*XBRL will produce more effective reporting
through market-based standards.*

Corporate Reporting Enters the Information Age

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NOW MORE THAN EVER, DECISION makers across the corporate reporting supply chain recognize the need for accurate, reliable, timely, and accessible business information. In the age of Sarbanes-Oxley, executives in particular have a critical responsibility: Ensuring that communication of operational results also means conveying those results through efficient delivery in an interactive medium such as the Internet.

Resistance to the idea of using the Internet for gathering and disseminating financial information largely reflects a widespread perception that the required technologies are too complicated, too unwieldy, and perhaps not worth the time, talent, and money. The means of reducing complexity and promoting more straightforward information-sharing among disparate types and brands of business reporting and analytical software lies in the creation of a standard that all business software can understand and use. That standard has already been created, and is moving into the corporate reporting supply chain more quickly than you might think. Welcome to the age of eXtensible Business Reporting Language (XBRL).

THE PROBLEM WITH PAPER

What if air traffic controllers were required to issue paper reports detailing the speed, direction, and location of aircraft during the prior quarter? We probably would not have much air travel. Information about landings and departures that already occurred is irrelevant to the control tower as it directs current activity in the skies over the airport. Air traffic controllers require real-time information, which is why airplanes are equipped with transponders that allow the real-time tracking of their movements on screen rather than on paper.

Paper-based reporting is opaque, linear, and unable to meet real-time information needs. So why do investors still have to perform their analyses and make decisions based on voluminous, backward-looking, paper-based periodic reports? On paper or in an electronic version of a paper report, important information could be on page 2 or it could be buried on page 76. In the Information Age, that is no way to run an efficient market system.

XBRL will bring corporate reporting into the twenty-first century. Users of information from XBRL-enabled corporate reports will be able to extract data instantly and easily, and enter it into their analytical software tools for immediate analysis. XBRL represents the next stage in the evolution of human communications.

Freed from the paper From stone tablets to papyrus, to paper, to printing press, to electronic documents, the written word has always been embedded into the medium in which it is presented. In order to find and use a specific piece of information, it first has to be located and then copied before it can be used. With XBRL, information can still be presented in traditional document formats, but it is not locked into the document. Instead, information can be located and extracted in an automated manner, with software doing in moments what previously took human eyes and hands hours to accomplish.

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The advantages of XBRL relative to the current business information exchange process are:

■ **Lower production costs and more efficient reporting.** In an XBRL framework, all business information is identified according to a label or "tag" that can be understood and used by any type of business software. That allows direct, software-to-software information-sharing, eliminating the need for human intervention — and for paper. Data is entered only once, and thereafter can be addressed for any reporting or analytical purpose. Information is transferred file-to-file instead of file-to-hands-to-file. As a result, the cost of financial reporting for public companies could drop by 40 to 60 percent per year while enabling companies to communicate more directly and accurately with their constituents.

■ **Lower consumption costs and greater transparency.** Information consumers (including managers, investors, creditors, regulators, and other stakeholders) will gain significantly increased access to information in corporate reports at lower cost.

■ **Enhanced information-sharing.** XBRL exponentially increases the timeliness and communication abilities between any and all parties interested in corporate information. That is not only relevant for communication between companies and investors, but also between entities whose communications are derived from corporate report aggregations, such as reports issued by regulators to other government agencies for analysis and policy-making decisions.

No more data shovelling Businesses, regulators, stakeholders, and other corporate-information consumers face an enormous challenge: processing huge (and growing) volumes of information in a timely, cost-efficient manner. While the Internet is now used to collect and disseminate business information, the data within the reports cannot be shared easily. Disparate systems and software can only share documents — they generally cannot directly share the information in the documents. Thus, manual information gathering and consolidation — searching through sources, then "cutting and pasting" or re-keying — is necessary to get information from its disparate sources to the point at which it can be used for analysis, decision making, and reporting.

Manual information processes are not economical, accurate, or flexible enough to accommodate today's changing and growing information needs. Many organizations are already realizing that throwing more money and people at "data shovelling" tasks adds no value to an organization's performance and may reduce value because of mistakes made in the manual data-transfer process. If all software could "speak" the same language, there would be no need for the manual data-transfer tasks. They would disappear, along with their associated costs and error risks.

ONE STANDARD FOR MULTIPLE INFORMATION NEEDS
XBRL is a universal format, specifically designed for business information, that all software can understand and use. Because it is both software- and platform-neutral, XBRL enables direct software-to-software information-sharing and exchange using Internet technology. XBRL works through published "taxonomies," which are like dictionaries of business-data terms. Every single piece of business information has a business-data term, or "tag," attached to it that makes the data identifiable in any software.

Unlike solutions that require special-purpose software and proprietary standards to enable disparate systems to share information, XBRL does not leave organizations dependent upon particular third-party vendors for implementation, maintenance, or adaptation as information needs evolve and grow. With XBRL, there is no need for costly special-purpose software or development of proprietary information standards or manual tinkering to deliver information to those who wish to use it. XBRL can be deployed over existing systems and incorporated into software already in use. Unlike manual consolidation processes, human hands are a lot less involved, significantly enhancing the reporting control environment.

Banking on XBRL XBRL benefits both those who produce and those who consume corporate financial information. Many high-profile government regulators around the world have begun requiring companies to submit filings utilizing XBRL, and more will do so in the very near future. A sampling of global regulators adopting XBRL include the Bundesbank, which began an XBRL filing pilot in 2002; the UK Inland Revenue, which will start accepting XBRL filings for the 2003 tax year; the National Tax Agency of Japan (Kokuzeicho), which has scheduled implementation for 2003, and the newest agency to adopt XBRL, the U.S. Federal Deposit Insurance Corporation, which will begin XBRL filings in 2004. That will likely be followed shortly by XBRL implementations at FDIC's fellow members of the Federal Financial Institutions Examination Council.

Although several U.S. federal agencies have begun exploring XBRL's potential to lower costs, enhance performance, and increase responsiveness to information constituents, the FDIC is the first to act. The FDIC's Call Report Modernization Project will use an XBRL framework for collecting, processing, and distributing data from over 8,000 banks to audiences inside and outside the government. (A Call Report is a consolidated report of condition and income compliance that all FDIC-insured institutions file quarterly.)

The FDIC anticipates that the $39 million it will spend on implementing the new reporting over the next 10 years will produce a net savings of $26 million in processing costs, starting in 2004. And the agency initially expects to take only five days to report consolidated information to other government agencies, financial institutions, and the public, instead of the minimum of two weeks it now takes.

The time difference results from automating consolidation of Call Report information. Here's how the process will work: The FDIC will provide a new, XBRL-enabled Call Report submission form so the data provided by banks will enter the agency's systems in a single form. That eliminates the manual

standardization process used today, enabling immediate information validation and processing.

The FDIC will store the information in a central repository, which will be accessible to other regulators, financial institutions, and the public. That will provide a single point of access for all information constituents, enabling them to select the information relevant to them. The FDIC will not have to produce a variety of different reports that utilize overlapping information.

What impact will the FDIC's XBRL implementation have on banks? The reporting window for banks will stay the same and the XBRL-enabled submission form does not, in itself, require banks to change their methods of gathering Call Report information However, the practical effect of the FDIC's implementation will be to highlight the need for banks to automate Call Report production. The reason is straightforward: The faster the FDIC turns reported data around, the more imperative it becomes for banks to provide 100 percent accurate information the first time.

With a five-day turnaround, there is little room for banks to send the FDIC corrected data — reporting will become a one-shot deal. With no second chances, the usual manual processes banks use to produce Call Reports will likely require added resources or an XBRL-enabled reporting process to ensure accuracy and completeness. Moreover, banks will need to begin adapting their processes as soon as possible because the five-day time span will grow shorter as the FDIC uses XBRL and its own streamlined processes to disseminate Call Report data within hours of receipt.

BENEFITS FOR COMPANIES AND STAKEHOLDERS

Because the FDIC's XBRL implementation puts banks on notice to ensure nearly flawless Call Report data aggregation and validation processes, and because all or part of those processes are currently performed manually, bank managers have a choice: dedicate more resources and money to manual processes, or XBRL-enable the systems used for preparing the information.

Allocating more money and manpower to manual processes adds expense without adding value. Deploying XBRL over business information systems involved in Call Report production benefits banks by lowering reporting costs through automation and, even more critically, resolving one of the most pressing reporting problems banks face: accessing information contained in numerous data sources that are incompatible with each other and with reporting and analytical software.

In most banks, consolidating information is not only a manual process, it is a daunting task with piles of paper printouts from all of the various and sundry data stores located throughout the bank. Many companies in many industries confront this same problem, which is an outgrowth of having a range of different operating areas with different information needs and requirements as part of a single organization.

Government also confronts this problem: Agencies use disparate software, making information-sharing among them inefficient, untimely, and inaccurate — a recipe for poor decision making. In addition, because information-sharing is arduous and slow because of differing systems requirements, government agencies (like company operating areas) tend to be isolated from each other. Frequently, several undertake the expense of entering and attempting to maintain the exact same information. The results? Redundant effort and, worse, the exchange of outdated, erroneous data with other relevant operating areas or agencies.

The situation is even worse in the banking industry as a result of relatively higher historical merger and acquisition activity that has produced systems and data sources from formerly separate companies within a consolidated environment. Usually, systems were incompatible before the organizations were joined, so the layers of incompatibility have mushroomed over time as mergers and acquisitions continued.

Beyond warehousing To overcome the disparate data-store problem, banks and other companies often resort to moving information into yet another data store, a "warehouse." Does this make sense? Not really. It is expensive, adds third-party risk, and cannot rapidly or easily accommodate prospective changes needed in the internal information environment.

Moving information from the data stores into the warehouse, and then moving information out of the warehouse for reporting, analysis, and management decision making takes incremental resources, effort, and layers of expensive special-purpose software. In addition, there is vulnerability to the third-party vendors servicing the complicated structure because data movement would be impaired if any one of them stopped supporting a particular product or products. In contrast, XBRL enables information in disparate data stores to be standardized for re-use in management or regulatory reports without special-purpose software or proprietary information standards.

XBRL also allows faster utilization of the data used to create non-financial performance metrics. For example, the data used to create summary indices such as "customer satisfaction" and "customer retention" are difficult or impossible to gather when systems in various operating areas are incompatible and consolidation processes are manual. Yet, this type of information can be critical for assessing a company's performance.

With XBRL, information needed to routinely monitor critical non-financial information becomes as easily and instantly available as information used for statutory reporting. So, internal XBRL deployment not only increases the number of data points that can be used in any particular management analysis, it also increases the variety of information that can be incorporated routinely into management decision-making processes.

XBRL VS. PROPRIETARY XML

The Internet as we know it today is actually a gigantic, super-efficient fax machine. While it increases the speed with which documents can move, it does not make the information in documents any easier to extract and use in analytical or reporting software than it was in physical paper documents.

What the Internet is missing is universal, software-neutral, non-proprietary standards for presenting, accessing, and moving information safely and securely. Those standards, collec-

tively called "Web Services," are now being deployed and the result will be an unprecedented level of direct communication ability between formerly incompatible software within and across organizations in all information supply chains, not just business reporting.

The foundation of Web Services capabilities is its universal language, Extensible Markup Language (XML). XML is the starting point for creating specific-purpose languages; XBRL is XML for corporate reporting.

XML-based languages, including XBRL, describe different kinds of data and text through "tags." Tags give information an identity and context that can be recognized and understood by national, and international levels under the umbrella of XBRL International. The developers' focus is on creating a universal information format for business reporting over the Internet. The open, collaborative XBRL standards are key to effective information exchange among corporate reporting supply chain members. With over 200 organizations around the world involved in the collaboration, XBRL is by far the leading candidate for use by all supply chain participants.

In contrast to XBRL's open, collaborative standards, proprietary information standards typically found in vendor-supplied software present barriers to information exchange between different applications. XBRL is the universal format for

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disparate software products. By enabling universal communication across all forms of business information software, XBRL promotes instant information accessibility through direct exchange.

For example, a company publishing XBRL-enabled financial statements on its website can present the information in a traditional format. However, even if information appears in a traditional paper document, the information is not locked into the document. Users can extract whatever specific information they want simply by requesting it — right from their XBRL-enabled analytical software.

Try it yourself   To see what XBRL-enabled reporting looks like, you can access a publicly available demonstration created by Microsoft, PricewaterhouseCoopers, and NASDAQ. This pilot contains XBRL-enabled financial statements from 21 companies for the last five years. It enables you to extract specific information for any period, literally in seconds, right into an XBRL-enabled Excel analytical spreadsheet. You can try out this XBRL-enabled reporting and analytical environment for yourself at *www.nasdaq.org/xbrl*.

Be forewarned: Once you experience this pilot, you will not want to go back to today's reality. You will be able to extract whatever specific information you want from any company report simply by requesting it — right from XBRL-enabled analytical software. The data appear, the analysis is completed, and the graphs drawn all in a matter of seconds.

Open standards   XBRL's universal application to disparate software is just one of its important features. Another is that it is an open standard developed collaboratively by over 200 corporate reporting supply chain participants including accountants, software vendors, regulators, aggregators/distributors, companies, and industry organizations working on the regional, business reporting that enables interoperability of information. The primary potential competitors to the XBRL standard for business reporting in the Web Services environment are proprietary XML standards developed by individual members of the corporate reporting supply chain. Individual supply chain members may develop their own XML standard and demand that other members use it.

The alternative path for such members is to work collaboratively with the XBRL consortium to ensure that their unique needs are included within the XBRL standard. A proprietary approach to information standards increases costs for both the consumers and producers of information. A proprietary standard means all users must modify their applications to incorporate that standard.

Regulators are a clear-cut example of supply chain members in a position to develop and impose their own standards. However, justifying use of taxpayer dollars for such undertakings will be difficult when suitable open standards exist. Moreover, forcing a private taxonomy on regulated entities, and thus adding to their reporting burdens, has little value when communication among supply chain members, other than the regulator, is based on the open public standards. A proprietary approach by a single regulator also will adversely affect its ability to share collected data with other relevant regulators and government agencies.

Many regulatory reporting requirements are based on Generally Accepted Accounting Principles and, therefore, to the extent that regulators can map their systems to publicly developed GAAP XBRL taxonomies, they are relieved of the burden and expense of developing and maintaining standards for those reporting elements.

In addition, regulatory involvement in collaborative, public XBRL standards-development efforts is highly desirable because it:

■ benefits the standards through input of the regulatory perspective,

■ enhances relationships between supply chain members through ongoing dialog about how best to convey information vital to the supply chain,

■ promotes more effective regulatory processes for both information producers and consumers through the use of interoperable information standards,

■ lowers the cost of regulation by spreading development and maintenance of technical and semantical standards among collaborators.

Vertical standards   Integral to the collaborative standards development process is consideration of particular reporting needs within various industries, or "verticals." Just as XBRL enables managers to gather relevant performance-assessment information that falls outside the range of statutory reporting (e.g., "customer satisfaction and retention"), open collaboratively developed XBRL reporting standards for such metrics benefit all supply chain members. Because XBRL promotes a more seamless flow of data within and among supply chain members, it becomes possible to track information on non-financial metrics relevant to assessing the health of individual companies and entire industries.

Regulators have a particularly important role to play in vertical standards development because they are in a position to consolidate the information that they receive from industry members and offer valuable benchmarking data by which individual companies can perform additional, timelier self assessments. This may come in the form of peer-group analysis and comparative information. Regulators currently providing that service will be able to provide it concurrent with the filing by the regulated entity, rather than days, weeks, or months later. The sooner information is available for re-use, the greater its value to the regulatory process.

It is also important to realize that regulators themselves are a "vertical." Standards developed by one government agency could be offered to and used by other agencies. Regulators can and should work together to create standards for consolidating and aggregating information for specific operational and performance measurements needed within government.

A BETTER CORPORATE REPORTING SUPPLY CHAIN

An example of collaboration between regulatory agencies is the taxonomy now being developed for the FDIC's Call Report Modernization Program, which will also be used by other FFIEC agencies. There is no reason that other government agencies cannot also join this collaboration to achieve their own "e-government" goals.

By adopting XBRL, regulators are also initiating the adoption process in the supply chain by promulgating information standards that are relevant and beneficial to every corporate reporting supply chain participant. Management gets more access to information residing in company systems and can easily and quickly incorporate it into the decision-making process, which means better-run companies. Business partners can re-use shared information more effectively and quickly so that operations become more efficient not just within companies but between companies. Accountants will be able to serve clients and the market far better because there will be more information and more time available to perform risk assessment analyses. Creditors can make more timely decisions based on a larger pool of borrower data. Investors get improved access to information reported by companies, as demonstrated in the NASDAQ pilot, so those reports become more relevant for decision making. Other regulators and government agencies gain more timely access to a larger pool of accurate, relevant information for analysis and policy decisions.

The big picture is that the Internet continues to provide a powerful platform for the exchange and use of information. But what we are accustomed to today only scratches the surface of the information-sharing opportunities available to corporate reporting supply chain participants. To realize those benefits and more, a collaborative approach is needed among the supply chain participants.

CONCLUSION

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 a new Internet revolution that will redefine the "business reporting" paradigm through a new reporting standard, XBRL, and new capabilities for moving information more quickly and securely over the Internet. This revolution will not take 10 years to affect business communication — it is already unfolding. Regulators have been at the forefront of adopting the new XBRL standard, but their involvement in determining the effectiveness of this standard goes far beyond meeting their own challenges and imperatives.

Regulated entities are more than likely to deploy XBRL in their own systems, beginning with those that feed management information and then expanding beyond those systems to other consolidation problems posed by disparate systems and data stores that exist in most companies. Internal XBRL adoption by companies increases the trust that all company stakeholders can place in information that companies report and also serves to increase the quality of management decision making.

Business information consumers of all stripes — managers, investors, regulators, business partners, and creditors — are the biggest winners of all with XBRL because they are the ones who, right now, are stuck digging through the hundred-page-plus annual report to find the facts of interest to them. Data "hunting and gathering" is largely a manual, high-cost, low-value process that results in less informed decisions. If the facts are presented in a way that allows easy access and consumption, then the costs and time associated with using information will be significantly lower and more analysis on more facts will be performed. XBRL presents the facts in an instantly consumable, easily reusable manner. For investors, regulators, and all other stakeholders who are mostly concerned with "facts," XBRL is a welcome addition to the information revolution.   ℞