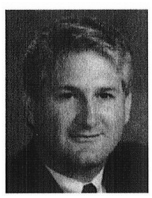


The Internet financial reporting language known as XBRL continues to develop and has now reached the point where much of its promised benefits are available. The authors look at the history of this project, provide a case study of how Morgan Stanley has made use of the system and predict some developments for the future.

Financial reporting, Financial services, Internet

Ten years ago, only a handful of visionaries could have foreseen the impact of the Internet on the entire business world and the information-exchange community. Today, a decade later, we are on the brink of an Internet revolution that will redefine the "business reporting" paradigm. This revolution will not take ten years to impact business communication. The new Internet technology, eXtensible Business Reporting Language (XBRL), is already being deployed and used across the world.

For many companies, the Internet plays a key role in communicating business information, internally to management and externally to stakeholders. Company Web sites, extranets and intranets enable clients, business partners, employees, financial market participants and other stakeholders to access business information. Although the need for standardization of documents used in business commerce has long been understood, until recently, no tool has been useful for the exchange of business reporting. Without that necessary tool, business reporting information on the Internet is not immediately usable because there are no universal, software-neutral standards for reporting that have gained general acceptance and incorporation into business information production and consumption software.

This is changing. XBRL is platform-independent, freely available and offers universal standards for defining business information. XBRL is gaining widespread acceptance, support and advocacy from a range of key constituencies, including the accounting, software, regulatory and industrial sectors. XBRL offers a way to overcome communication barriers caused by incompatible business information systems and software, by providing a common language that developers can share, enabling their products to communicate directly with each other using Internet technology. XBRL allows information producers to re-use information in their systems for multiple reporting purposes without re-keying. It also provides business-information

DOI 10.1108/09657960310491172 VOL. 11 NO. 3 2003, pp. 29-37, © MCB UP Limited, ISSN 0965-7967

consumers with direct access to desired specific information in a report and immediate use of this information in analytical software for decision making.

This article explores the foundations of XBRL's growth, from the demand side and in the context of a changing Internet environment; explains how XBRL will transform the business information supply chain; looks at XBRL's impact through the eyes of a leading financial services company, Morgan Stanley, and discusses the steps assurance professionals can take now to make the XBRL transition through XBRL GL, the journal taxonomy (XBRL GL).

Making business reports more relevant

The financial-reporting world is changing. Let's look at what many financial services companies see in a new business-reporting standard, XBRL. Hungry to make company reports more relevant and useful for decision making, the financial services industry – the largest business information producers and consumers in the world – have recognized, supported and advocated widespread XBRL adoption. This industry sees the benefits of an environment in which not only public companies, but information consolidators, regulators and industry organizations all offer:

- instantly accessible, immediately re-usable, secure reporting data . . .
- that is requested from, and delivered right into, desktop analytical software . . .
- along with the context that makes it relevant and more readily mapped and integrated into a consolidated report and/or analysis . . .
- so that greater volumes of business information are more quickly and cost effectively obtained . . .
- and more analysis can be performed . . .
- and better investment decisions can be made . . . .

If this sounds like a fund manager's or financial analyst's wishful thinking, reconsider. For many in the financial services industry, and also in other key stakeholder groups, the stage is nearly set for XBRL reporting. They have a point.

The reality is already here

XBRL is already incorporated into many of the most widely used enterprise products – or soon will be. Therefore, the capability for companies to produce XBRL-enabled reports is latent in corporate business reporting systems on a fairly extensive basis. The most popular engine of financial analysis, Microsoft Excel, will be capable of consuming information in XBRL enabled company reports with the next version of Microsoft Office, due out this year. Preparing and consuming XBRL enabled information will be just another "Office" feature very soon.

Financial market participants are not the only stakeholders demanding XBRL reporting. Regulators are among its leading proponents. For reporting companies in Australia, the UK, Japan, and the USA, the reality is here. Regulators themselves are adopting XBRL to streamline the job of intensive information processing, enhance regulatory analysis and lower the

XBRL at a Glance

XBRL is an XML based information format that places self-describing tags around discrete pieces of business information. Once tags are assigned, it is possible to extract only desired information, rather than having to download or print an entire document.

XBRL is platform-independent: It will work on any current or recent-year operating system, or any computer and interface with virtually any software.

XBRL is flexible, allowing a financial report created in one software to be transferred to someone using an entirely different software and XBRL will allow the recipient to easily import the data right into their own software application.

associated costs. For this, they need companies to provide them with XBRL enabled information – they can ask for it, at least initially; they can also require it, in time or immediately.

XBRL's purpose is not to redefine accounting terms or replace existing accounting principles. Its job is to provide universal definitions for existing terms so that business information on the Internet can be read and understood by disparate reporting and analytical software without any intervention by human hands and without regard to which system originates or consumes the information. This has the effect of:

- lowering the cost of information production and consumption;
- increasing the speed of information exchange; and
- enhancing access and re-use of information so that reports become more relevant to their audiences.

By necessity, the universal XBRL definitions require business information expertise – which is to say, they require accounting, financial reporting and business reporting expertise. The accounting industry created XBRL and continues to play a central role in developing and refining the standards through XBRL International (www.xbrl.org). This group of over 200 entities is the focal point of the accounting industry's collaboration with major companies, industry organizations, regulators, software makers and other organizations from all over the world.

To understand how far reaching the interest is in making XBRL reporting a reality, take a look at XBRL International's membership roster: http://www.xbrl.org/members. Members resolve to incorporate XBRL into their products and services, and dedicate resources to work to make XBRL standards the best they can be. Accountants and executives who have not already done so should use the site to gain a fuller understanding of what XBRL is and what it can do and join the efforts to create standards that are likely to become central to the tasks of internal and external reporting.

Beyond stakeholder demands for XBRL reporting, executives must also recognize how fundamental XBRL is to corporate reporting in the context of the Internet's broader transformation. You may have heard the term, "Web services", but even if you have not, the important point here is that the software industry is using this package of Internet technologies – now – to standardize how programs talk to each other.

The Extensible Markup Language (XML) is the language of Web services. It is used as the starting point for creating specific-purpose languages, such as XBRL for business reporting. XML based languages, including XBRL, describe different kinds of data and text through "tags" which give information an identity and a context that can be recognized and understood by disparate software products. By providing the means of universal communication across all forms of business information software, XBRL promotes instant information accessibility through direct information exchange.

For example, a company publishing XBRL enabled financial statements on its Web site can present the information in a traditional format. However, even if information appears as a traditional paper document, and will print out as if nothing is different about the document, the information within is not locked into the document. Users can extract whatever specific information they want simply by requesting it – right from their XBRL enabled desktop analytical software.

XBRL is XML for the business reporting supply chain; it is the one Web services standard every assurance professional needs to know about. It will:

- promote information sharing between otherwise incompatible business reporting systems and software; and
- facilitate faster consolidation of information for creating multiple reports and instant extraction of information from within business reports upon request.

The end result is that business reports offered as static, Web based documents (really just electronic versions of physical paper documents) are unlikely to survive much longer as the preferred business information presentation format. XBRL can free specific information within the reports upon request and in moments. As XBRL means business reports are freed, so information of every other kind is moving more freely and independently of traditional document formats on the Internet through other XML based languages. There are already several of these for public relations, news, market data, research information, and business process information.

Business information, which perhaps has the broadest audience of all, can hardly remain outside the information mainstream.

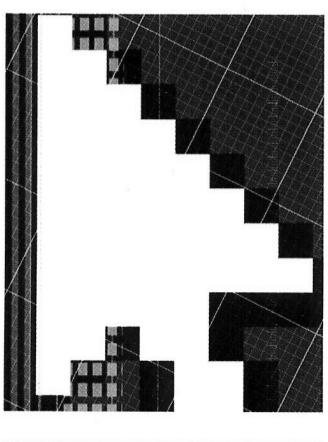
As the providers of assurance on business information, internal and external auditors need to recognize that their current processes will be insufficient for monitoring and providing assurance in an Internet world of freer flowing, more frequent and even real-time information. Just as XBRL is the new standard for expressing business reports, it is also the tool to help auditors adapt their processes and service offerings to the new business-reporting environment:

- First, by joining collaborative efforts to define XBRL's information tags and work with software makers to create the necessary tools;
- Second, by helping clients to adapt their reporting systems, streamline their business reporting processes, enhance existing reporting controls and establish new, more effective controls leveraging XBRL's standards; and
- Third, by XBRL enabling internal and external auditing tools to increase capacity for evaluating information's efficacy as it moves directly from system to system and is used for reporting at higher and higher levels of consolidation and decision making.

The first step in understanding why and how these auditing process changes need to be made is to have a clear idea of how XBRL will affect the entire business reporting environment; seeing the destination clarifies the path to getting there.

Automating the business reporting supply chain

In the middle of an information revolution spurred by the Internet, the process of consolidating business information for financial reports or analysis is still largely based on the same manual procedures that have been in place for 25 years. The prerequisite for using business information is preparing it for use through low value, manual tasks like hunting through pages and pages of information and then cutting, pasting and re-keying it into a single software file for reporting or analysis.



Reliance on manual processes leaves the entire business information supply chain, from managers, to business partners, to auditors, to regulators, to investors and financial analysts, stuck in a time warp in which the processes for getting information to the point at which it can be used are:

- slow;
- labor intensive;
- costly;
- error prone; and
- inefficient.

Worse, various reports or analyses often use identical or overlapping information, which means the same data is manually gathered and input over and over again within the same organization.

To streamline the information preparation process what is needed is a way to make information available from a single, reliable source that can be accessed repeatedly by various users electronically, circumventing all or most manual preparation work within companies and across the business information supply chain. Enter XBRL.

By facilitating direct communication between diverse business reporting systems and software, XBRL reduces, even eliminates the need for manual preparation tasks and enables at least part of the considerable time, money, and human resource outlay to be redeployed to areas that are more productive for the businesses. Equally important, software-to-software information transfer provides the ability to incorporate more information into a report or analysis with no incremental costs and leaves more time to use the information.

XBRL leverages the Internet to improve the business information environment by making information:

- easily exchangeable;
- instantly extractable; and
- more exact.

By enabling disparate systems and software to use the same terms to describe financial data, XBRL effectively breaks down information silos within companies and between companies and their stakeholders, including business partners, financial-market participants, auditors and regulators. Improved Internet tools that enable access to more information in reports, benefit all decision makers, whether they are:

- executives using internal information for tactical and strategic decisions;
- fund managers using company reports and third-party sources for making investment decisions;
- financial analysts creating a thorough picture of a company's or industry's prospects;
- internal or external auditors seeking to establish the efficacy of information in company systems from transaction level through higher and higher consolidation levels; and
- regulators seeking to strengthen oversight capabilities and offer value added benchmarking information back to industries.

XBRL provides the basis for software developers to anticipate the format of information and build functionality into their tools so information consumers can select the precise information they want from a report, right from their desktop analytical software.

This may be difficult to picture, but you don't have to. There is a live example of how XBRL enabled financial reports work. Microsoft, PricewaterhouseCoopers and NASDAQ collaborated on a demonstration, which can be found at: www.nasdaq.com/xbrl. Accessing the analytical software, Excel Investor's Assistant, enables an information consumer to pull up information for 21 companies for any reporting period in the past five years, five companies at a time. The information is delivered within seconds into the spreadsheet, along with the appropriate footnotes and other references from the report and key financial ratios, which are automatically calculated.

With XBRL, business information consumers are better assured that information being used in a report or analysis accurately reflects the information as it was offered by the source. Automated exchange reduces the chance of manual transposition errors. Once information is published in an XBRL enabled environment, authorized viewers access it through their desktop software directly from the publishing source. Moreover, updates from the publisher can be automatically reflected in whatever "downstream" reports or analyses the information may appear.

In the end, XBRL business reporting means greater volumes of business information can be more cost effectively obtained and more analysis can be performed. For this reason, XBRL is not about technology, it is about businesses increasing internal operational efficiency and making more informed investment decisions.

XBRL and the financial markets

Several leading financial institutions already recognize the benefits XBRL, or the broader parent language XML, offers for their own information-processing-intensive areas, like credit and trading; and fund manager and analyst company evaluations for investment purposes.

Internal deployments utilizing XBRL or XML have already taken place, and more companies are in the planning stages of such deployments. To understand exactly how XBRL works to streamline operations and lower costs, consider the typical volume of internal information that investment management organizations must organize, track and distribute as a matter of routine. Here are just some examples:

- public investment management companies must issue reports at the company level, as well as for all public funds, sometimes in numerous reporting jurisdictions around the world;
- all financial services companies must report to clients on an individual basis at regular intervals; and
- trades need to be processed accurately and in a very limited amount of time.

For trade processing, as one example, XBRL or XML offer the advantage of providing a single data representation format into which the information in corporate data systems can be translated, shared and used for reporting. This is regardless of whether it originates from the Internet, data stores or transaction systems. So, incoming trades from the Internet can move through the transaction system, data stores and the reporting software without the need for human intervention or a complicated technology infrastructure involving layers of special-purpose software. The end result of automating the trading process is that it is faster and cheaper to move information from front-end transaction systems to back-end processing and reporting systems – and all operating areas see and can access the same information on any particular trade or customer account.

If streamlining their own operations was all that companies were concerned about, each one could have its own XML representation standards, without regard to how other companies chose to define their information. But the need is far broader than that – information sources (and users) outside of the company must also be considered.

Taking it internal

The question is how to use XML to represent incoming information shared among exchanges, regulators, benchmarking providers, information consolidators, industry organizations, investors and other stakeholders so that it can be understood by internal business information systems and, very importantly, by investment analysts and fund managers to make their information processing jobs easier and faster. That's what XBRL can do and that's why so many prominent, forward-thinking investment management companies find it so attractive.

The Morgan Stanley experience

While it may not be today's reality, investment management companies and the broader financial services industry understand XBRL's potential to create a world of more standardized, automated business information sharing. One major financial services company, Morgan Stanley, has gone a step further by actually offering its published reports in XBRL.

The foundation for Morgan Stanley's leadership position in XBRL and its participation in international efforts to develop the standard is that it improves investment product quality by:

- enabling fund managers and financial analysts to use information straight from reporting companies;
- offering more time for value added analysis by streamlining repetitive preparation work;

- facilitating more analysis from several information sources, including companies, consolidators, regulators and industry organizations; and
- providing a clearer description of reported data, raising the level of confidence in the information used for analysis.

Extracting information directly from company reports is difficult and time-consuming today, requiring substantial time and costs for manual information gathering from lengthy reports that can total over 100 pages.

To speed up the analytical process, investment professionals often rely on intermediaries, such as information consolidators, to make the data in company financial reports usable in their analytical software. This also introduces delays and, very importantly, means management of reporting entities is often once removed from key decision makers in the marketplace. Information consolidators have their own classifications for various report elements, making it hard for market decision makers to know how management itself classifies items. These kinds of classification distinctions can add critical dimension to an analysis.

[illegible]

This is a critical point for Morgan Stanley and other investment management companies supporting XBRL. Portfolio managers and analysts will be able to access information directly from companies without relying on tedious manual processes or waiting for intermediaries to provide the data to them in usable form. And, broad XBRL usage means they can easily, quickly and accurately assimilate company information along with information provided by third parties, including regulators, consolidators, exchanges and industry organizations.

Another critical point is that, by automating the low value-added, expensive analytical preparation process, through reduction of manual tasks necessary before beginning analysis, Morgan Stanley fund managers and analysts will gain far more time for value-added analysis than is generally available today. Resources currently providing low value oriented data access and input can be redeployed to higher end analysis, including extended data considerations. This increases both the quality and timeliness of analysis and, by extension, investment decisions and, by further extension, returns for investors.

[illegible]

Just three years ago, the accounting industry's own insight into how the Internet's overall information-exchange environment would evolve through information standardization led to the creation of a small consortium to develop a means of standardizing business information for system to system exchange. That small group of 13 founding organizations is now a large group of over 200 collaborating organizations working through XBRL International. And XBRL itself did not remain obscure for very long; it is now incorporated into the most widely used business information systems in the world.

Because it is part of so many systems already, and will be incorporated into even more programs, late adopters of XBRL are unlikely to see it as much more than a menu option for saving files or importing data. After all, most people do not think twice about what is behind

XBRL education

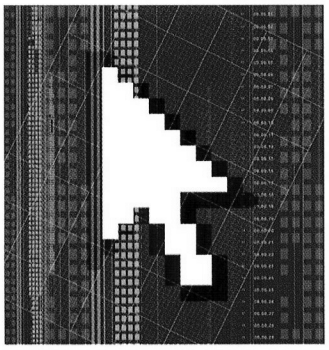
XBRL International: www.xbrl.org

PricewaterhouseCoopers dedicated site: www.pwcglobal.com/xbrl

XBRL in the UK: The Institute of Chartered Accountants in England and Wales: www.icaew.co.uk/index.cfm?AUB=TB2I_25514,MNXI_25514

XBRL for International Accounting Standards: http://www.xbrl.org/taxonomy/int/fr/ias/

XBRL live demonstration for financial statements: http://www.nasdaq.com/xbrl



saving information as an HTML or PDF file, but they do know that this enables their information to be placed on and move about the Internet. That is how a vast majority will see XBRL.

Agreeing standards

XBRL enabled reporting requires that companies have a detailed understanding of how their business information systems move information from the transaction level through higher and higher consolidation levels. XBRL GL, created by XBRL International, is now available and has agreed standards for representing the information found in an accounting system:

- master files, for customers, vendors, employees and others;
- chart of accounts or trial balance;
- transaction files, such as sub-ledger and general ledger postings and history;
- status files, such as trial balance, general ledger, accounts receivable and accounts payable ageings and inventory stock status; and
- business performance and metrics and much more.

It is a universal audit trail, a standard archive format, a mapping tool, and much more. Working in greater detail than aggregated financial statements, is XBRL GL's domain. For instance, XBRL GL may be used to represent the details of the underlying transactions that flow into consolidations. Along with internal data integration, XBRL GL standardizes the data fields of an accounting system so information can be more easily transferred from the client to the accountant in full detail. XBRL GL can represent summarized information (such as "Cash is £100") as well as detailed information, such as "**Check number** 300 from **Customer** 5076B paying off **Invoice** 34578 **received on** 3-April-03 which hit the **"ABC" bank** account and was summarized on Cash Receipts **Journal** # 1078").

This data standardization makes it far more efficient to move information from sub-system to GL, from GL to budgeting tool and back, from GL to the consolidated system at HQ and from HQ to the accountant, the bank, or other users of information. As such, XBRL GL will facilitate audits, both internal and external, and be a catalyst for more frequent reporting and eventually continuous reporting for selected items of interest to management and stakeholders. It will provide a common format for archiving data from disparate systems.

XBRL GL is not primarily a way to report information for external parties; it is instead a multipurpose tool for anyone who ever needs to retype information into a general ledger or from a general ledger. It has value to companies of almost any size. Because it is independent of the chart of accounts or trial balance and the XBRL financial reporting taxonomy, it can represent journal entries in multiple charts of accounts simultaneously for US/IAS-concurrent accounting or map to US, IAS, tax and management reports to be the drill down detail for any of these reports, as well as tie from one report to the other automatically.

Change is never easy, but XBRL GL and continuing efforts of XBRL International are laying the groundwork for the transition to a new world of better, faster and more business information for better business decisions.

Making the change work

Change happens. Look back ten years and consider if you would have suggested that placing company financial statements on the Internet would be a very effective way to reach stakeholders. Probably not. Very few did. Yet, the language that drove the Internet's widespread adoption as a reporting communication vehicle, HyperText Markup Language, was born a little over ten years ago. The important point is to think about what you probably could have done differently from a professional standpoint if you had seen that change coming.

The next change is a new Internet language, XML. XBRL is the XML derived language for the business reporting supply chain. This article outlined many of the opportunities for companies, their stakeholders and the accountants who serve them to enhance their business information for better decisions. Continued enhancement of the business reporting supply chain would also transform the analyst processes and enhance the value of related research and analyst products.

Anticipating the change enables you to act on it – and there are plenty of opportunities to consider. The most relevant is that XBRL enables better information for better business decisions by management and company stakeholders.

This article is of a general nature and is not intended to address the specific circumstances of any individual or entity; in specific circumstances, the services of a professional should be sought. The views and opinions are those of the authors alone and may not necessarily represent the views and opinions of PricewaterhouseCoopers or its member firms or XBRL International.