What Filers Should Know about the Quality of XBRL Filings

Lately, the industry is abuzz with discussions of the quality of XBRL. While many are weighing in on the discussion—from regulators to filers to industry analysts—those of us who are closest to it and work day-to-day with XBRL know that along with the tremendous benefit offered by XBRL, we should be accountable for enhancing the quality of the data.

To that end, Calcbench has developed market leading technology for detecting and correcting errors and inconstancies in XBRL filings to help enhance the quality of the data. The bottom line is that until the community works a bit harder on data quality, filers are at risk of actions by the SEC or other stakeholders, and none of us will reap the full benefits of XBRL.

XBRL provides the ability to analyze data in ways that were not possible prior: with tools and platforms that offer analysis capabilities leveraging the data, finance leaders can access and analyze industry trends and competitor, supplier, and client financials more timely and efficiently than they could before.

The Good, the Bad, and the Ugly

The good news is that in certain areas, XBRL data quality is already trending in the right direction. The bad news is that filing errors are still very much a reality. We need more than discussions of quality to make a positive impact, and all of us who create or disseminate the data have either a judicial or intrinsic obligation to do something about it.

To this end, as a financial data platform that harnesses XBRL data, Calcbench not only identifies errors in filings and makes this information available to filers via our complimentary Filer Portal, but we also review and correct these errors before entering them into our database to help uphold data quality.

We recently delved into the topic of XBRL errors in a recent research report, analyzing several types of mistakes, including errors in the Document and Entity Information (DEI), scale errors, and sign switches. The findings suggest that most XBRL filings contain errors. The errors are in most cases relatively easy to correct and may be the result of a learning experience by both filers and third parties creating the XBRL filings.

The most frequent problem we document are sign switches (about 50% of filings), followed by scale errors (about 8% to 12% of filings) and DEI errors (about 3% of filings).

Snapshot of Errors Identified in XBRL Filings

Below are a few excerpts from our recent report. Visit www.calcbench.com/xbrldataquality to download the full analysis.
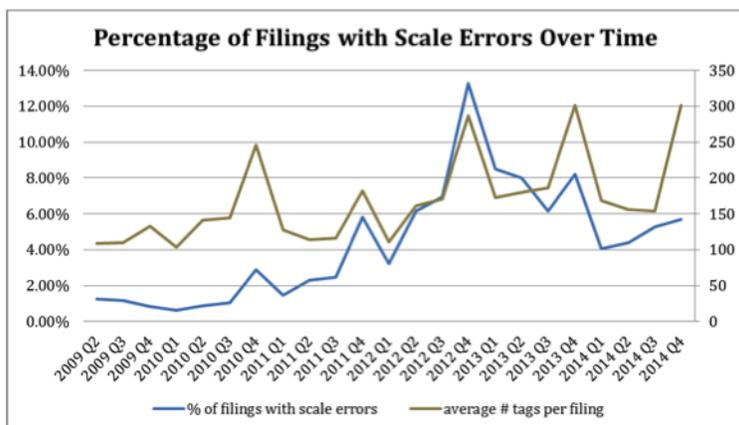
Scale Errors: Scale errors occur when a firm reports a number in the incorrect magnitude, such as reporting 15,000 when they intended 15,000,000. As can be seen from the chart on the next page, the percentage of filings (out of all filings) that include at least one scale error was the highest in Q4 of 2012.

The Current State of XBRL Data Quality

Download the full paper, *The Quality of XBRL Filings*

XBRL provides the ability to analyze data in ways that were not possible prior.

At that point, *one in eight filings had a scale error*. Q4 of 2012 is when smaller companies started tagging the notes to the financial statements. Since the scale errors are likely correlated with the number of tags in each fling, we also show the average number of tags per filing.

In examining the tags that seem to have more scale errors, the most frequent scale errors occur in tags associated with shares. As can be seen in the table below, most errors occur in tags associated with shares. However, *there are a non-trivial number of errors in tags which are likely to be heavily used by analysts and investors* (e.g., Revenues, Net Income, Assets, etc.). Errors in these accounts may cause potentially wrong investment recommendations and decisions which may lead to increased liability by filing firms. For this reason, these errors are at the top of the data quality priority list: They are among the easiest to fix, and one of the most detrimental if left uncorrected.

Tag	# Filings with Scale Errors in this Tag
WeightedAverageNumberOfDilutedSharesOutstanding	968
WeightedAverageNumberOfSharesOutstandingBasic	960
CommonStockSharesOutstanding	494
CommonStockSharesAuthorized	480
CommonStockSharesIssued	460
WeightedAverageNumberOfShareOutstandingBasicAndDiluted	267
StockIssuedDuringPeriodSharesStockOptionsExercised	235
SharesOutstanding	210
SharesIssued	187
TreasuryStockShares	157
IncrementalCommonSharesAttributableToShareBasedPaymentArrangements	137
TreasuryStockSharesAcquired	120
EntityCommonStockSharesOutstanding	119
StockholdersEquity	117
Assets	108
NetIncomeLoss	99
StockIssuedDuringPeriodSharesRestrictedStockAwardNetOfForfeitures	98
PreferredStockSharesIssued	90
Revenues	87
PreferredStockSharesOutstanding	84
LiabilitiesAndStockholdersEquity	69
CashAndCashEquivalentsAtCarryingValue	64
OperatingIncomeLoss	60
RetainedEarningsAccumulatedDeficit	58
LiabilitiesCurrent	55
AdditionalPaidInCapital	55
CashAndCashEquivalentsPeriodIncreaseDecrease	54
AllowanceForDoubtfulAccountsReceivableCurrent	53
Liabilities	52
AssetsCurrent	52

1 in 8 filings had a scale error in Q4 2012.

Look up whether your latest filings had errors using our free service, Filer Portal

There are a non-trivial number of errors in tags which are likely to be heavily used by analysts and investors.
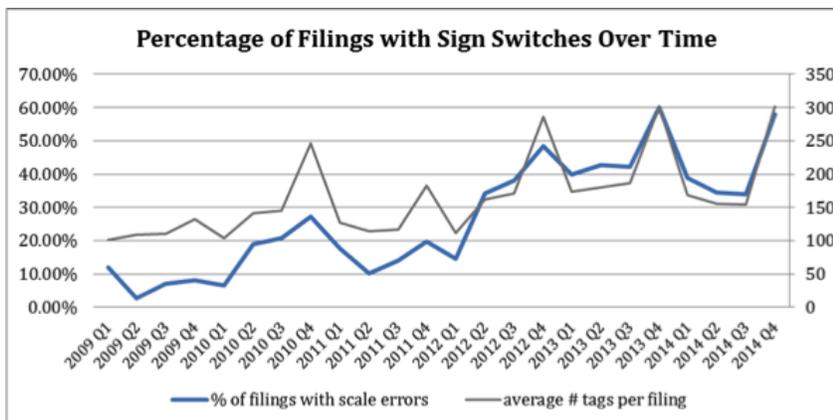
Document & Entity Information Errors (DEI): When examining the occurrence of these types of errors over time, we observe that the percentage of filings with DEI errors seem to be relatively constant at about 3% of filings. It is interesting to note that annual filings seem to have fewer DEI errors, potentially because filers giving special attention to these filings.

The table below shows an example of DEI errors as detected by Calcbench. In this case, the filer reported fiscal year 2013 instead of 2014, an end date of 9/30/2013 instead of 3/31/2014 and a fiscal period of Q3 instead of Q1. It is likely that during the filing, the information from Q3 2013 was copied and pasted into the Q1 2014 filing, a mistake that would be easy to avoid.

The percentage of filings with DEI errors seem to be relatively constant at about 3% of filings.

Filings	Scale Errors (0)	Potential Typos (0)	Sign Switches (7)	Fact Revisions (10)	Extension Tag & Facts	Disclosure Check	Resources

Filings 3 'Document and Entity Information' Errors Detected:

Accession	File Date	doc type	Per Index	FY End Date	Fiscal Year	End Date	Period	Shares Out	Shares Out Date	
View Filing at SEC.gov	5/8/2014	10-Q	1	--12-31	~~2013~~ → 2014	~~9/30/2013~~ → 3/31/2014	~~Q3~~ → Q1	2,532,200	5/1/2014	Calcbench Networks
View Filing at SEC.gov	2/26/2014	10-K	2	--12-31	2013	12/31/2013	FY	2,532,200	2/19/2014	Calcbench Networks
View Filing at SEC.gov	11/7/2013	10-Q	3	--12-31	2013	9/30/2013	Q3	2,532,200	11/1/2013	Calcbench Networks
View Filing at SEC.gov	8/9/2013	10-Q	4	--12-31	2013	6/30/2013	Q2	2,532,200	8/1/2013	Calcbench Networks
View Filing at SEC.gov	5/9/2013	10-Q	5	--12-31	2013	3/31/2013	Q1	2,532,200	4/19/2013	Calcbench Networks
View Filing at SEC.gov	3/20/2013	10-K	6	--12-31	2012	12/31/2012	FY	2,532,200	3/12/2013	Calcbench Networks
View Filing at SEC.gov	11/14/2012	10-Q	7	--12-31	2012	9/30/2012	Q3	2,532,200	11/1/2012	Calcbench Networks
View Filing at SEC.gov	8/3/2012	10-Q	8	--12-31	2012	6/30/2012	Q2	2,532,200	7/30/2012	Calcbench Networks
View Filing at SEC.gov	5/15/2012	10-Q	9	--12-31	2012	3/31/2012	Q1	2,532,200	5/14/2012	Calcbench Networks
View Filing at SEC.gov	3/30/2012	10-K	10	--12-31	2011	12/31/2011	FY	2,532,200	3/30/2012	Calcbench Networks
View Filing at SEC.gov	11/16/2011	10-Q	11	--12-31	2011	9/30/2011	Q3	2,532,200	11/11/2011	Calcbench Networks
View Filing at SEC.gov	8/11/2011	10-Q/A	12	--12-31	2011	6/30/2011	Q2	2,332,200	6/30/2011	Calcbench Networks

Sign Switches: Sign switches do not represent an error quite the same way as a scale error, as the sign on the amount may not necessarily be "right" or "wrong". For example, Cost of Goods Sold can have a negative sign and be added to Revenues, or can have a positive sign and be subtracted from Revenues. In theory, both would be correct, but in the majority of cases, either the taxonomy or best practices suggest the appropriate way to report the amount. Starting in 2012, we find a large increase in sign switches. About 40% to 60% of filings have sign switch. As the chart below shows, we find some correlation between the occurrence of sign switches and the average number of tags per filing, suggesting that the more tags you use, the more likely you are to have a sign switch.

Percentage of Filings with Sign Switches Over Time

Legend: ── % of filings with scale errors   ── average # tags per filing

Visit http://www.calcbench.com/xbrldataquality to download the full analysis on the types of errors in XBRL filings or www.calcbench.com/filerportal if you are a filer and wish to access your companies filing errors.

The Merits of XBRL

Despite the presence of errors in filings, those who are closest to XBRL's ecosystem know that is more than a new process for filing financial statements: it also offers many benefits for individual firms and for the industry overall, which can attest to the momentum XBRL is gaining.

In fact, a significant number of financial information providers have adopted XBRL as a part of their data gathering, allowing for faster and more detailed information to be passed on to their customers. In fact, we estimate that greater than 40% of investors currently reap the benefits of XBRL, many of whom don't even realize they are using XBRL based information because it is coming to them through a major financial data provider or website. More importantly, we expect that number to be near 100% in 2016.

Additionally, having financial data readily available across a wider set of firms democratizes information access and levels the playing field, making company, market and sector analysis more comprehensive and robust. This benefits both the filers and the analysts: Smaller firms who file using XBRL benefit from greater visibility by industry analysts, while analysts and investors benefit from timely and affordable access to granular company financials.

The Reality of Today's XBRL Filings

Those who file with the SEC know there is complexity in the tagging and filing process, and errors will happen, unfortunately. We believe the vast majority of filers take this topic very seriously and work very hard to strive towards error-free filings. That said, our research shows signs of sloppiness from even some of the largest companies. While some of this can be blamed on the complexity and the imperfect nature of filing tools, some of it is can be easily avoided. For example, in our recent research paper, we came across errors such as incorrect dates entered in Document and Entity information.

Errors in filings negatively impact the quality of the XBRL data, of course, but beyond that they expose firms to reprimand from the SEC or lawsuits from outside parties. And in response to hearing these concerns from filers, Calcbench developed the Filer Portal. Not only does Calcbench clean up errors before entering it into the Calcbench Platform to uphold data quality, but we also provide this information back to the corporate filers to enhance the quality of their future filings.

Filer Portal is a complimentary service that XBRL filers can use to check the quality of their filings, as well as study their revisions histories and see how their filing information appears to an outsider. Unlike other consistency checks, Calcbench's Filer Portal is unique in that it examines all of the information for that company in aggregate in order to find problems such as errors of scales, sign switches, and date errors.

6 'Document and Entity Information' Errors Detected:

Accession	File Date	doc type	Per Index	FY End Date	Fiscal Year	End Date	Period	Shares Out	Shares Out Date		
View Filing at SEC.gov	11/8/2013	10-Q	1	9-30 → 12-31	2013	9/30/2013	Q3	242,634,671	10/31/2013	Calcbench	Networks
View Filing at SEC.gov	8/9/2013	10-Q	2	6-30 → 12-31	2013	6/30/2013	Q2	242,634,671	7/31/2013	Calcbench	Networks
View Filing at SEC.gov	5/10/2013	10-Q	3	3-31 → 12-31	2013	3/31/2013	Q1	242,634,671	4/30/2013	Calcbench	Networks
View Filing at SEC.gov	10/17/2013	8-K	4	--12-31	2012	12/31/2012	FY	242,634,671	1/31/2013	Calcbench	Networks
View Filing at SEC.gov	3/1/2013	10-K	4	--12-31	2012	12/31/2012	FY	242,634,671	1/31/2013	Calcbench	Networks
View Filing at SEC.gov	11/9/2012	10-Q	5	--12-31	2012	9/30/2012	Q3	242,634,671	10/31/2012	Calcbench	Networks
View Filing at SEC.gov	8/8/2012	10-Q	6	--12-31	2012	6/30/2012	Q2	242,634,671	7/31/2012	Calcbench	Networks

Tag	Scale Error Count
SharesIssued	30
WeightedAverageNumberOfDilutedSharesOutstanding	10
WeightedAverageNumberDilutedSharesOutstandingAdjustment	10
WeightedAverageNumberOfSharesOutstandingBasic	10
EntityPublicFloat	1

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Filers also use Calcbench's **Footnotes Query** to improve the efficiency and quality of their filings. By examining how other companies report and tag information, users can examine what other filers in their peer group include in the disclosures, the wording they use in disclosures, and what XBRL tags are being used.

The Bigger Picture

It is easy to get lost in the day-to-day work and forget the bigger picture: we should all work a bit harder on data quality or we won't have access to this valuable data.

For those of you interested in reviewing the current state of XBRL data quality in more detail, download the full paper "The Quality of XBRL Filings".

If you file with the SEC, we strongly encourage you to sign up for the Filer Portal free of charge.

About Calcbench

Founded in 2011, Calcbench is the first company of its kind to fully harness the power of the new government mandated data standard XBRL, yielding an unprecedented direct line into the SEC's corporate financial data repository. Calcbench has revolutionized the use of artificial intelligence for XBRL data extraction, allowing users to easily retrieve information and perform financial data analysis not previously possible.

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Calcbench reviews errors in the data and cleans it up before entering it into the Calcbench Platform to uphold data quality.