Retrieving Financial Information in XBRL

Hands on with the Next-Generation Edgar System

By Jianing Fang

In the four years that have passed since the SEC's XBRL conversion mandate, most registrants have converted their Forms 10K, Forms 10Q, and other required financial reports from the document format under the old Electronic Data Gathering, Analysis, and Retrieval (Edgar) system to the data-element format under the Next-Generation Edgar system: Interactive Data Electronic Applications (IDEA). This provides a more efficient and less expensive data source for financial analysts, investors, students, and other users who need information on the annual or quarterly financial reports of publicly traded companies. Yet, due to limited opportunities in terms of education and training (Roberta Cable and Patricia Healy, "XBRL in the Accounting Curriculum," working paper, American Accounting Association Mid-Atlantic Region Annual Meeting Proceedings, 2013), most of CPAs and users do not have the knowledge or skills necessary to take advantage of this new data source (Jianing Fang 2013, "The Progress of XBRL Conversion: Reviewing the Rules, Consequences, and Potential Remedies," *The CPA Journal*, February 2013, pp. 68–71; Taylor Provost, "Not-So-Happy Anniversary, XBRL," CFO.com, Jan. 25, 2013).

This discussion will review the SEC's XBRL conversion mandate through a report of up-to-date filer compliance status and a walkthrough on how to retrieve financial data on the IDEA system, with practical examples. These detailed instructions show how to search companies and their data on IDEA, and also how to correctly set up worksheets to import and process the XBRL data in Microsoft Excel 2013.

The SEC's XBRL Conversion Mandate

On January 30, 2009, the SEC issued the final mandate for XBRL adoption and con-

version target dates (http://www.sec.gov/rules/final/2009/33-9002.pdf). The mandate required the largest domestic and foreign public companies to file their financial statements in XBRL format by June 15, 2009, medium-sized filers by June 15, 2010, and the rest of the filers using either U.S. GAAP or IFRS by June 15, 2011 (Jianing Fang, "Why Is the U.S. XBRL Conversion Process So Slow?," *The CPA Journal*, January 2011, pp. 6–10).

The new rules intended to make financial information easier for investors to analyze and to assist in automating regulatory filings and business information processing. The IDEA system provides information at both the document level, such as the entire set of financial statements for a given firm, and at the data-element level, such as the firm's inventory or net income. Data in XBRL format, or data tagged at the data-element level, can function across multiple

and different platforms or application programs; thus, XBRL has the potential to increase the speed, accuracy, and usability of financial disclosure and eventually reduce costs for financial reporting, as well as business transaction processing (Jianing Fang, "How CPAs Can Master XBRL," *The CPA Journal*, May 2009, pp. 70–71; Pascal A. Bizarro and Andy Garcia, "XBRL—Beyond the Basics: Benefits for Financial Reporting And Auditing," *The CPA Journal*, May 2010, pp. 62–71).

The Current Status of Compliance

How have U.S. companies fared in this XBRL conversion endeavor? The SEC estimates that there are about 10,200 registrants. Based on the corporate filing data published on RR Donnelley's website (https://xbrlviewer.bowne.com/), 8,066 of these companies had successfully converted to the required XBRL filing format before

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EXHIBIT 1
SEC Search Enhancements
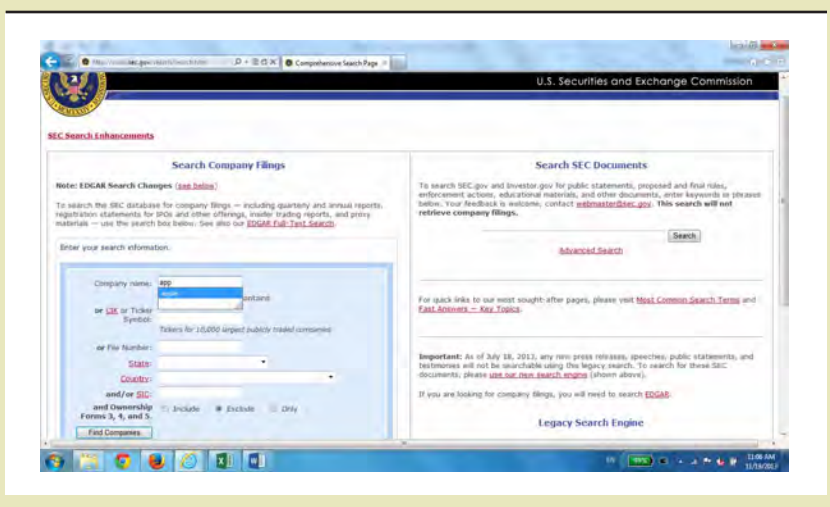
the final deadline of December 30, 2011; approximately 21% failed to convert to XBRL by the deadline. But as of January 22, 2014, more than 96% of filers have complied with the SEC's mandate. In addition, companies will continue to provide increasing amounts of financial IDEA data (Trevor S. Harris and Suzanne G. Morsfield, "An Evaluation of the Current State and Future of XBRL and Interactive Data for Investors and Analysts," Columbia Business School white paper, 2012, http://academiccommons.columbia.edu/item/ac:161038).

The following sections build upon the process described by Thomas Tribunella and Heidi Tribunella in "Using XBRL to Analyze Financial Statements: A Step-by-Step Spreadsheet Guide," published in the March 2010 issue of *The CPA Journal*. As mentioned, this discussion will guide CPAs through the process of retrieving financial data on the IDEA system, including how to search the companies and their data and how to correctly set up worksheets to import and process the XBRL data in Microsoft Excel 2013.

An Example of Retrieving XBRL Data

When this author taught vertical and horizontal ratio analysis in a financial accounting class, he taught students how to retrieve the necessary data on the IDEA system to complete a three-year trend analysis by following the following steps:

Step 1: Prepare the Excel workbook. Immediately after opening a new Excel workbook, check whether the "Developer" tab is displayed in the ribbon. If not, click "File" and then "Options" to open the "Excel Options" window. Choose "Customize Ribbon" in the left pane. In the right column beneath "Customize the Ribbon," check the selection box next to "Developer" and click "OK" to confirm the selection and return to the worksheet.

Step 2: Retrieving data on IDEA. The next step is to download the necessary data from the IDEA system at http://www.sec.gov/edgar.shtml. From the SEC's Edgar homepage, search for any registrant by clicking on the "Search" button in the upper right corner. This will open a "SEC Search Enhancements" window (http://www.sec.gov/search/search-enhancements-notice-053013.shtml; see *Exhibit 1*).

The SEC provides a few different ways to search company filings. This example will use the filings of Apple Inc. To search by name, type "Apple" into the "Company Name" field and click the "Find Companies" button. This will open an "Edgar Search Results" window (*Exhibit 2*) that shows a list of names beginning with "Apple." Scanning down the "Company" column will reveal the intended company, Apple Inc. Clicking on the assigned CIK code to the left of the company name opens a list of all the documents filed with the SEC in chronological order, together with all the pertinent registrant information. A blue "Interactive Data"

EXHIBIT 2
Edgar Search Results
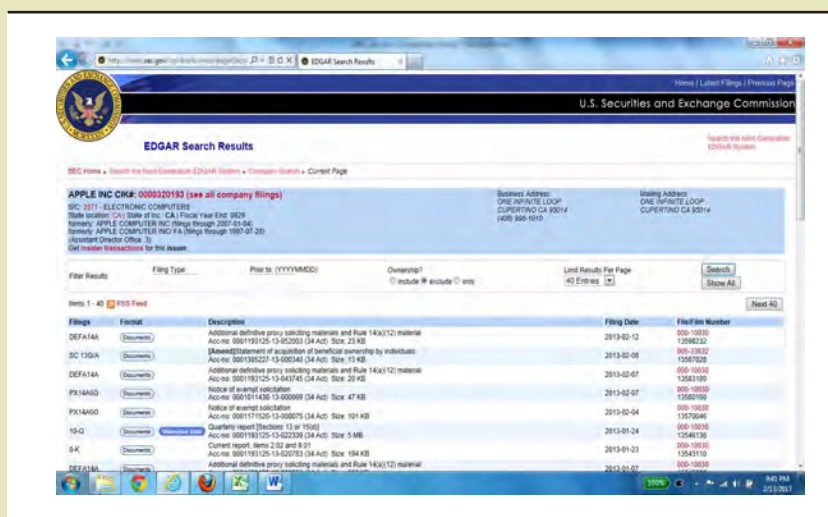

EXHIBIT 3
Filings List

EXHIBIT 4
View Filing Data Window
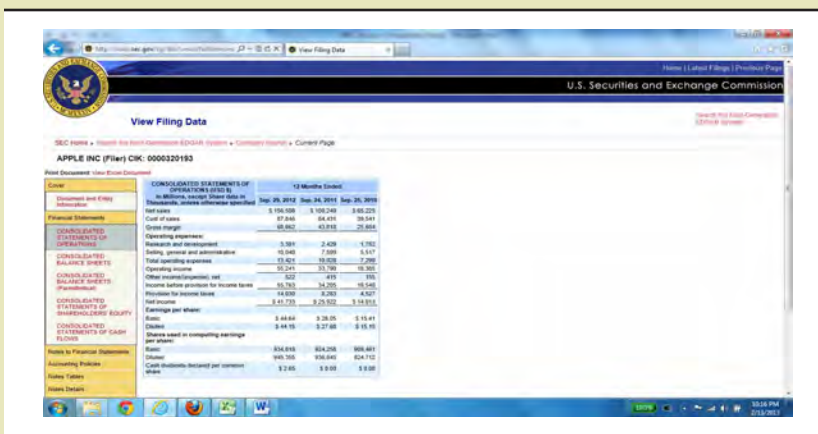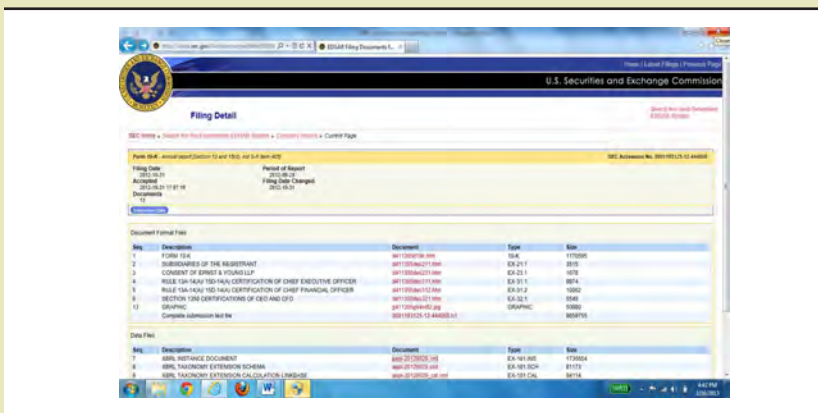

EXHIBIT 5
Apple Inc., 2010–2012

EXHIBIT 6
Filing Detail Window

tag identifies all of the filings in XBRL format (*Exhibit 3*).

Scroll down the list to find the company's 2012 Form 10-K report filed on October 31, 2012, with the SEC. Clicking on the "Interactive Data" tag will lead to the "View Filing Data" window (*Exhibit 4*). Click on the "Financial Statements" tag on the left pane and select "Consolidated Statements of Operations" from the dropdown list to reveal Apple Inc.'s Consolidated Statements of Operations from September 29, 2010, to September 29, 2012 (*Exhibit 5*).

There are a few ways to save this information for future reference. One can print out what's on the screen or save a screenshot. Another option is to save the reports as PDFs. Most Internet browsers have the capability of either saving or "printing" a webpage as a PDF. The advantage of this option is that the result is a text document, which will speed up the search for relevant information later on.

Next, download the financial statement data in XBRL format. Return to the document list window (*Exhibit 3*), and scroll down to the same Form 10-K report, but click on the "Documents" button. A "Filing Detail" window (*Exhibit 6*) will open. Find the file with the description "XBRL INSTANCE DOCUMENT." Right-click the link named "aapl-20120929.xml" and save the file in a convenient location.

Step 3: Preparing the Excel workbook. The next step is to import the XBRL data needed for the analysis to an Excel worksheet. Select the "aapl-20120929.xml" file and open it from within Excel. Excel will recognize that the file is in XML format and provide an "Open XML" dialog box. Select the "Use the XML Source task pane" option (*Exhibit 7*). A warning will say "Excel will create a schema based on the XML source data"— choose "OK" to proceed. An "XML Source" pane will open on the right side of the worksheet (*Exhibit 8*). In order to map the data quickly and accurately, the author recommends displaying the associated value of each XML data element. Click the "Options" button at the bottom of the "XML Source" pane and check all the options.

The next step is to map the XBRL data elements equivalent to "Net Income" on the Excel worksheet. The problem is that XBRL is still in its infancy and all the XBRL taxonomies (XBRL financial statement filing

standards for various accounting standards or industries—for example, IFRS versus U.S. GAAP) provide many different labels to tag identical or similar data elements (Ernest Capozzoli and Stephanie Farewell, "SEC XBRL Filing Requirements: An Instructional Case on Tagging Financial Statement Disclosures," *Issues in Accounting Education*, vol. 25, no. 3, August 2010, pp. 489–511). This presents a formidable challenge for users—especially XBRL novices. Looking for the correct tag from a list with thousands of data elements for any new instance document is not easy, because one does not know which label a company uses to tag a particular data element. This is when having a hard copy (or PDF) of the consolidated statements of operations to refer to can be helpful.

Step 4: Preparing the XBRL data. Scrolling down the instance document on the "XML Source" pane, approximately three-quarters of the way down the list, will reveal

> Expanding the worksheet for a longer-trend analysis can be done quickly because the XBRL mapping and report worksheet have already been set up.
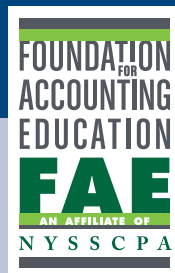
a data element named "ns8:NetIncomeLoss" with a <value> of "14013000000" (for year ended Sept. 25, 2010). Refer to the consolidated statements of operations for Apple Inc. (*Exhibit 4*) to verify that the two amounts match. This reveals that the company uses the label "ns8:NetIncomeLoss" to tag its "Net Earnings."

Now click on <value> (next to its associated amount of 14013000000) and drag it to cell A1 on the worksheet, or to any other field designated for mapping the "Net Income" or XBRL data elements labeled "ns8:NetIncomeLoss." Click on the "Developer" tab in the Excel Ribbon on top of the window and choose "Import."

Excel will display an "Import XML" window. Again, select the same "aapl-20120929.xml" file. After the "Import" button at the bottom of the window is selected, Excel will import and place Apple's "Net Income" for all the reporting periods (2010, 2011, and 2012) below the XBRL data element of "ns8:NetIncome Loss." This author recommends labeling

the data with the corresponding year by referring to the hard copy of the consolidated statements of earnings (*Exhibit 9*).

Following the same procedures, scroll down the XML Source pane, about halfway down the list, to find "Net Sales" or the XBRL equivalent data elements of "ns8:SalesRevenueNet," map it to cell "D1" on the Excel worksheet, and then fol-

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EXHIBIT 7
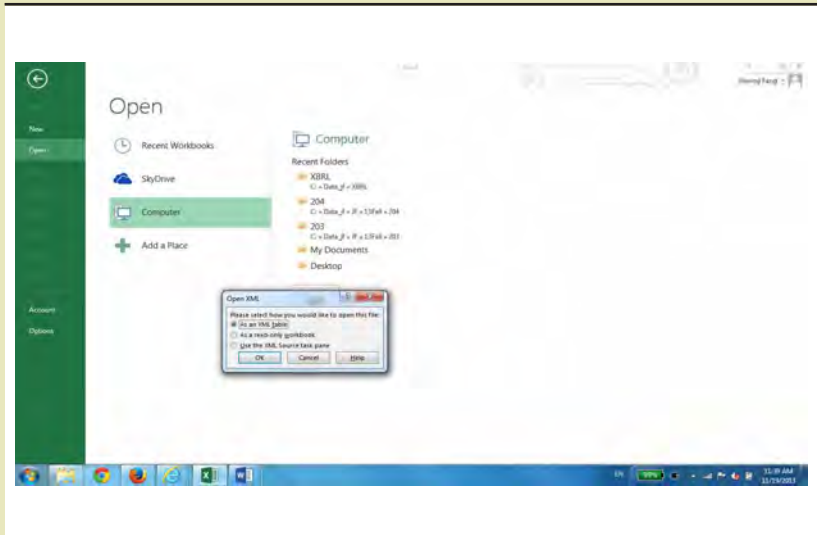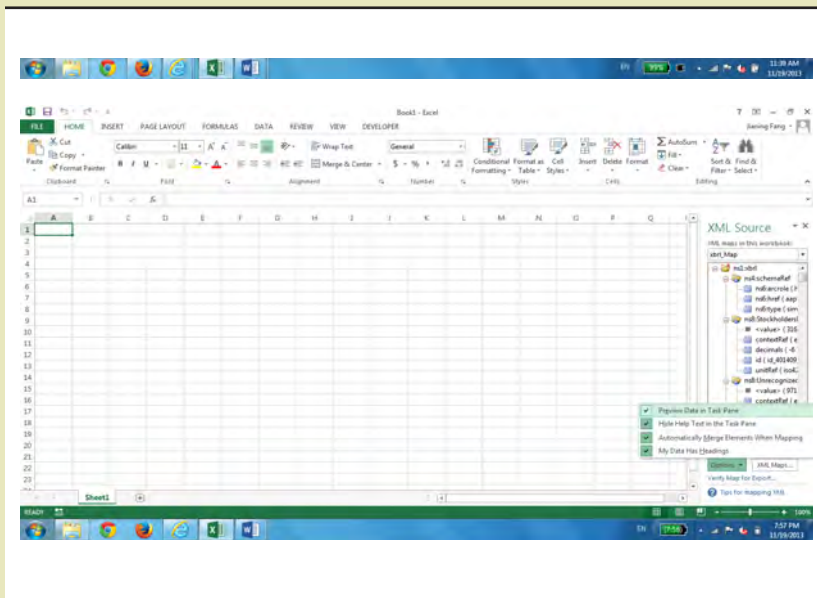### Open XML Window

EXHIBIT 8
XML Source Window

low the same steps used above for net income. At this point, the author recommends renaming "Sheet 1" as "XBRL Data" and "Sheet 2" as "Report" and saving the workbook somewhere accessible (e.g., "AAPL_XBRL" on the desktop). Later, the "XBRL Data" worksheet will be used as a template for importing all the necessary XBRL data and the "Report" worksheet will be used for the trend analyses and reports.

Step 5: Importing XBRL data to Excel. On the "Report" worksheet, users can set up a section to calculate a three-year net profit ratio trend analysis. The next step is to link all the necessary data from the "XBRL Data" worksheet to the "Report" worksheet. Next, set up the formulas needed for the net profit ratio trend analysis. For example, the formula in cell F9

> Over the past five years, the SEC has made considerable progress in building a functional IDEA system.

would be "=F6/F7"; this formula can then be copied to the other years *(Exhibit 10)*.

This same procedure can be used to download Apple Inc.'s financial statement data for 2009 (including data for 2008 and 2007) and for years in the future. Expanding the worksheet to include additional years for a longer-trend analysis, can be done quickly because the XBRL mapping and report worksheet have already been set up—a huge gain in both efficiency and accuracy.

It is important to note that, except for those registrants that took part in the SEC's voluntary XBRL filing program, most companies have only started to file their financial reports in XBRL format after the SEC's XBRL conversion mandate in 2009. Nevertheless, IDEA is "backward-compatible," meaning that users can continue to download compa-

nies' financial statements at the document level from the SEC by following similar procedures to search for a target company (Apple Inc., in this example). IDEA will still provide the full reports for prior years (a Form 10-K for 2008, for example). Users will have to sift through the report to find the data needed for their analysis and manually enter the amounts in the "Report" worksheet—much slower than the XBRL data import and, more importantly, much more susceptible to input errors. Searching for information online or in the saved PDF can improve search accuracy and efficiency. These formats maintain the integrity of the reports at the document level.

Training Needed

Over the past five years, the SEC has made considerable progress in building a functional IDEA system. It has successfully implemented the next-generation Edgar system, which provides users with many convenient search options, such as multiple links and RSS (really simple syndication) feeds. As noted above, this new system is backward-compatible, by seamlessly combining the old document-level Edgar system with the new data element–level IDEA system; thus, a user can retrieve a company's financial data in XBRL format at data-element level, as well as electronic-document level in HTML format.

This article has explained all the necessary XBRL-related concepts and demonstrated how to directly retrieve XBRL data from financial reports filed with the SEC and import that data into Excel 2013. To be better prepared to handle this challenge in the near future, business schools and institutions with modest resources should train their faculty, students, and staff with the necessary XBRL knowledge. By now, most of the major software vendors have developed proprietary XBRL modules to work with their enterprise resource planning systems for filing financial reports with the SEC, as well as retrieving IDEA data for financial analyses. Yet Microsoft Excel remains the most cost-effective and accessible XML-capable software for most users of limited resources. ❑

Jianing Fang, DPS, CPA/CITP, is an associate professor of accounting at Marist College, Poughkeepsie, N.Y.

EXHIBIT 9
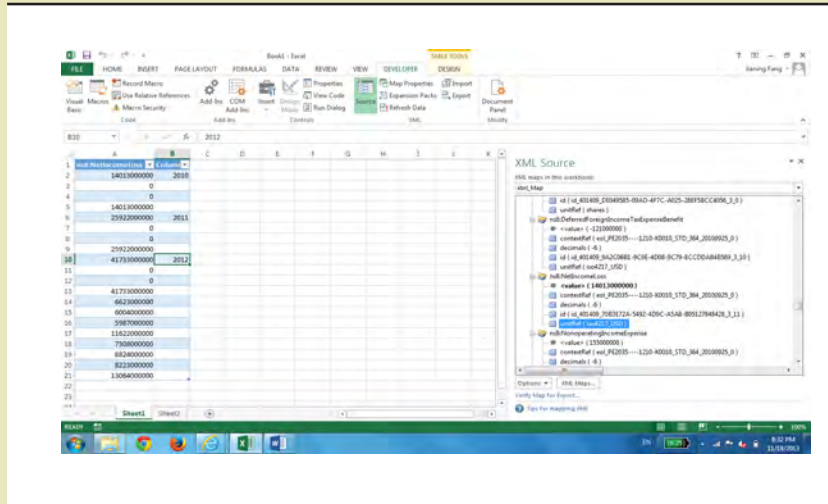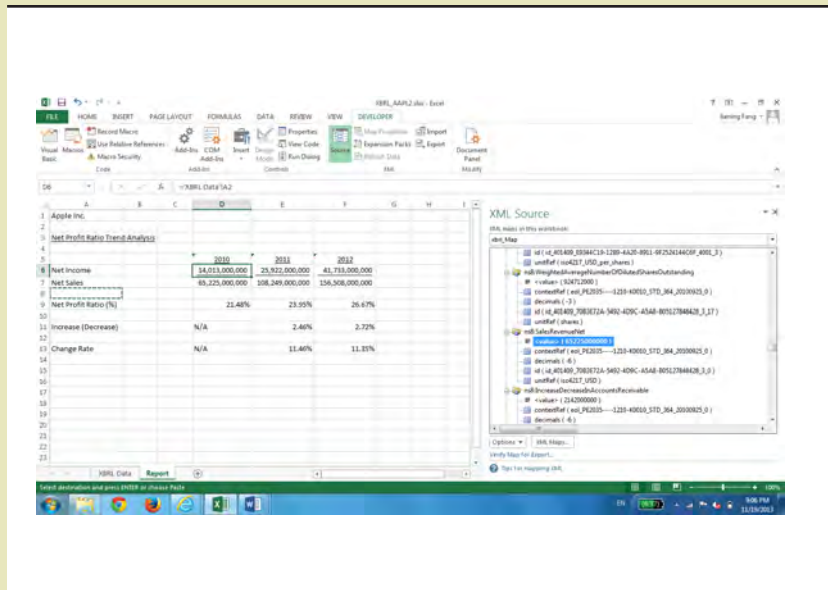Mapping and Importing XBRL Data Window

EXHIBIT 10
The Report Worksheet