

Reengineering Financial Services

How data tagging has made a muddle of financial transparency—and what CEOs can do about it.

BY ALLAN D. GRODY

It seems CEOs are being put upon by all manner of regulations—anti-money laundering legislation, Sarbanes-Oxley, the SEC’s IDEA initiative, the next generation of EDGAR and now executive compensation controls. Next up is a systemic risk regulator, a financial products safety commission, and probably much more as legislators continue to probe the roots of the financial calamity that has befallen us.

All of this seems a distraction from the important things—like running a business and creating shareholder value. But what if it was possible to get a significant return on an investment in accommodating new regulation? Would fixing the financial services infrastructure and global systemic risk mitigation be worth a small effort to accommodate government regulators? Could lower financing costs, cheaper IPO fees, better disclo-

sure and more direct access to shareholders make a difference? Could an embrace of a regulatory initiative as simple as tagging and standardizing data in corporate filings lead to solving the problems of lack of transparency and the failure of regulatory oversight while providing all the enumerated benefits described above?

What we had believed about our system of regulation was that regulators could carry out their mandate to oversee our financial institutions. The recognition that the financial services industry has come undone and is, at its root, fundamentally flawed is no new revelation. That regulators are not able to see the exposures to the risks being taken is the more egregious offense. As former Treasury Secretary Paulson said, “Our current regulatory regime is almost solely focused above ground, at the tree level. The real threat to

market stability is below ground, at the root level, where the health of financial firms is intertwined.”

The fundamental restructuring of the financial services industry begins with a corporate CEO’s willingness to support the standardization of data in regulatory filings. In so doing we can begin the transformation of the infrastructure of the financial services industry, linking filings data to financial intermediary access, and on through the supply chain of financial firms and institutions that trade, match, clear, settle, pay, take custody of, aggregate and report on the financial transactions of our economy.

Each CEO who participates in this standardization process gets the financial services industry a step closer on a long overdue journey to straight-through processing (STP), the still-unrealized vision of a seamless, locked-in, automated, electronically connected infrastructure, where risk is minimized and operational efficiency maximized. The realization of STP is today stymied by the incredible complexity of non-standardized referential data components, arrayed in different assemblages to describe a myriad of financial transactions that collectively represent the business and inven-

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tory of our financial services industry. All can benefit from labeling the same product or business entity with identically tagged data throughout the supply chain, so that access can be automated and identification absolute, giving new

Add to this the reality that every internal development project or external vendor, or every intermediary such as an exchange or a payment system operator or clearing facility, out of necessity and in attempting to preclude competition, created its

entirely, as has happened many times. Waiting those three days is especially troublesome when counterparties traverse different time zones.

Data-tagging initiatives, the most prominent being the SEC's interactive data program, are being mandated by regulators. First-level initiatives are under way to identify the commercial description of the item to be tagged, and the precise spelling of the tag. (For example, the tag <business entity> means "a commercial enterprise or issuing entity that is required to report to a regulating authority.") Along with these data-tagging initiatives are projects meant to set a standard for the identities of each financial product or business entity without ambiguity. The current financial crisis has given urgency to these efforts. Although no center of gravity for this has yet emerged, we expect that the global systemic risk regulator being discussed will focus these efforts.

The methods and technology have evolved to provide impetus for regulators to chart a new course in regulatory filings, as they have to aggregate and then understand the electronically transmitted data filed with them. Today they cannot do either, nor can the CEOs who run the companies that submit this data. Both constituents also desire to "see" the data in near real time—that's how quickly risk is being placed onto their companies' books—or at least a lot sooner than once a year. This annual review is now the only time when transactions are validated, and then only after auditors take many months to go over the numbers, using hordes of staff and spreadsheets, in order to proclaim that the numbers conform to GAAP and that the internal con-

Upwards of \$10 billion in annual trading losses could be eliminated by data tagging, as a starting point to saving nearly \$40 billion in annual expenses that the largest financial institutions spend unnecessarily.

meaning to transparency and regulatory oversight. Corporations will benefit immensely.

How We Got Here

There is no one to blame for the current state of affairs. It simply had to do with the evolution of the business, first from localized community banks visually inspecting securities, posting cash into ledger books, etc. We then went on to automation and national institutions where everything was coded so that the computer could post it to automated ledgers; and finally to multinational and global institutions with remote management and processes transcending sovereign state regulations and even regional government compacts. Commensurate with these events were the improvements in infrastructure that evolved over 50 years of automation and the dominance of the silo governance structure in which delegation was accomplished and the business managed.

own identification codes and numbers. Not to leave out the fact that the industry's high profit margins could pay for inefficiencies built into the infrastructure of each firm and systemically built into the best practices of the industry, and passed on as higher prices to customers.

In a simple example of a systemic infrastructure issue, securities trades between firms that are completed on day one are paid for on day four. This time delay is necessary to allow each firm to assemble, transmit and then match by computer the details of the trade. When, as is the case, there is no absolute precision in so many identifying attributes, failures in matching result in costly reconciliation procedures, loss reserve accounts, etc. The industry is thus exposed to risk over these three intervening days. In the U.S. alone there are \$7.4 trillion in unsettled transactions each day, with the possibility that one of the parties will fail to pay its obligations or cease its business

Tagged Documents and Data Examples

More Work for Computers—Less for People

XML Message Format*

```
<Customer>
<Type>Margin </Type>
<Name>"John Doe"</Name>
<Identificationnumber> 999-99-9999
</Identificationnumber>
<Addressline1> 1313 Blueview Terrace </Addressline1>
<Cityormunicipality>Boston</Cityormunicipality>
<Stateorprovince>MA</Stateorprovince>
<Ziporpostalcode>12345</Ziporpostalcode>
</Customer>
```

*FIXML Trade Transaction Format

XBRL Message Format*

```
<SEC-HEADER>
9876543210-09-003850.hdr.sgml : 20090331
<ACCEPTANCE-DATETIME>20090423150642
<ACCESSION-NUMBER>9876543210-09-003850
<TYPE>8-K
<PUBLIC-DOCUMENT-COUNT>8
<PERIOD>20090331
<ITEMS>2.02
<ITEMS>9.01
<FILING-DATE>20090331
<DATE-OF-FILING-DATE-CHANGE>20090331
<FILER>
<COMPANY-DATA>
<CONFORMED-NAME>ABC COMPANY
<CIK>9876543210
<ASSIGNED-SIC>6331
```

*SEC Edgar Filing Header Format

trols are adequate to assure that what has occurred is what appears on the books. Regulators, likewise, are supporting a labor-intensive review process to carry out their oversight responsibilities. This is no longer acceptable, as the global financial crisis has taught us.

The Solution

In 1984, the SEC began a program to place corporate documents, previously typed, copied and physically distributed, into an electronic database. In 1993, the SEC began distributing EDGAR (Electronic Data Gathering Analysis and Retrieval system) information over the Internet. While a significant improvement over prior methods, granular data was, and still is, recorded in an undisciplined way, incapable of access by computerized means in any rigorous, predictable and replicatable

way. Now the SEC's new system, IDEA (Interactive Data Electronic Applications), is set to redefine data disclosure and, by its logical extension, place this data onto the on ramp of the financial information grid using the evolved technology of the Internet. eXtensible Markup Language (XML) and its allied business reporting language, XBRL, is the preferred mechanism to package the data and enable computerized access. Christopher Cox, the outgoing SEC chairman, called the IDEA development something that would "significantly transform the SEC's business model," and compared XBR's importance to that of the first personal computers and the requirement that financial statements be published online in the EDGAR database. (See table above.)

The Federal Financial Institutions Examination Council became the

latest regulator to adopt XBRL technology with the recent launch of a modernized Central Data Repository (CDR) that will be used by the Federal Reserve Board, the Federal Deposit Insurance Corporation and the Office of the Comptroller of the Currency to gather, validate and store banks' Consolidated Reports of Condition and Income (Call Reports).

Interactive data relies on computer "tags," similar in function to locating the bar codes that position a scanner to read the encoded and standardized item number. These tags allow an automated search routine to locate and identify individual items in a company's or legal entity's financial disclosures. With every number on an income statement or balance sheet and every data item in mutual fund filings and offering prospectuses individually labeled, information can be easily accessed

BERKSHIRE HATHAWAY, INC.

Multiple Business Identities:

Service (partial list)	Identifier
Cusip Issuer	084670
S&P Rating	100264
Compustat Issuer	002176
Dun & Bradstreet	001024314
Edgar Online	0001067983
Red/Clip CDS	08CAD7
Fitch Rating	80090742
Telekurs	20823

Multiple IBM Common Stock Global Identifiers

- CUSIP (US) 459200101
- AUSTRIA 851399
- COMMON CODE 9703799
- ISIN US4592001014
- ITALY 550304
- JAPAN 584006000
- NETHERLANDS 45480
- SEDOL 2005973
- SEDOL: CANADA-TORONTO 201382
- SEDOL: FRANCE-PARIS 5217689
- SEDOL: GERMANY-FRANKFURT 5199204
- SEDOL: JAPAN-TOKYO 6003649
- SEDOL: JAPAN TOKYO 6464956
- SEDOL: MEXICO-MEXICO CITY 2667715
- SEDOL: NETHERLANDS-AMSTERDAM 4463353
- SEDOL: NETHERLANDS-AMSTERDAM 5199323
- SEDOL: PERU-LIMA 2436517
- SEDOL: SWITZERLAND – SWISS S.E. 4514325
- SEDOL: UNITED KINGDOM- LONDON 40868
- SEDOL: USA – NEW YORK 2005973
- SICOVAM 12964
- SVM 9254608
- VALOR 941800
- WPK 851399

Source: Standard & Poors, 2008

on the Internet, downloaded into spreadsheets, reorganized in databases, and put to any number of comparative and analytical uses by investors, analysts, journalists and financial intermediaries.

Importantly, by requiring such tags to surround the business identity and security instrument codes, which also need standardization, and prescribing that other information normally described in text-only press releases and word documents, such as corporate event notifications, be presented in standard format, we begin to set the stage for retooling the infrastructure of the financial services industry. Setting standards where proprietary and conflicting identification codes now exist across the entire range of referential data, including such fundamental identifiers as symbols for corporate issuers and their issues; symbols used in contract markets such as options and derivatives; and numbering conventions for securities, supply chain business entities, and counterparty identifiers, would be a transforming event. (See sample tags, above.)

The Starting Point

If CEOs would simply have their staffs stop asking “what’s in it for us” when the regulators come calling, then the starting point is easy to understand—and implement: tagging corporate filings for voluntary corporate events, such as mergers and acquisitions, and other reportable items like dividends that are declared in board meetings, transcribed and typed in text and disseminated in press releases. Standard formats and data tags within a finite number of corporate event types would be prescribed by a designated industry trade group, with many having already volunteered to do this. Standard templates would be filled

out by corporate filers and uploaded to the SEC’s IDEA database for all to retrieve and use. A huge number of financial intermediary activities of retrieving, interpreting, coding, inputting, and transforming this data into proprietary computer formats, and distributing the results would be eliminated, as would the risk of getting it wrong. (See sample standard template, “Unstructured Corporate Event Notification,” below.)

More importantly, the locked-in-nature of the at-source-through-to-end-use process, the fulfillment of the straight-through-processing mantra of the financial services industry, would diminish significantly the risk now associated with misidentified items; unreported events; and transposition, transformation and mapping errors. Ultimately these errors find their way into incorrectly updated securities positions, unreported income, failures to adjust traded quantities and improperly reported performance and risk information to regulators. Just in this sim-

Unstructured Corporate Event Notification

OPT:01:”ELECTRONIC DATA SYSTEMS CORPORATION“
 UPDTEXT: 643251: #:0099: “SMK INFORMATION SERVICES“
 EXTENDED THE OFFER TO PURCHASE SHARES OF ELECTRONIC DATA COMMON STOCK FROM HOLDERS OF 99 OR FEWER SHARES HELD AS OF RECORD DATE SEPTEMBER 20, 2002, UNTIL 07-18-2003. TERMS: HOLDERS WILL RECEIVE CASH AT A RATE TO BE DETERMINED AT THE CLOSE OF BUSINESS ON THE DATE OF TRANSFER, LESS A PROCESSING FEE OF \$1.50 PER SHARE: THE OFFER WILL EXPIRE ON JULY 18, 2003 (05:00 PM EDT). THERE IS NO PROTECT PERIOD OR WITHDRAWAL PRIVILEGE AVAILABLE. NOTE: HOLDERS MAY PURCHASE ADDITIONAL SHARES TO REACH 100 AT A DEPOSIT PRICE TO BE DETERMINED, PLUS A \$1.50 PER SHARE PROCESSING FEE. THE OFFER IS NOT REGISTERED WITH THE SEC. A MAXIMUM NUMBER OF 10,000 SHARES PER WEEK WILL BE ACCEPTED ON A FIRST COME, FIRST SERVE BASIS:

ple but transforming way, upwards of \$10 billion in annual trading losses could be eliminated as a starting point to savings of nearly \$40 billion in annual expenses that the largest financial institutions spend unnecessarily and should now be part of all taxpayers' concerns.

Limitless Benefits

The benefits to corporate users of financial services are limitless: being able to see inside financial products via automated means and deconstruct their components for risk assessment and valuation purposes; to easily and automatically access financial industry records, i.e., shareholder lists, counterparty activities, risk exposure, trading activity, shareholder ownership concentrations, et al; to penetrate into regulatory data at a granular level, including footnotes in the balance sheet, cash flow and income statements; and the ability to associate news events with any and all of the above, and monitor this all in real time.

Had this already been the case for the offering documents containing the details of the Collateralized Debt Obligations (CDOs), and had Lehman

Brothers' identity been similarly tagged and standardized, a regulator could have easily swept through via computer the databases of each of the financial institutions it oversees. Regulators would have been able to locate and then aggregate and analyze the counterparty risk each had with Lehman. (See Lehman Brothers table, below.)

In reality, it took weeks, even months in some institutions, to find, aggregate and then analyze their exposure to the CDOs now referred to as toxic assets and to Lehman Brothers, now bankrupt. The starting point to this is the reengineering of financial services by corporate CEOs willing to support the standardization and tagging of data in regulatory filings.

Conclusion

Regulators worldwide are demanding more interactive, automated inputs, requiring even more structure, precision and standardization of data. After studying this issue for over two decades, the Group of Thirty, an international policy consultative group with representatives from regulators and the world's largest financial insti-

tutions, concluded that a global owner of reference data is needed to manage the systemic risk of a real-time global financial industry. Already, policy makers and regulators are studying various proposals for a reference data utility, one of which is described as a Central Counterparty for Data Management, where "assured data sets" would be validated and overseen by a systemic risk regulator.

This article suggests a structural starting point for corporations, financial institutions and regulators to keep pace with the risks inherent in globe-spanning real-time financial transactions. It further offers the means to gain access and interact with the interconnected financial information grid in an efficient manner and with minimal risk. For regulators and others it is also the means to observe the individual components of the financial transactions that traverse this electronic highway. For CEOs it is the means to interact with a streamlined, efficient, properly policed, easy-to-access, transparent financial industry where "what you see is what you get" takes on a new meaning. Corporations will be able to easily access the financial data that emanates from corporate filings, prospectuses, corporate notices, etc., and is transformed into analyzed, processed, reconfigured, structured and tranced financial information and products. ▲

Allan D. Grody is president of Financial InterGroup, a former professor of risk management at New York University's Stern Graduate School of Business and an editorial board member of the *Journal of Risk Management in Financial Institutions*. He was the founding partner of Coopers & Lybrand's Financial Services Consulting Practice.

What Was Your Exposure to Lehman Brothers in:		
These Products?	These Business Relations?	
Unique Securities Issues Outstanding	Bond Indenture Trustee	General Partner
Lehman Brothers Bank, FS 2,717	Commodity Trading Adviser	Investment Adviser
Lehman Brothers Finance SA 467	Counterparty	Index Vendor
Lehman Brothers Treasury Co.BV 3,657	Custodian	Limited Partner
Lehman Brothers Holdings Inc. 2,228	Collateral Depot Agent	Market maker
Neuberger Berman Inc. 7	Dealer	Prime Broker
	Depository Agent	Reference Entity
	Escrow Agent	Real Estate Manager
Unique Issuing Identities 204	Fiduciary	Syndicate Manager
Subsidiary Issuers 79	Floor Broker	Underwriter
	Futures Commission Merchant	

Source: S&P/Financial InterGroup