

## Editorial

# Moving from “Big Data” to “Best Information”

Scott Mullins

In the financial services industry, data has always been 'big'. Information derived from data is the fuel that drives the engines of global markets. With the advent of the commercial cloud, organizations of all sizes across all industries have access to incredibly flexible, scalable, enterprise-grade infrastructure. A company's ability to make the best use of its data sets is no longer limited by the computing power available in their own server room or under their employees' desks, and instead is now enriched by tools such as real-time streaming, predictive analytics, machine learning, low cost data storage, and petabyte-scale data warehousing.

Imagine reading 15,000 tweets in a single day. Chris Camillo, the founder of FinTech startup TickerTags and the author of the book 'Laughing at Wall Street' used to do just that as an individual investor when, in 2007, he took USD 20,000 and turned it into just over USD 2 million in three years. Camillo's premise was

a simple one: read as much information as possible about companies that interested him and then make investments based on the sentiment of the social networks that he scanned. In 2015, Camillo co-founded TickerTags to enable investors to perform social sentiment analysis using data from online content streams including Twitter, blogs, message boards, and more. Instead of the 15,000 tweets that Camillo was able to physically read each day, now TickerTags users have access to the Twitter Firehose data feed (500 million+ tweets per day) and libraries of curated 'tags' to query from thanks to the company's use of Amazon Simple Storage Service (S3) and Hadoop.

FinTech start-ups aren't the only financial firms using Big Data to innovate. Financial services firms are leveraging Big Data analytics, data warehousing, and machine learning to better enable fraud detection, risk analytics including stress tests mandated by global



Scott Mullins  
Head of FSI Business Development  
Amazon Web Services

regulatory agencies, and mobile, voice, and Internet banking. Both FINRA, the primary regulatory agency for broker-dealers in the US, and Nasdaq, the second largest exchange by market capitalization, leverage the cloud for data analytics. For market surveillance, each night FINRA loads approximately 35 billion rows of data into cloud storage and uses Amazon EMR to monitor trading activity on exchanges and market centers in the US. Nasdaq leverages a petabyte-scale data warehouse to store an average daily volume of 7 billion rows of data upon which it runs analytics for its internal business teams and customers.

While Big Data is 'big' in financial services today, it will only get bigger – in the volumes, velocity, and variety of the data sets. Moreover, there will be an increase in the use of analytics to both produce actionable information and improve the customer experience as the technical transformation currently in motion in the industry continues.

In the future, “Big Data” – the tools and processes that we use to accomplish it – will no longer be in focus; rather, the output of these will be expected to simply deliver “Best Information”, and to do so through channels that abstract away the heavy lifting of the actual analytics. Today, financial firms are preparing for a future where their customers leverage devices, such as a voice-powered personal assistant to ask complicated questions related to their financial life. In the not-so-distant future, customers will simply 'ask' devices, “how did my portfolio perform this month?”, or “please show me options for rebalancing my portfolio to protect against instability in Europe and then execute the strategy I select”.

As you consider the future of your own Big Data projects, think long-term and take advantage of cloud-based analytics. By doing so, you will be well equipped to meet the “Best Information” demands of our rapidly evolving financial markets.