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PETER SCAVUZZO: Data is like a murky, muddy lake: It has to be cleaned before it can be used.

Big data days ahead

By: Bernadette Starzee January 10, 2017

There's a revolution brewing in public accounting, with big data poised to transform many aspects of how CPA firms do business and service their clients.

With access to unprecedented volumes of data and new tools to analyze it becoming available, accounting firms can potentially gain a competitive advantage by harnessing this data. Big Four firms, with their considerable resources, have been at the forefront of the data analytics revolution, but the trend is beginning to trickle down to midsized public firms.

"Big data falls under the overarching market trend of digital transformation: Everything is becoming digital, leading to exponential growth in the amount of data that is accumulated," said Peter Scavuzzo, chief information officer of Marcum in Melville.

The challenge for accounting firms is to figure out what to do with all that data.

"The Big Four spends hundreds of millions of dollars on big data analytics," Scavuzzo said. Firms in the next tier, including Marcum, are currently focused on preparing data so they will be in a better position to take advantage of the tools that are hitting the market, Scavuzzo said.

“One analogy is to think of data as a lake of water that is trapped and gets murky and muddy,” Scavuzzo said. “We have to clean it – to turn it into a reservoir – to be in a position to leverage it.”

Marcum has been repositioning some of its technical assets toward this vision – the “cleanup work.”

“Once our data reaches the state where it can be fully maximized, we will hire data scientists – people who focus on algorithmic, quantitative functions,” Scavuzzo said.

Big data has been around for a long time. “Every single line item on a tax return could mean something,” said Debbie Davidman, chief information officer and a principal at Marks Paneth, which has offices in Woodbury. “There are endless rows of data.”

But there is greater focus on it now with the exponential growth of data associated with social media, said Peter Kaplan, office managing partner of the Melville office of PricewaterhouseCoopers.

Even as they work toward the lofty goal of harnessing big data, midsize CPA firms are concurrently running business analytics against their current data sets to leverage the information to make better business decisions. For instance, by monitoring data related to business processes, “if something normally takes 10 minutes to get from step A to step B and then it suddenly takes 30 minutes, you can look at why it went from 10 to 30 and act on it immediately,” Scavuzzo said.

“Internally, data analytics can be used to figure out how you can market more services to clients,” Davidman said. “You have a lot of data about clients. It could give you insight into which campaigns could be successful and which haven’t been successful.”

In addition to capturing data in their internal practices, accounting firms can capture data as it relates to clients and give them insight into their business or industry.

For a client in the restaurant industry, for instance, “you could look at what orders they put in at what time of day, and figure out how you can use that information to make good business decisions,” Davidman said.

In many cases, “using real-time data points to see what is happening with a company and its industry is more relevant than looking at historical sales information,” Kaplan said. Just as accounting firms have traditionally reported on companies’ historical financials, they are starting to be called on to report on real-time data, such as current buying habits or trends, to allow companies to utilize it to share with capital markets.

“Shareholders and capital markets rely on financial statements being certified by a CPA firm,” Kaplan said. “With big data, they’re starting to look to the CPA profession to certify the new forms of information on relevance and accuracy. There will be significant enhancements over the next decade to allow accounting firms to provide assurance around some of these data points and data analytics.”

The CPA profession continues to evolve because of the new requirements related to big data, Kaplan said.

“This could have a significant impact on the folks we hire from the standpoint of skill set, as well as the number of people coming into the firm,” Kaplan said. “Historically we hired accounting majors; now there is a migration toward hiring people with more of a STEM [science, technology, engineering, mathematics] perspective, with skills to develop software applications and write code to look at relationships or trends in data to determine where a market or industry may be going. And if

software is doing a lot of the work, that may take out a number of procedures that were once done by humans.”

Marks Paneth has “hired more database, developer and programmer types in the last year or two than we ever have in the past,” Davidman said. “In order to analyze data, you have to understand how it’s stored and how to query data, so we have gone in that direction, as most firms in our peer group have.”

While mid-sized firms can’t match the Big Four with regard to resources, one advantage they may have is that they are nimble.

“We can develop a proprietary technology and quickly complete it from beginning to end because of our nimbleness,” Scavuzzo said.