

Wall Street & Technology

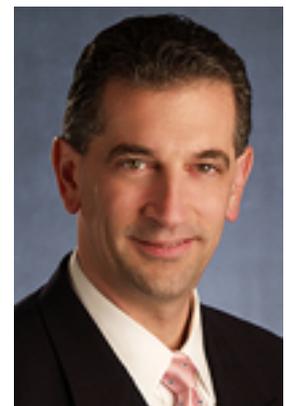
The Evolving Role of the CDO By [Greg MacSweeney](#) October 25, 2012 URL:

During the height of the financial crisis, John Bottega was right where he needed to be: at the Federal Reserve Bank of New York. As the New York Fed's chief data officer, a role he assumed in February 2009, Bottega was at the epicenter of financial data collection, analysis and dissemination while the bank worked with many of the world's largest financial institutions, the U.S. Treasury and the newly created Office of Financial Research. To help the public and private sectors work together on data management objectives designed to provide transparency into the financial health of many institutions, Bottega tapped into the experience and knowledge he gained from his previous senior data management roles and his work with the Enterprise Data Management Council. Now Bottega is CDO at [Bank of America](#). He recently spoke with Greg MacSweeney, editorial director of *Wall Street & Technology*, about the changing role of the chief data officer and the growing importance of data in the enterprise.

WS&T: What knowledge and experience did you gain while at the New York Fed that will help you at Bank of America?

John Bottega, Bank of America

John Bottega: My experiences as a chief data officer started back at Citi and then continued at the Federal Reserve [of New York]. I worked at the Fed at a very critical time during the financial crisis. Both in the public and private sector during that time, there was a renewed awareness of the importance of data, how important data is to financial stability and how important data is to determining an individual firm's financial health. I say this from the bottom of my heart—that I was very honored to have worked at the Federal Reserve and to be able to do work with the Treasury and the Office of Financial Research. Many of the seeds we planted for work between the public and private sectors are coming to fruition now.



WS&T: You've been a CDO for a number of years. How have you seen the role change over the years?

Bottega: It has gone through a rapid evolution. When most firms created a CDO-type position—whether it was a head of market data, a head of reference data, a chief data architect or whatever the actual title—it started as a siloed business focus. Today, it's more of a horizontal responsibility across the enterprise. I've seen this shift not only in the banking industry but also in other industries. You're seeing chief data officers pop up in the medical industry and in government roles. The city of Chicago has a CDO, as does the city of Philadelphia.

So, we have seen it grow from being siloed to now taking a much broader view across an enterprise. However, you can't discount the individual work done in each silo, but you need both views [siloed and horizontal] into data to be successful. **WS&T:** You are one of the few CDOs in the industry, which is surprising given financial services' ongoing struggle with data and data standards. Why haven't more data architects risen to the CDO level? Or, why haven't more financial firms created a CDO position?

Bottega: Firms are starting to change. They may not be outright calling it a CDO. I have been contacted by a number of colleagues at other companies who've inquired about how the role has been established and what responsibilities it encompasses. Many firms are recognizing the importance of data and are starting to position themselves for it. Citi has a chief data officer at an executive level. Other banks are starting to move in this direction. You may not see firms calling them chief data officers, but they have established the office and have given data relevance in their organization.

WS&T: You've worked with the Enterprise Data Management (EDM) Council for seven years. How has it changed data management?

Bottega: I have been really fortunate to be part of the EDM Council since it started. To drive change across an industry, it has to happen collaboratively. The EDM Council created a forum where we can get together and have discussions. But they weren't just discussions—we have built some action plans. EDM has been focused on finding common ways to describe data and common semantics. EDM has also been working on the data maturity model, which is a cookbook, if you will, of best practices around data management. These are the results of collaborative exercises with subject-matter experts from across the industry.

I think that this is what moves a discipline in an industry, by having the collaboration. They've done that effectively, and that's why EDM has been so good at driving change. There are other industry associations, and they're all important, but EDM and its rifle focus on how to manage information and data has been a game changer in the industry. I certainly hope it continues.

WS&T: Traditionally, EDM has been focused on setting standards around specific types of structured data. Today, more and more unstructured data is being used. How is unstructured data changing the way you approach managing data?

Bottega: It's not changing the role; it's evolving the role. When you think of the responsibility of managing the information in the enterprise, usually the first focus is around the structured data—your database capacity, reference data, analytics. What's evolving is that there is an awareness that unstructured data is as important to a firm as the structured data. The strategies and methods around archiving, retention and access—they touch on both structured and unstructured data, but it's important for a firm to have access to both structured and unstructured data as quickly as possible. As the role of data management matures, the scope of it is expanding. If you go back five or six years, I don't think there was the absence of unstructured data, but it wasn't a large focus at the time. Today, a mature and holistic approach to data management includes both structured and unstructured data.

WS&T: Which is more difficult, managing unstructured or structured data?

Bottega: Each one has its own unique characteristics. We're more mature on the structured data side because we've been doing database design for two or three decades. Unstructured data hasn't been a focus for as long, so there are challenges around that. However, they share the challenge of the governance of the data, and the policies and standards that are applied to the data, so that's consistent across all types of data.

As the role of data management becomes more of a process in the firm, the business units now have a place to go with questions about data. All data is important, but now there's a place where business units can go to get their questions answered.

WS&T: As you know, big data is the hot and trendy topic today. Is it for real? Is big data technology changing your approach to the way you manage data at BofA?

Bottega: It's definitely trendy, but I don't want to speak to the trendiness of big data. I would rather focus on what big data actually is and how you use it to manage large amounts of data and get value. Technology is really advancing in this space, and this is great news. There are many new products on the market that are helping to drill down and find value in the data. But if you step back for a second, large data repositories are important now because we recognize there's value in very granular data. In the past, perhaps, we were looking at things at an aggregate level. Now we can drill down and look for patterns in granular data, and that's becoming very valuable to firms, both offensively and defensively.

Defensively, so firms can look for anomalies in financial activities and drill down to transactions. The work that's being done on these large databases that allows for very specific granularity is important for the health and wellness of the industry. On the offensive side, certainly big data allows you to find patterns in how customers buy and sell or make decisions.

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From a technology perspective, you've seen large volumes of data managed effectively in the social space, such as Facebook and Google. They've been doing a good job managing the data, and that's now becoming a part of the financial industry. Taking all of the trendiness away from it, as banks gather more information about activities, having the ability to drill down into the data is more important. And the technology is available to manage the data.

The opportunity that quants and data scientists are creating—the ability to look for opportunities by analyzing data—most often starts in the business units. In other words, the business units ask for the capability to analyze the data, and technology provides the solution.

WS&T: How is big data being used now in financial services?

Bottega: Big data is definitely being used to analyze market risk, as well as being used to analyze new business opportunities. That's consistent across the industry.

WS&T: What new business trends or opportunities will change the way firms do business?

Bottega: The regulations put forth by Dodd-Frank have very significant data implications. As I mentioned, it's about more granular data and specific data to how the markets move. As far as new technologies, you're seeing big data and more advancements will continue. The market, in both business and technology, is realizing how important data is to their operations, and that's a good thing for our industry.

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