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Still think XBRL use is limited? Experts discuss how XBRL is transforming the SEC and investors are reading your financial disclosures

Ten years have passed since the SEC's XBRL requirement came into effect. Despite the challenges of the transition from traditional filing to structured data, using XBRL in SEC financial reporting has proven to be a great success. The use of XBRL-tagged data in financial disclosures continues to accelerate among investors, market analysts, and the SEC staff who conduct review and enforcement activities. It is becoming the norm for the collection and analysis of financial data.

The SEC's vast structured database is transforming and improving the way financial disclosures tell companies' stories to investors. It is solving the two problems the SEC sought to address with the XBRL mandate: The need to make the ever-expanding universe of corporate financial information more easily accessed by investors who are facing investment decisions; and the need to regulate this data universe so that the SEC can ensure compliance with accounting rules, mitigate risks to investors, and detect accounting fraud or other forms of corporate wrongdoing.

In a Toppan Merrill webinar broadcast on September 18, 2019, three experts from different markets sectors discussed XBRL's success story:

- *Mike Willis,* Assistant Director of the SEC's Office of Structured Disclosure.
- *Emily Huang,* CEO and co-founder of idaciti (which makes tools for analyzing structured data). Ms. Huang explained how Inline XBRL brings a company's financials to life and how painfully apparent XBRL mistakes are to investors and analysts.
- *Mike Schlanger,* Vice President of Solution Sales at Toppan Merrill. Mr. Schlanger offered best practices for filing high-quality XBRL disclosures.

Dimensions has summarized below some of the highlights from the webinar, which is available here.

XBRL is solving the problems it was mandated to address

"What problem was the SEC trying to solve with XBRL?" That was the question Mike Schlanger, Toppan Merrill's Vice President of Solution Sales, posed at the start of the webinar. To put the answer simply: data overload. The SEC needed a cost-effective way to harness a vast quantity of varied financial data into a readily consumable form without losing valuable information. By capturing a volume of data and reducing its variety through standardization, XBRL tagging converts human-readable filings into machine-readable units that can be grouped and processed. For investors and other data-users, this allows aggregation, comparison, and analysis at a faster rate and lower cost than unstructured disclosures can.

With XBRL, all users of the SEC's structured database can access instantly usable data, such as numeric and narrative-based disclosure elements of financial statements, without needing third-party data aggregators to process it first. All footnote data must be tagged, so users can mine the entirety of a company's financial disclosures directly from the SEC's database. By contrast, most third-party data aggregators provide access only to the face financials and select footnote information.

After ten years of the SEC's XBRL requirement, we have proof that structured data in financial reporting is achieving the benefits the program was put into place to accomplish. XBRL makes it much easier for investors to gather and analyze financial information quickly and much harder for companies to hide accounting problems or fraud from the SEC.

"How comfortable are you with the possibility that your XBRL and EDGAR submissions may be telling a different story?" is a concern that Mr. Schlanger wants all SEC filers to consider. Moreover, he warns, "any inconsistencies in the information between those files may subject a company to more adverse scrutiny and greater risk." Far from making data useless, XBRL errors and sloppy tagging can give the SEC and investors valuable clues about the quality of a company's accounting controls and even its corporate governance.

100% XBRL coverage has transformed SEC review and enforcement

XBRL has transformed SEC review capabilities, according to SEC regulator Mike Willis, Assistant Director of the SEC's Office of Structured Disclosure. With

XBRL filings, the SEC staff now has—in-house—100% coverage of reporting companies and of financial disclosures in structured-data format. This is a 7- to 10-fold increase in the coverage that was previously available from commercial sources of financial data in structured form. This enhancement has given the SEC staff unprecedented oversight in filer reviews and enforcement activities.

XBRL-tagging mistakes and inappropriate extensions can be detected immediately. Assessments of errors in XBRL quality are included in the review and comment process for a registrant. "SEC staffers have called vendors and registrants on specific data-quality errors," Mr. Willis noted. "If your phone has not rung, good for you. But it has rung for others, including vendors."

First stop for enforcement investigators

XBRL has also greatly enhanced the SEC staff's reporting-compliance assessments. Machine-readable XBRL tags are directly linked to the underlying FASB codification. That, Mr. Willis observed, enables identification of missing,

"SEC STAFFERS HAVE CALLED VENDORS AND REGISTRANTS ON SPECIFIC DATA-QUALITY ERRORS. IF YOUR PHONE HAS NOT RUNG, GOOD FOR YOU. BUT IT HAS RUNG FOR OTHERS, INCLUDING VENDORS."

• *MIKE WILLIS, SEC*

incomplete, or inconsistent disclosures. “With a mouse-click, we can now identify what’s not in a financial report.” SEC enforcement investigations use XBRL filings heavily. “Due to the granular nature of structured disclosures,” he warned, “XBRL disclosures are the first stop for an enforcement investigation of financial statements.”

Narrative disclosures monitored for troubling signals

The SEC is also using machine learning to monitor the narrative portions of financial reports. “We’re monitoring the tonality of the narrative disclosures and comparing the tonality of the narrative disclosures with the related disclosures to identify inconsistencies as a signal for closer review,” explained Mr. Willis.

Data shared with the IRS and other agencies

“We are performing economic and market analyses. We are able to aggregate data. It is very useful to monitor changes in overall cash, effective tax rates, geographic trends, etc.” He revealed that the SEC shares the machine-readable datasets with other agencies and standards organizations, such as the IRS, the US Census Bureau, the US Bureau of Economic and Business Affairs, the Federal Reserve Board, the FASB, the IASB, and others.

XBRL mistakes send disturbing signals to the SEC and the market

While poor XBRL quality distorts a company’s financial story, Mr. Willis noted, it is not entirely useless to investors. Just as bad XBRL is a beacon for SEC review and enforcement staff, it may function as a lighthouse, warning investors away from rocky accounting controls and shallow corporate governance.

“Those issues provide very useful and often very interesting insights about filers’ choices, reporting processes and controls, and sometimes their absence,” he observed. “Some data-quality errors require very subjective assessments, and they provide significant insights into the company’s judgment.”

Overuse of custom extensions

One example Mr. Willis gave of an XBRL warning flag is the excessive use of custom extensions instead of standard XBRL tags from the US GAAP taxonomy. When the percentage of custom extensions exceeds the average in the company’s sector by double or more, it is a red flag not just for SEC staff but also for analysts and investors.

“Excessive and inappropriate extensions are wildly obvious to the user,” he warned. “They say a lot about the filer. As a result, filers should pay very close attention if they’re in that bucket. We see extensions for property, plant equipment, cash, and other disclosures where we should not see them.”

Another big red flag is incorrect tag selection. For example, SEC staff sometimes finds that “gross revenue disclosures are tagged with the defined-benefit discount rate—completely inappropriate!” Missing XBRL tags are an even bigger gaffe. “That raises a question in the analyst’s mind about whether the filer even has adequate reporting processes and controls.”

BAD XBRL MAY FUNCTION AS A LIGHTHOUSE, WARNING INVESTORS AWAY FROM ROCKY ACCOUNTING CONTROLS AND SHALLOW CORPORATE GOVERNANCE

“EXCESSIVE AND INAPPROPRIATE EXTENSIONS ARE WILDLY OBVIOUS TO THE USER,” MR. WILLIS WARNED. MISSING XBRL TAGS ARE AN EVEN BIGGER GAFFE.

XBRL tips for filers

Mr. Willis concluded with five XBRL tips for filers:

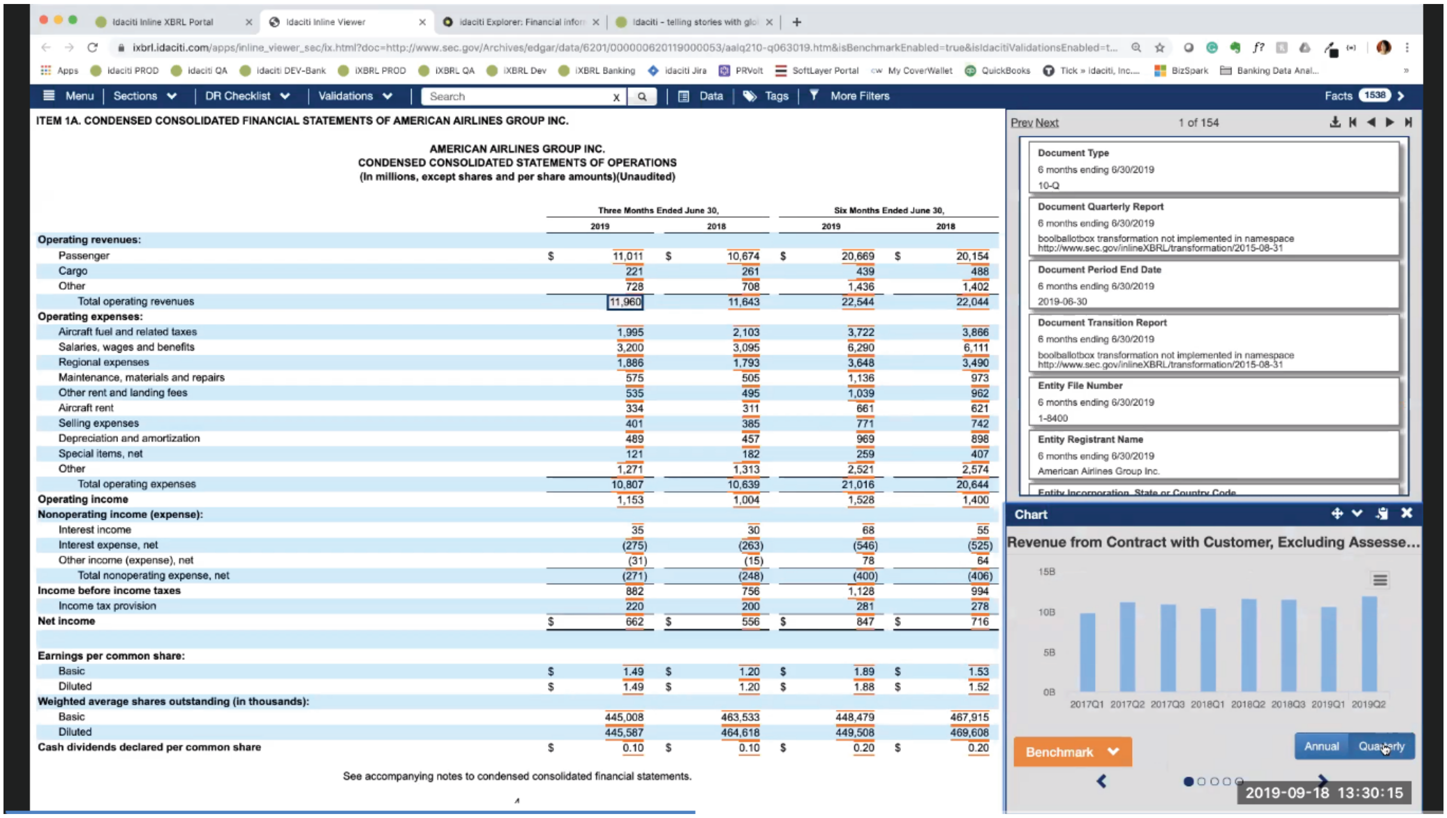
- Ensure reporting processes include data-quality standards.
- Pay attention to EDGAR warning messages and correct flagged errors.
- Apply the freely available, open-source data-quality rules from the XBRL US Data Quality Committee.
- Before submission, check your filings for the most commonly occurring XBRL mistakes.
- Benchmark the rate of XBRL extension use in your company's sector to gauge whether extensions in your filings exceed the average.

Inline XBRL brings a company's financial data to life

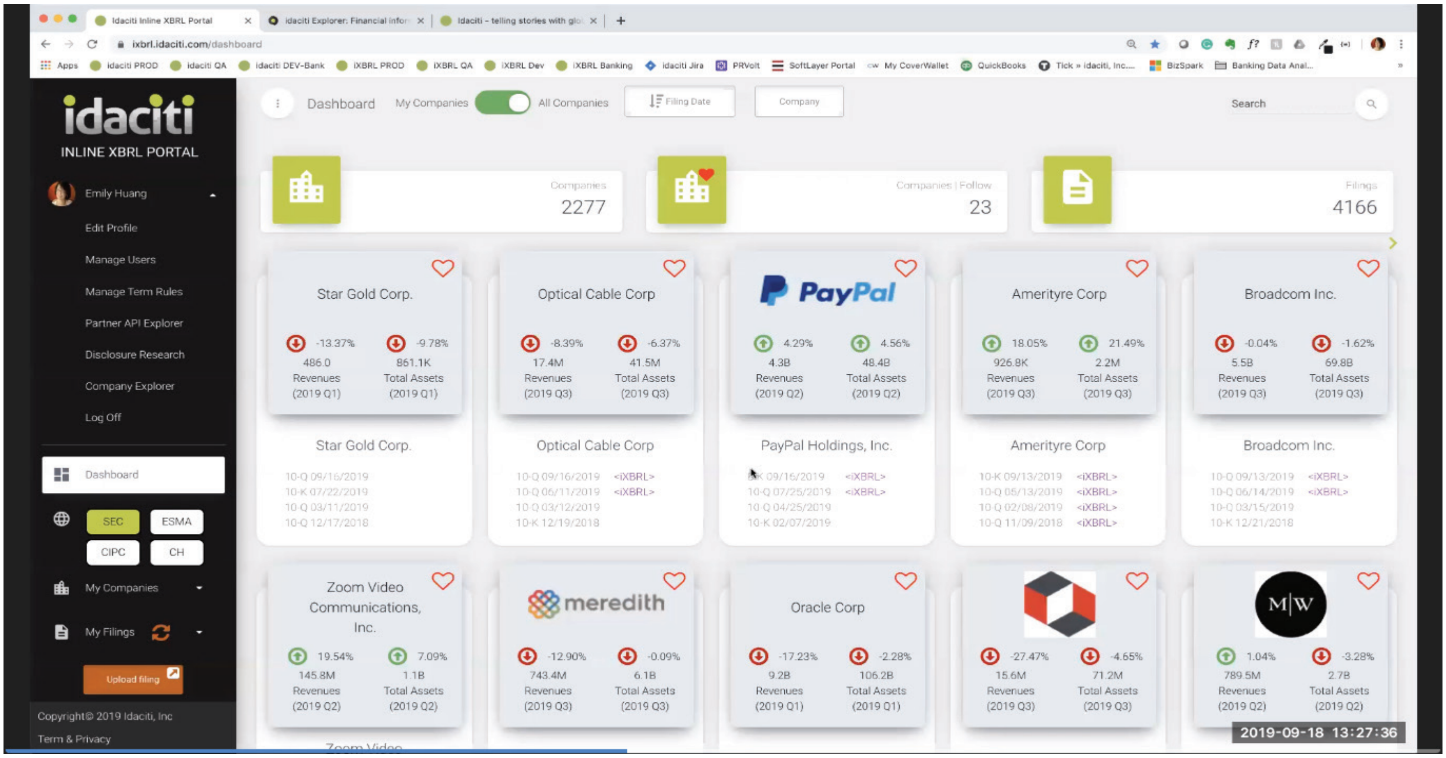
Next up was Emily Huang, CEO and co-founder of idaciti (which makes tools for analyzing structured data) explained how Inline XBRL brings a company's financials to life and how painfully apparent XBRL mistakes are to investors and analysts. Her firm collects Inline XBRL filings from the SEC every ten minutes. "No more waiting for hours or days to get the data," she noted. "As soon as the filing is made, the data is available."

Ms. Huang gave examples of how Inline XBRL brings a company's financials to life in the tools that investors and analysts now use to gather and parse the information. "Even though Inline XBRL is not a complicated process change for filers, it really changes the consumption. The machine-readable and human-readable combined together now tell us a great story."

With a screenshare of her firm's Inline XBRL viewer, she showed the webinar audience a sample company's income statement and demonstrated quick ways by which users can do analyses directly from the document. For example, one click on "total operating revenue" brings up a trending chart for both yearly and quarterly data.



“That’s the power of XBRL,” Ms. Huang continued. “As soon as you file, investors and other companies can jump in and start doing analysis and read contextual information around the numbers.” Lateral XBRL-related information is also immediately available: how many other companies are using that data point, what the labels are, and what the definitions are.



With XBRL data, she continued, the powerful ability to benchmark and compare financial information across a sector is extremely valuable. She displayed a screenshare to show how you can immediately compare a company’s financials to those of all others in its industry. In a matter of seconds, she conducted benchmarking comparisons and analyses that would each have taken hours in the old days of text-only filings, manual extraction, and spreadsheets.

“This is the thing I really love about XBRL,” asserted Ms. Huang. “[Former] SEC Chairman Cox, the one who pioneered the XBRL movement, always called XBRL data ‘interactive data.’ I love that term. XBRL allows us to play with the data, interact with the information, and do discovery. It’s not static.”

Best practices for high-quality XBRL

Toppan Merrill’s Mike Schlanger reiterated a question he had posed at the start of the webinar, a question that all SEC filers should ask themselves: “Do you have the appropriate process controls and oversight in place to ensure that the XBRL and EDGAR submissions tell the same story?”

As Ms. Huang and Mr. Willis demonstrated in their presentations, many companies are still submitting XBRL and EDGAR files that tell two different stories. Their disclosure teams are unaware of these flaws, and the filers are not using the free validation tools that would help them detect some of the most obvious errors. The result? Unwanted scrutiny from SEC staff, who are likely to wonder what else may be going on in the file that warrants investigation. The largest offenders include filers that prepare XBRL without any outside help or rely entirely on an outsource solution with minimal review.

At a minimum, suggests Mr. Schlanger, all filers should run checks of their XBRL tagging through the free XBRL rulesets offered by the XBRL US Data Quality Committee.

However, he emphasized, filers need to know where this automated validation should end and expert human review should begin. “As good as it is, it’s important to understand the limitations of computer validation. Judgment, knowledge, and expertise of both accounting and XBRL are critical. If you’re counting on a computer validation only, you run the risk that you will have errors in your XBRL file.”

After 10 years of XBRL, it may be time to review your company’s process of filing preparation to determine whether it is truly adequate. He offered several XBRL best practices for filers, including:

- Run your files through the XBRL rules offered by the XBRL US Data Quality Committee.
- Have your filing reviewed by experts (humans, that is), who can catch other tagging errors or needless extensions and can suggest improvements.
- Review your XBRL-preparation process and team skills. Do you have the in-house oversight and controls to ensure your XBRL and EDGAR submissions are correct and tell the same story?
- Know the dangers of poor XBRL quality: unwanted SEC attention; liability; reputational damage.

Filers must recognize the SEC’s omniscient XBRL capabilities, Mr. Schlanger suggested. “The SEC might be seeing things in your file that you do not even know about.” He stressed the importance of an adaptive approach to XBRL disclosure, one that fully understands the vulnerabilities which XBRL can expose for any SEC filer.

How to prepare for a temporary market window

Abstracted from: *Keeping The IPO Door Open*
By Alexander Lynch and Michael Hickey
Weil Gotshal & Manges, New York NY
Insights: Corporate & Securities Law Advisor
Vol. 33, No. 3, Pgs. 3-8

Hire a Big Four firm before the eleventh hour. Management at a company held in a private-equity portfolio must be ready to capitalize on a temporary market window, if the portfolio owners decide the window means an IPO would be more profitable than an M&A transaction. Attorneys Alexander Lynch and Michael Hickey suggest several steps management can take to be prepared for the eventuality. These steps include:

- Retain a Big Four accounting firm or another of the few large national firms, since investment banks generally prefer—and might even require—that the audit and the comfort letter come from a national firm. A last-minute switch from a smaller firm could result in an expensive financial restatement or a change in accounting policy, causing the IPO to miss the market window.
- Have audits conducted under the standards from the Public Company Accounting and Oversight Board (PCAOB), as required by the SEC for IPOs, not the laxer standards from the American Institute of Certified Public Accountants (AICPA), which private companies often follow. To obviate the need to replace the auditors in mid-IPO or obtain an SEC waiver, verify that they meet the PCAOB's independence standards.
- Prepare interim financials that include what numerous underwriters recommend: eight or more quarters of P&L data for the IPO prospectus.
- Submit interim information to the auditors for review under AICPA's Statement on Accounting Standards No. 100.
- If the financials for any acquired business must appear in the prospectus, negotiate for rights to the required historical financial data.
- Assess the method of aggregating and reporting data about the company's reporting segments (i.e., lines of business and operations in different geographic regions) on the website, in public disclosure, and to chief decisionmakers. That method should match how the company wishes to present the data in the prospectus.

- Learn how competitors that have already gone public report financial line items, non-GAAP information and other key measures of performance (such as EBIDTA), and MD&A; then consider adopting their practices now.
- Ascertain whether the IPO's effect on company ownership could activate change-in-control provisions and, in turn, events of default under credit agreements or repurchase obligations under bond indentures. If so, obtain a waiver in advance of the IPO.
- Make sure no agreements limit stock issuances or uses of IPO proceeds.
- Find out whether material agreements may be filed as exhibits to the registration statement, with or without consent or notice. To a limited extent, the SEC will permit the redaction of such agreement information as trade secrets, as well as commercial and financial data that give the company a competitive edge.
- If the Sarbanes-Oxley Act would ban loans already made to directors and executive officers, give them sufficient time before the registration statement is filed to repay or refinance.

Be wary of equity awards. The SEC might decide that equity awards to employees in the 12 to 18 months before an IPO were unjustifiably issued at values too far below the IPO price. Should that occur, the SEC could impose a compensation expense (thereby lowering earnings), require a financial restatement, and regard the employees as having received taxable income. To prevent these problems, the authors advise management to get independent valuations by qualified appraisers before issuing equity awards during the crucial period, and to prepare a thorough description of a well-designed system for setting their value.

- Issue equity awards within a registration exemption, which most often will be SEC Rule 701.
- Consider eliminating equity awards that have performance-based vesting. They often vest during or soon after an IPO, so that the company must have withholding obligations and the holders will face tax consequences.

Watch out for activities that may condition the market. Be aware that the IPO's formal start will greatly restrict public communications. The limits go beyond securities offers and can be counterintuitive. And, limits aside, it is not advisable to publicize the IPO or the accompanying financial projections. The dangers range from the risk of violating a securities law to conditioning the market by raising expectations that might not be met.

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RECENT DEVELOPMENTS

More data, more challenges: DERA chief explains SEC's expanding use of big data

The SEC Division of Economic Risk and Analysis (DERA) is the linchpin for the SEC's ever-growing use of structured data and data analytics. DERA was created in 2009, when the SEC was just beginning to require filers to use XBRL. Its stated mission is to "integrate financial economics and rigorous data analytics into the core mission of the SEC." Specifically, it devises the economic and statistical analyses used throughout the agency. To do this, DERA employs a well-rounded, multidisciplinary team of attorneys, economists, analysts, statisticians, and computer programmers. The fruits of their labors include analytical tools used by the SEC's Division of Corporation Finance and the Division of Enforcement.

DERA's current chief economist and director is S.P. Kothari, who came to the SEC from MIT's Sloan School of Management in Cambridge, Massachusetts. He revisited Cambridge in 2019 to give a speech at a conference, *Big Data And High-Performance Computing For Financial Economics,* held by the National Bureau of Economic Research. His talk offers valuable insights into the SEC's current use of big data, its successes and challenges in this area, and the future of big-data science at DERA. He emphasizes that structuring data to be machine-readable in XBRL will make it much easier for investors to analyze information quickly when making investment decisions and much harder for companies to hide accounting fraud from the SEC.

What "big data" means at the SEC

Dr. Kothari begins by outlining the universe of big data in the SEC's domain. For example, two million separate filings are made in EDGAR every year, each of which is itself a large, elaborate disclosure containing multitudes of data. Another example is the SEC's Option Pricing Reporting Authority (OPRA), which gathers two terabytes of information every day. To put that in perspective, one terabyte is 1,000 gigabytes. Today's typical laptop or desktop computer has a maximum storage capacity between 500 and 1,000 gigabytes, so OPRA's daily data diet would completely fill a hard drive by lunchtime.

Dr. Kothari lists three commonly held characteristics of big data:

- Volume (the quantity of data)
- Velocity (the speed at which data is created and stored)
- Variety (differences in data types and formats)

"To this list of three," he notes, "some would add a fourth *v*, veracity. Veracity is the quality and accuracy of the data."

Big-data policy challenges: cybersecurity, technology, and communications

The SEC faces several policy challenges—in the realms of cybersecurity, technology, and communications—arising from the use of big data. Big data is hard to store and safeguard; furthermore, the bigger it is, the more enticing it becomes as a target for criminal hackers. Dr. Kothari explains that "portfolio holdings data for all investment advisors are more valuable than portfolio holdings data for one investment advisor, and weekly portfolio holdings data are more valuable than annual portfolio holdings data. These challenges get harder as certain datasets start to include more personally identifiable information (PII) or identifiers that link investors and institutions within and across datasets."

Echoing a keynote address made only days prior by SEC Chair Jay Clayton, Dr. Kothari reiterates the SEC's commitment to responsible collection and use of sensitive data from filers. "Naturally, data collection is not an end unto itself—the SEC must not be in the business of ill-defined and indefinite data warehousing," the very same turn of phrase used by Chair Clayton. For example, Form N-PORT is a new form for disclosing both public and nonpublic fund portfolio holdings. The SEC recently changed its submission deadlines to shrink the volume of sensitive data the SEC is holding. "This simple change reduced the SEC's cyber-risk profile without affecting the timing or quantity of information that is made available to the public."

In the SEC's never-ending technological arms race with the market, the use of artificial intelligence, machine learning, and related tools is growing among the major Wall Street players and other securities-trading firms. Some technologies, such as artificially intelligent algorithmic trading, are "inherently challenging" for the SEC to monitor. To match wits with the market, the agency has prioritized developing and supporting a workforce with big data skills and experience. In its single decade of operation, he indicates, DERA has expanded from 30 employees to almost 150 staffers now.

XBRL helps in turning big data into useful information

Big data must be turned into useful information for all types of market participants, from large pension funds to individual retail investors. An ongoing challenge for the SEC is discovering cost-effective methods to hone the variety of financial data into a readily consumable form without losing substantive information. Dr. Kothari cites the success story of financial discosures tagged in XBRL. "By dramatically reducing the variety of the data, tagging transitions an electronic document from being human-readable into one that is also machine-readable." This makes it easier for investors to assess the information and harder for filers to conceal fraud. Tracing the roots of structured data at the SEC back to its XML requirement in 2003, he notes that the SEC's new requirement for Inline XBRL will further the benefits of structured data. (See CD&Is on interactive data for guidance on the SEC's Inline XBRL requirements.)

"Structured information can also assist in automating regulatory filings and business information processing," Dr. Kothari adds. Tagging the numeric and narrative-based disclosure elements of financial statements and risk/return summaries in XBRL standardizes those disclosure items; they can then be processed immediately by software for analysis. "This standardization allows for aggregation, comparison, and large-scale statistical analyses that are less costly and more timely for data users than if the information were reported in an unstructured format."

Tagging also has "network effects." Data in Forms 10-K can be linked to data in other forms and from other filers, as well as across regulatory and national borders. "[A] key benefit of cross-regulator consistency in tagged data is the ability to understand better the nature of the risks in the financial markets," Dr. Kothari observes. "The markets today do not stop at national borders, so looking only at intra-national data provides only a partial picture of the system's risk."

Bright future for big-data science at the SEC

Dr. Kothari sees many future opportunities for DERA research based on forthcoming massive datasets, from the long-awaited Consolidated Audit Trail (CAT) to the Legal Entity Identifier (LEI). Through the SEC's enhancement of its data science, "big data will continue to help the SEC and other market regulators identify and shut down bad actors."

About *Dimensions*

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Learn more at www.toppanmerrill.com

info@toppanmerrill.com
800.688.4400