

Paper 182-29

# XBRL - eXtensive Business Reporting Language, The New Language of Financial Reporting

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## ABSTRACT

XBRL has been named one of the Top Tech Trends by PwC, been mentioned as a potential solution to greater Financial Transparency in connection with the Sarbanes-Oxley act and is being widely adopted by vendors developing ERP and accounting systems. So what is XBRL? What are the benefits and when can you expect it to become mainstream? What plans do SAS have for supporting XBRL?

## INTRODUCTION

This paper will start out by giving you an introduction to XBRL, and then address some of the benefits of XBRL as well as the latest developments done in the XBRL community. We will look at the organization behind XBRL and conclude with how SAS is looking at incorporating this promising standard.

## XBRL – WHAT IS IT?

XBRL is a freely available electronic language for financial reporting, based on the XML standards in order to:

- Prepare financial data
- Reliable extract financial data
- Exchange financial data on a system to system basis
- Publish company financial data

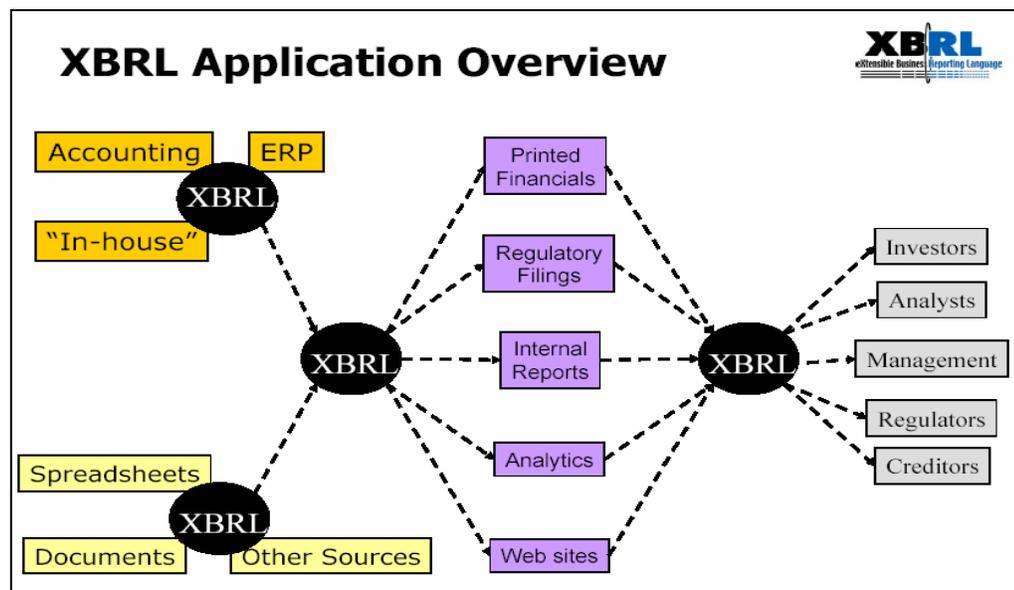
Like with XML documents, you are not only storing the data itself like date, account, amount etc. you are also storing (tagging) information about what the data represents and in which context a given element is represented e.g. within the balance sheet in the company's financial statement. It brings structure to unstructured data.

You can compare XML with barcodes you see on products you buy at the supermarket – it is a way of tagging the products so that it speeds up the process when you go to the register. In US barcodes follows the UPC standard, whereas in other parts of the world other standards are used. This is similar to XBRL in that XBRL represents a language to identify business reporting, just as there are XML standards used for e-business, medical data etc.

Just like barcodes speeds up the process in retail, the use of XBRL speeds up the process of reporting and exchanging data. You don't have to reenter or further process the information when you get a XBRL report and want to use it in another context or for comparing e.g. financial statements from multiple companies.

You can take data from many different sources like ERP and GL systems, spreadsheets, in-house systems and map the data to XBRL which then allow you to create XBRL documents – also referred to as Instance documents.

Figure 1

XBRL  
Overview(XBRL  
website)

## XBRL TAXONOMIES

The XBRL 2.1 Technical Specification was released in January 2004 by XBRL International, and it shows the continued development of the set of rules that is behind XBRL. The specification outlines all the technical details about how an XBRL document should be created. By following the specification you ensure that XBRL documents you create can be easily exchanged with other systems that read XBRL documents.

In addition to the XBRL Specification, you also use a given *Taxonomy*, which can be described like a dictionary that covers a given area – like US GAAP reporting. The taxonomy defines all the tags needed to describe your data, like e.g. for a Payroll account you would use the tag

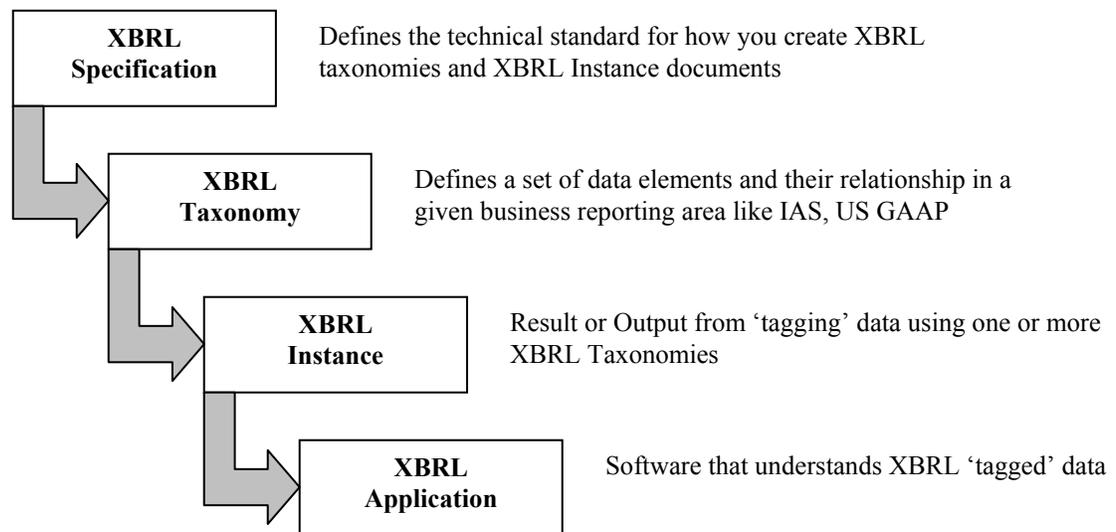
```
<Payroll currency="US Dollars">35,500</Payroll>
```

The Taxonomy also describes the relationship between the elements, both mathematical and definitional as well how to display the information. By using XML Linking (XLink) you also get the benefit of having the same statement represented in different languages – meaning that the same report can for example be viewed in English, Spanish or Danish without having to map and generate multiple reports.

When a report is created with the XBRL specification and a given XBRL Taxonomy it is referred to as being an *XBRL Instance document*, which then can be read by a XBRL enabled application.

To illustrate the relationship between the different terms the figure below gives you the structural overview:

Figure 2:  
XBRL  
Structural  
Overview



Taxonomies are divided into categories by XBRL International:

- *Recommended* – These taxonomies have the same status as the XBRL specification itself.
- *Approved* – Means that it is technically compliant with the XBRL specification, it is available on royalty free terms and it have most likely been developed XBRL International or have been in a public review similar to the process that XBRL International follows.
- *Acknowledged* – The creator have asked XBRL International to list the taxonomy and it follows the same royalty free terms as the approved taxonomies. It is acknowledged by XBRL International that the taxonomy follows the XBRL specification.
- *Final* – When a taxonomy is marked Final it receives a version number and is made permanently available on the XBRL website. This is important because part of the XBRL instance document will always have a link back to the taxonomy being used.
- *Public Working Draft* – As the type indicates this is work in progress and will most likely change, which means that you should use them at your own risk. Members of XBRL will have access to the drafts and the ability to influence the development as well prepare for the changes.

The content that the taxonomies are covering also spans different categories which are based on which jurisdiction or domain and industry. Jurisdictions are the different countries and their specific accounting standards like IAS/IFRS and US GAAP, whereas Industry refers to the differences found in accounting practices between industries like Banking, Manufacturing and Insurance etc.

At the moment the following taxonomies have been published at [www.xbrl.org](http://www.xbrl.org):

- [XBRL GL 1.0](#) - The Journal Taxonomy - Recommended
- [IAS PFS taxonomy](#) , Primary Financial Statements (PFS), Financial Reporting for Commercial and Industrial Entities, International Accounting Standards (IAS/IFRS) - Recommended
- [Global Common Document \(INT-GCD\) Taxonomy](#) – Recommended Public Working Draft
- [Accountants Report \(INT-AR\) Taxonomy](#) – Recommended Public Working Draft
- [Explanatory Disclosures and Accounting Policies \(EDAP\), Financial Reporting for Commercial and Industrial Entities, International Accounting Standards \(IAS\)](#) – Approved Public Working Draft
- [XBRL GL 1.1](#) – Approved Public Working Draft
- [International Financial Reporting Standards \(IFRS\), Financial Reporting for Commercial and Industrial Entities \(CI\)](#) – Acknowledged Public Working Draft
- [US Financial Reporting Taxonomy Framework](#) – Collection of taxonomies that can be reused for building different financial reporting taxonomies for various reporting purposes, includes [US GAAP - Commercial and Industrial](#), [US GAAP - Banking and Savings Institutions](#) and others. Acknowledged Public Working Draft

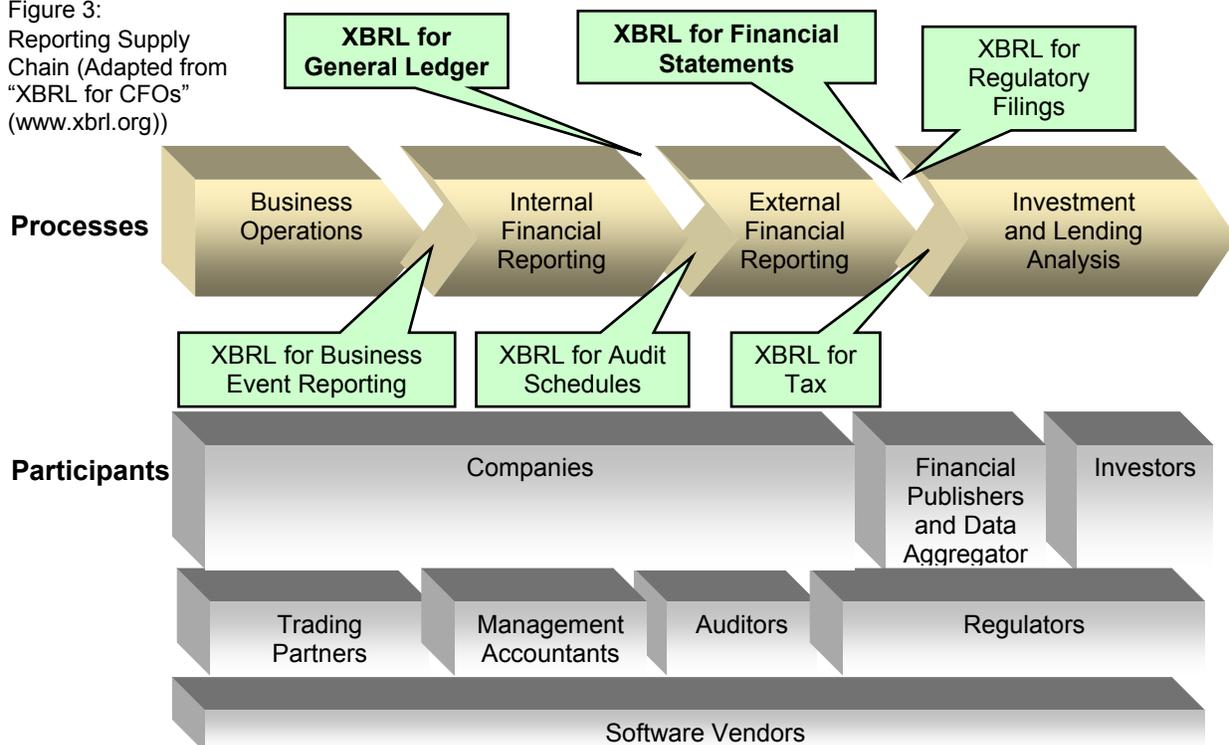
In addition there are a number of not yet acknowledged International taxonomies under development in Australia, Canada, Germany, New Zealand, Singapore and UK.

For more industry focused taxonomies, there are companies working on creating taxonomies for Credit Reporting, Risk Reporting, Tax filings and other types of Regulatory filings to name a few.

### FINANCIAL REPORTING SUPPLY CHAIN

As it was mentioned earlier the XBRL documents can be used in many places and this is often referred to as the Financial Reporting Supply Chain. The figure below illustrates how different taxonomies are used at different places and times in the process, as well as which participants who use or contribute to the supply chain:

Figure 3:  
Reporting Supply Chain (Adapted from "XBRL for CFOs" (www.xbrl.org))



## THE PROMISE OF XBRL

We have already touched on some of the benefits that XBRL promise to bring, like eliminate re-keying of information which then speeds up the reporting cycle and exchange of data between systems. If you can cut down on the time it takes to consolidate your data, while at the same time gaining improved data quality, you end up with more time to thoroughly analyze your data before you publish it.

The savings you get in automating the process will not only enable you to spent more time on analyzing the data – but it will also help you cope with the continuously growing amount of data from more and more sources.

Sure you could use other XML standards to describe and organize your data, however the XBRL standard is backed by more than 200 global member companies spanning leading accounting firms, public sector, fortune 2000 companies and mostly all the major software companies.

In Australia, Denmark and UK and other countries XBRL is already being used as the format for submitting certain regulatory reports and it have been mentioned in connection with new legislation in US in order to provide greater financial transparency after the accounting scandals like Enron.

An example in US is the move by FDIC (Federal Deposit Insurance Corporation) to build a new XBRL based system for publishing financial results into its data reporting platform. Expected to go live in late 2004 the system will require call reports to be submitted in XBRL format. This should according to FDIC officials save up to 25 percent of the cost of processing reports.

XBRL Express has collected many other good case stories on "[XBRL: How It Can Improve Today's Business Environment](#)" which I encourage you to read.

[Edgar Online](#) and [OneSource](#) are both services that now offer company information in XBRL format, with the intent to cover all public companies in US and other countries. As part of the services you often get additional tools that let you easily analyze performance and allow you to benchmark it against your own company.

Talking about tools, a recent [survey](#) (August 2003) conducted for the XBRL US Adoption Committee by AICPA, shows that two-thirds of surveyed accounting software vendors have either already implemented XBRL in their software or plan to do so by December 2004. An example is Microsoft, which will add XBRL support in their new Office 2003 package, by using the upcoming XBRL Accelerator.

Having wide software support is a critical step in gaining adoption and it seems that the needed software or rather 'features' are being added rapidly.

Today there are not many companies that have actually deployed XBRL enabled reporting environments and most of the recent years have been spent on base development of the technology standard, taxonomies and software. The experts from XBRL International (e.g. Mike Willis the founding chairman) predicts that it will take another 2-4 years before XBRL is mainstream, but look to 2004-2005 to be the years where XBRL will start receiving more market recognition.

## XBRL STEERING COMMITTEE

The XBRL Committee was founded in 1999 by AICPA (American Institute for Certified Public Accountants) with 12 other companies, and has since grown to more than 200 members.

Member companies, firms and agencies cover the whole spectra of the Financial Supply Chain like:

- Accounting and Trade Organizations
- Local and Federal Government as well as non-profit
- Financial Services and Information Providers
- Software vendors and other Technology companies
- Professional Services and Consulting companies

The organization is responsible for working on and approving the XBRL standard, the different taxonomies and promotional work, which all is mostly done in a wide range of active workgroups split between the different jurisdictions in many countries.

The website [www.xbrl.org](http://www.xbrl.org) is a very well organized site being maintained by the organization and offers both business and technical oriented material for the public and serves as the hub for members which can login and gain access to the various workgroups.

## SAS AND XBRL

SAS joined XBRL in 2004 and plan to use its wide knowledge of other XML related standards as well as its long history of software development to help shape the future of XBRL.

There are a number of Solutions and Products that are a natural fit for using XBRL, with SAS® Financial Management Solutions being the most obvious.

### SAS® FINANCIAL MANAGEMENT SOLUTIONS

SAS® Financial Management Solutions (FMS) provides a single approach to an organization's financial management needs, including: planning, budgeting, consolidation, reporting and analysis driving a performance management approach to business.

The first important aspect of XBRL support is to be able output financial reports as XBRL Instance Documents that then can be distributed to internal and external parties – this has also been the main focus of most of the other vendors that have added or are adding XBRL support. In order to make the process easy to maintain we plan to incorporate the option of importing the various XBRL taxonomies, so that you can use the information when you want to map your own chart of accounts to one or more XBRL taxonomies. Currently information about account dimensions/hierarchies as well as other dimensions/hierarchies is maintained in a single place from the FMS Studio client. Due to the nature of the XBRL standard and the use of XLINK, you should also be able to store information about the relationships in the hierarchies that illustrates the rollup, including cases where items are subtracted. You should be able to capture text and non-financial data in the XBRL instance documents like KPI's, notes, period information, names etc. This first step should help you in case XBRL suddenly moves from a nice to have to a regulatory must have.

Figure 4:  
Example of  
dimension  
editor in FMS  
Studio

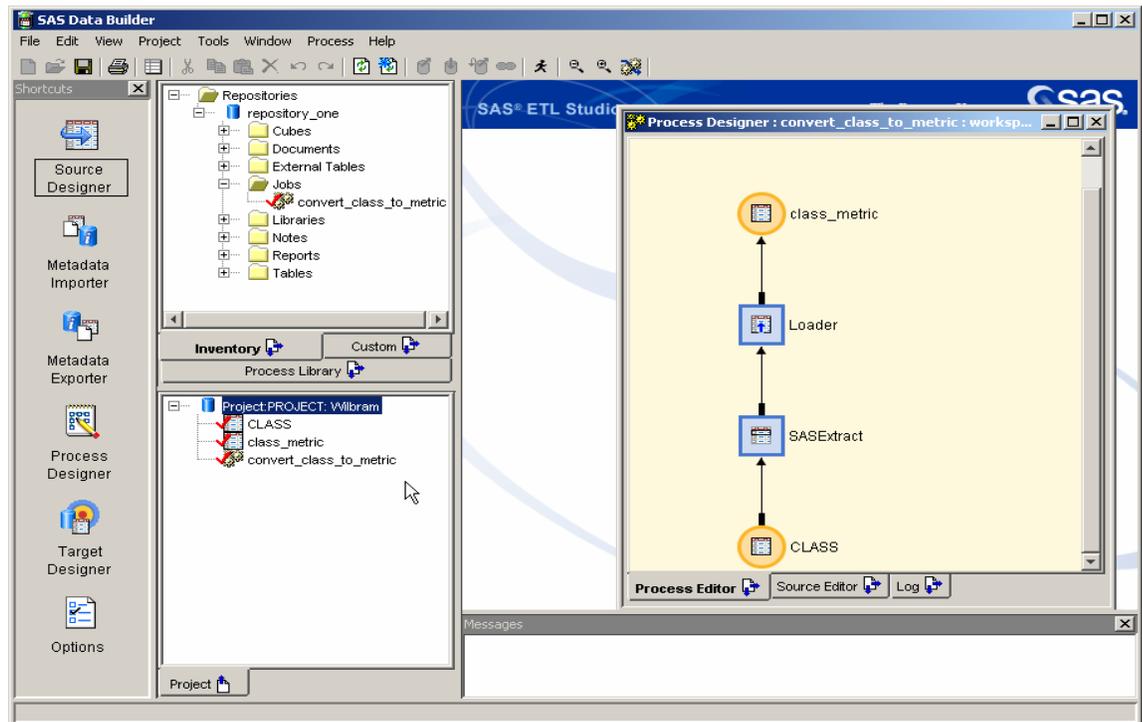
Name	Label	Description	Account Type
ACCOUNT_STD	Standard Account Hierarchy	Standard Account Hierarchy	
001921	001921	LC Other Intangible Assets E...	Statistical Balance
001922	001922	LC Accum Amort. Other Intan...	Statistical Balance
BALCTA	BALCTA	Off Set CTA (NOT USED IN FI...	Statistical Balance
LCEACD	LCEACD	Local Currency Ending Accu...	Statistical Balance
LCEPPE	LCEPPE	Local Currency Ending PP&E	Statistical Balance
MEHC	MEHC	Month End Headcount	Statistical Balance
PM1921	PM1921	Prior Mo. LC Other Intang. As...	Asset
PM1922	PM1922	Prior Mo. LC Acc. Amor. Oth I...	Asset
PMLCEACD	PMLCEACD	Prior Mo. Local Currency End ...	Asset
PMLCEPPE	PMLCEPPE	Prior Month Local Currency E...	Asset
PMNI	PMNI	Prior Month(s) Net Income	Equity
SQFT	SQFT	Month End Square Footage	Statistical Balance
SUSPNS	SUSPNS	Suspense Accounts	Statistical Balance
TOTASSET	TOTASSET	TOTAL ASSETS	Asset
CURASSET	CURASSET	Current Assets	Asset
CASH	CASH	Cash	Asset
INVM	INVM	Investments	Asset
TOTREC	TOTREC	Receivables	Asset
OTHCURA	OTHCURA	Other Current Assets	Asset
TOTLTAS	TOTLTAS	Long Term Assets	Asset
TOTLIAEQ	TOTLIAEQ	TOTAL LIABILITIES AND EQUI...	Equity
amyxxx	amyxxx	amyxx	Liability
Copy of ACCOUNT_S...	Copy of ACCOUNT_STD	Standard Account Hierarchy	
NewHierarchy	NewHierarchy	Description of NewHierarchy	

In FMS, the majority of reporting will be done using the Excel add-in which gives you both OLAP-style reporting as well as freeform cell based formula support. This means that a natural place for XBRL output support would be to allow you to save as XBRL from Excel, but it could potentially also happen in the new SAS Web Report Studio.

### SAS® ETL STUDIO

All the new SAS Solutions on the SAS 9 platform will be using the SAS® ETL Studio, as the preferred common ETL (Extract, Transform and Load) tool for importing data. One of the ways ETL Studio makes it easier to access data is by using Data Surveyors, which help you understand complex data like in typical ERP systems (SAP, Peoplesoft, Oracle etc.) without requiring specialized application knowledge. Just like XBRL it is all about the metadata, being able to understand complex data structures and not have to know large amounts of tables (e.g. SAP have more than 20,000 tables). This is also one of the reasons that the ERP vendors mentioned also are working on being able to present their data as XBRL. The taxonomy being used for this is typically the XBRL for GL (General Ledger) taxonomy which is geared toward transactional data.

Figure 5:  
Example of  
interface in  
ETL Studio



SAS is looking at being able to import XBRL data, map it and load it into the warehouse – this will be a tremendous help in ensuring a higher data quality and increase the level of integration between external systems and SAS. As mentioned the ETL Studio is also used by other solutions, and being able to bring in XBRL data will enable solutions like SAS® Strategic Performance Management and SAS® Supplier Relationship Management to include external XBRL data from other systems and companies for use in e.g. Benchmark reports.

### XML MAPPER

XML Mapper (formerly known as XML Atlas) is a new GUI tool for generating XML Maps, which is an integral part of the SAS XML Libname Engine (SXLE). The XML Libname engine is an import/export tool for leveraging XML data into/from SAS data sets. You use the XML Mapper to define row boundaries and column contents so that you can take the XML document and turn it into a data set.

The SAS XML Libname Engine can be used to read or write XBRL documents, but currently you will have to define the XML Map. In the future we will consider if these maps can be pre-made based on the XBRL standard and the most popular taxonomies.

## CONCLUSION

By now I hope you have a better understanding of:

- What XBRL is
- What benefits XBRL can bring
- The organization behind XBRL
- What SAS is working on in relation to XBRL

I personally believe that XBRL will have a big impact on Financial Reporting, and the level of integration we can achieve by using it. The complication is that we need success stories and to spread the knowledge in order to speed up the adoption of XBRL. Within SAS, we are looking at ways we can leverage XBRL in our different solutions and products – so that we can help you adopt XBRL in your organization. I suggest that you take a closer look at the XBRL website and the other websites mentioned in order to learn more - tell us how you think XBRL can help you and how you would like SAS to support XBRL.

**DISCLAIMER:** The contents of this paper are the work of the author and do not necessarily represent the opinions, recommendations, or practices of SAS Institute. There are no certainties that the proposed uses of XBRL within SAS solutions and products will be implemented.

## REFERENCES

Bryan Bergeron, Essentials of XBRL, Financial Reporting in the 21<sup>st</sup> Century (2003)

Charles Hoffman and Carolyn Strand, XBRL Essentials (2001)

Official XBRL website: [www.xbrl.org](http://www.xbrl.org)

Business Wire and EDGAR Online XBRL Panel Discussion (March 2003), multiple authors.

[CFO.com Magazine](#) – search for XBRL

[Financial Executives International \(FEI\)](#) – search for XBRL

## ACKNOWLEDGMENTS

SAS Colleagues Robert Rowan and Ole Bisgaard reviewed the paper and made valuable suggestions.

The author takes full responsibility for errors or omissions that remain.

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