

Certain facts under a given set of circumstances must be reported in a filing. For example, a company must report earnings per share/unit if the company has a public float. Very few concepts meet this condition but the ones that do are required. It would be rare for an extension to be made for these concepts as their meaning is either very generic or explicitly defined in the US GAAP taxonomy. This error occurred 6% of the time.

As an example, a global engineering and construction company did not report EarningsPerShareBasic. It is likely that they created an extension (e.g., EarningsperShareBasicAndDiluted) for this fact which is incorrect as this is a commonly used concept.

Missing data is usually a result of selecting an inappropriate concept. This could result in this company being missed in a screen of companies conducted by an investor.

## Making Corrections

Companies that encounter this error should consider:

- Is the fact excluded from the filing?
- Is an extension incorrectly made for this missing concept?
- Has an incorrect concept been selected to represent this missing concept?

## Other Problems

XBRL US identified other problems in XBRL creation including:

- Duplicate reported values that do not match - in some cases the same fact is represented using different concepts. This usually occurs when dimensions are used to represent the same fact as a line item concept.
- The value reported should be zero if another value is reported. This can occur when a mutually exclusive concept is reported. The US GAAP Taxonomy provides a number of different concepts to represent the different reporting combinations that an individual company may have. These checks indicate to the filer when both mutually exclusive facts have been reported in the same filing. For example, a company can report Common Stock and Additional Paid In Capital as a combined amount or as separate amounts in the Shareholders Equity Table. However, it is expected that both concepts would not be reported in the same instance.

## Conclusion

Public companies take great care in the preparation of their financial statements and have developed internal processes over the years based on experience and judgment. In 2008, the SEC mandate added a unique wrinkle to that process and public companies throughout the United States are revising their processes to add XBRL creation into that process.

XBRL creation requires some upfront investment but becomes a repeatable process, with increased efficiencies over time. But ready-to-use tools to perform checks and to enable greater consistency from one submission to the next can greatly streamline the process for preparers, relieving them of the burden of decisions that are not related to their own financials, but simply to the structure of the US GAAP Taxonomy and XBRL in general.

Following a standardized set of guidelines can provide the peace of mind that the best possible practice is being used.