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## DATA, DATA EVERYWHERE

Here is a simple fact to consider: 90% of the data in the world today has been created in the last two years alone<sup>1</sup>. Sometimes the facts speak for themselves, and this appears to be one of those times.

Indeed, we live in a digital age and are thoroughly awash in data of all sorts, with some of it useful and some of it less so. Research shows that there are now over 5 billion mobile phones at use around the world and over 30 billion pieces of content are shared on Facebook in one month alone<sup>2</sup>. The information generated and stored by mobile device users, social media consumers, enterprises, as well as personal users of notebooks and PCs, represented some 13 exabytes of data in 2010<sup>3</sup> and one exabyte reportedly represents 4,000 times the information stored in the US Library of Congress. The sheer amount of the data being created overwhelms the available physical storage capacity. The amount of data generated implies two things, first, that there is a treasure trove of information available revealing consumer behavior, and second, that people are watching way too many cat videos on YouTube.

With nothing against piano-playing-talking cats, it is the treasure trove of data being created for business purposes that is the topic at hand in this discussion. The creation, storage, organization and analysis of this digital data is most often referred to as “big data.” Big data is quickly becoming a strategic advantage to the firms that can successfully corral and process digital information in a coherent manner, allowing them to better respond to their customer preferences, or internally drive more efficient operations. In light of a few illustrations, it is not difficult to see the ways in which big data and its use can and should continue to improve customer experiences across a wide array of industries.

To begin there are two basic mediums for gathering data, with one being internal and the other lying external. The internal use of big data relates to intelligence that can now be more readily gathered and stored simply by more thoroughly recording and digitizing outputs that result from day-to-day business activity. In this example, a firm may collect information surrounding its various company-wide transaction activity, ranging from sales to tracking its stages of inventory from raw material procurement to processing to warehousing, etc. This form of big data collection and its subsequent analysis is the most pragmatic and widely adopted to date by enterprises. Conclusions that could be drawn from such an analysis may help determine the need to discount prices more quickly, eliminate waste or downtime in distribution channels, etc. The external application of big data relates to the collection of intelligence through “sensors” such as those found in mobile devices, hits on a website, traffic in social media, such as tweets, and so on. For investors who recall the quick two-minute free-fall in the Dow Industrials on April 23, 2013 based on a fake tweet that the White House had been attacked, this is a simple illustration of externally driven big data at work. Based on media reports, a hacker broke into the Associated Press’s

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<sup>1,4,5</sup> Michael Schroeck, Rebecca Shockley, Dr. Janet Smart, Professor Dolores Romero-Morales and Professor Peter Tufano. Analytics: The Real World Use of Big Data. October 2012. IBM Global Business Services, Said Business School, University of Oxford.

<sup>2,3</sup> James Manyika, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh, Angela Hung Byers. Big Data: The Next Frontier for Innovation, Competition and Productivity. June 2011. McKinsey Global Institute.

<sup>1</sup>Source: Bloomberg



twitter account, issued the false report, and trading algorithms trolling the internet for key words quickly issued a nearly automated response for sell-orders on the exchanges.

Perhaps a more practical instance of big data in use for legitimate purposes through “sensors” to collect data can be seen in the Ford Focus electric car<sup>4</sup> where devices in the automobile relay analytics to both the driver in real time diagnostics on the car, and back to engineers in Detroit who study data use and charging patterns to better optimize charging locations, etc. As we mentioned earlier though, a more commonly deployed internal illustration for businesses however comes in the form of studying data that is generated conventionally, but had been previously unusable or accessible given its large size or breadth. One good example can be seen in the South African Insurance Company, Santam<sup>5</sup>. Historically the firm had seen anywhere from 6-10% of its premiums lost to fraud, and it was able to apply data analysis to its incoming claims in order to both flag and investigate only the suspicious claims rather than all claims, which had been the practice in the past. This enhancement thereby created an efficiency that both improved its bottom-line, and the experience of its policyholders when it no longer had to inconvenience them with an investigation into every claim.

These two illustrations represent two instances where both the enterprise and the end-user win through the successful implementation of big data efforts. Of course, we can easily imagine alternative scenarios where big data can become intrusive or negative as other entities including governments possess the ability to infringe on personal liberty through surveillance measures. Within the commercial space however, the overwhelming application of big data use from early adopters has occurred in an effort to better address customer needs and eliminate internal waste at the company level. Interestingly, this effort is rather unrestricted in its potential across all industries, and therefore it is not difficult to imagine that in the free enterprise setting, competition will intensify in an orientation to better meet the needs of consumers. If so, then consumers should continue to realize a larger surplus over time through lower cost and better service which they should obtain through lower prices for goods and services. While early adopters may gain some strategic advantage through their use of big data, capable competitors should recognize the loss of market share and follow suit, in our opinion. In sum, the successful implementation of big data initiatives across the economy could lead to a broader level of human progress in the years to come through a lower cost of living, or at least we believe this a likely outcome within the scope of the free enterprise system.

Turning to the opportunities being created for investment, the most obvious manifestations of big data can be seen in a business model such as Facebook, which has a relatively unfettered ability to surveil its users’ habits, interests, personal lives, etc. Other manifestations such as the online retailer Amazon, however demonstrate the ways in which the careful collection of big data on its customer’s buying history and other tidbits foster a higher level of customer service, with a more personal feel than might be expected from an online business. Most investors and casual observers have thoroughly embraced the potential of these business models such as Facebook and Amazon, judging by their valuations, with Facebook trading at 43x 2013 earnings, and Amazon trading at 197x 2013 earnings<sup>1</sup>. As you might have guessed, we see no benefit to following other investors into the obvious, or what is working in the here and now. Rather, we believe in skating to where the puck will be, so to speak. With that said, we are fixated on the potential for a business such as a fifty year-old metal fabricator to apply big data towards greater efficiency in its inventory or distribution channels, or how 800 million mobile phone users in China will tie into the future success of firms focused on that consumer market. Probably, the firms that may best take advantage of a big data strategy in the less-developed markets may not even exist yet as we write this commentary. Truth be told, big data is not particularly new, but its use is still evolving and is a work in progress. For instance, data analysis is still largely groping in the dark once the medium



switches from traditional numeric or verbal data to video or audio generated data. We believe that current efforts, even as they have been underway for years, are still formative and evolving in regards to how best one might apply these processes and techniques. In keeping, we also believe that the big data opportunity is a longer-term secular-based phenomenon that will unfold over the next five to ten years, if not longer.

Bearing this in mind, and based on our bottom-up quantitative screening efforts, we believe there may be an opportunity within a cadre of firms poised to deliver big data services to companies across the world in the years to come. One example may become realized through our current holding in EMC Corp., trading at 12.9x 2013 EPS, or perhaps IBM (not currently held) trading at 12.5x 2013 EPS<sup>1</sup>. The investment analogy here is that one way to profit from a burgeoning gold rush could be to own established, well-run businesses that sell shovels and pans. We tend to believe that although many investors can readily see that companies such as EMC or IBM appear well-positioned to capture growth in the big data trend, their valuations are dominated by the currently tepid environment of broader IT spending over the next quarter or so, (3% or less growth forecasted by most observers). For the long-term focused bargain hunter however, the opportunity is not in quarter over quarter growth rates in IT spending, but rather in the 40% compounded annual growth in global data itself, and how businesses across the global economy will confront storage challenges, as well as competitive threats introduced by competing firms successfully applying big data initiatives of their own. Put another way, we believe these firms offer solutions to businesses confronting these competitive challenges. Within this context, we believe a firm such as EMC through its expertise in storage management, virtual servers and data analysis seems well positioned in our opinion to capture a share of the medium-to-longer-term secular trend in big data. Additionally, we find current valuations representing a bargain for those with a longer-term perspective. We believe one simple comparison of EMC's current valuation versus its historical averages over the past five years (longer-term introduces growth multiple comparisons and a steeper current discount) help illustrate this point with the 2013 P/E trading at a 43.7% discount, EV/EBITDA trading at a 26.9% discount, and price to cash flow trading at an 18.4% discount<sup>1</sup>. From our vantage point, the potential for growth in big data seems compelling, and even more so within the framework of an established business exposed to full breadth of the global market (including emerging markets) while possessing strong cash flows, and a low valuation.

We appreciate your continued interest in our firm. If you would like to learn more about the registered investment advisor Lauren Templeton Capital Management, please visit us at [www.laurentempletoninvestments.com](http://www.laurentempletoninvestments.com).

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<sup>1</sup>Returns are presented net of investment advisory fees and include the reinvestment of all income. Net returns may be reduced by additional fees (outside of investment advisory fees) such as transaction costs. Index returns for May 2013 are as of end of day May 28, 2013.

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