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"Boots in the Cloud"

By Jefferson V. DeAngelis, CFA®, Chief Investment Officer

Intelligence organizations have historically relied on agents in the field employing well-honed spycraft to collect and report vital information. The long-dated practice of recruiting and using spies is the cornerstone of what is referred to as human intelligence (HUMINT). But technological innovation resulting in the current big data revolution means intelligence gathering is increasingly driven by signal intelligence (SIGINT). Instead of relying on dead drops and written ciphers from secret agents, information is increasingly being gathered by data scientists in Langley or elsewhere, using computing power to apply algorithms and analytics. While human judgment is still required to assess potential threats, today's collection methods are capable of tapping into vast (and growing) amounts of data and data that is potentially more reliable by eliminating the biases inherent in human cognition.

The ability to collect and analyze data is expanding in tandem with the speed and computing power available through advances in microprocessors. Estimates suggest that as of 2013 the U.S. National Security Agency (NSA) filtered nearly 29 petabytes (29 million gigabytes) of data per day. While the day when artificial intelligence entirely replaces human decision making remains in the future, the ability for computing to substantially aid decision makers is here now. Any professional with decision making responsibilities, no matter their field of endeavor, must adjust their processes to reflect this reality.

In leveraging big data, collection is just the first step, however. Across the many studies examining human decision making a recurring theme is the failure to incorporate new information that clashes with one's preconceptions. This failure is particularly acute in what researchers call "System 1" thinking. While faster and more automatic than its slower, more deliberate "System 2" counterpart, System 1 thinking leans heavily on established biases and stereotypes. Fieldwork often tends to operate in this first mode, being more reactive, spontaneous, and subject to instinctive bias.

Meanwhile, decisions based on detailed analysis of data require more concentration and thought. This analysis tends to be more complete and logical. Michael Lewis' 2003 book, *Moneyball*, depicts the differences between these two modes when Oakland A's General Manager, Billy Beane, in seeking to impose more analytical thinking, implores his scouts not to be “victimized by what we see.” Perceptions are subjective and often lead to erroneous decisions. Experience combined with thoughtful consideration of information allows for sounder decisions.

As global bond managers dedicated to finding value in emerging markets, we can always learn a thing or two from the intelligence community and their use of technology. After all, we share a similar mission in attempting to uncover crucial, but difficult to obtain information in making decisions. Just as in the intelligence field, the best source of information traditionally came from analysts reporting from the field, the investment world’s version of HUMINT.

Especially in the bond business, investment bankers and brokers created intricate networks of influential managers from which to obtain information that they would share selectively with clients. There was an underlying belief in the idea that performance was achieved by controlling the information flow. The notion that a vast network of local offices—the literal boots on the ground—enhanced performance is now being challenged by results. Experience shows that the information obtained can be tainted by inherent biases and distributed through large networks of intermediaries, further filtering and distorting the data. Just imagine playing a giant game of telephone.

People do not always act rationally. Home bias, or “going native,” results from being too close to a situation. A loss of objectivity results from being too emotionally attached. The influence of local pressures can impair judgment and lead to poor decision making. These social and behavioral biases distort objectivity.

In our line of business, evaluating emerging markets investments, maintaining objectivity is key. Geopolitical events like Russia’s annexation of the Crimea or a failed coup in Turkey often represent opportunities that are more objectively assessed from a distance. Even from afar, loss aversion can limit investors’ abilities to sense an opportunity. Informed, objective decision making requires careful analysis of the opportunity in relation to the risk, rather than on the risk alone.

Moreover, technology is already providing a competitive advantage for those investment managers who properly employ it, leading to more efficient and cost-effective solutions to evaluate opportunities across an ever-shrinking globe. Large date sets published by supra-national organizations, like the World Bank and International Reconstruction and Development Bank (IRDB), are even more accessible thanks to the internet. Increasingly, however, such hard data, long a mainstay for investment firms, only scratches the surface of what is available or possible through advancing technology. For several years now, predictions about Walmart’s earning, before company earnings releases, have utilized satellite images of store parking lots to gauge customer traffic. Today, analyzing social media networks can provide real-time, near instantaneous insight of events. For example, examination of Twitter feeds within a 500-mile radius of London offered hints about Brexit hours before confirmation of the referendum vote by traditional news sources.

At Northwest Passage Capital Advisors, we have our eyes and ears affixed to the cloud. Through our investment process, we assess political and credit risks associated with investment opportunities by utilizing both hard and soft data to develop an internal rating system, as well as a tool to discern relative value. We also endeavor to monitor relevant events affecting emerging markets by scouring Google and other search engine platforms, enabling us to track thousands of events per day, across hundreds of news sources. Rather than boots on the ground, we have deployed our “boots in the cloud.”™

Using big data and broad sets of differentiated data can help reduce the risk of biases inherent in human judgment. Making the most of big data requires active human engagement to distil and make sense of the output. While not relinquishing ultimate responsibility for investment decisions, we believe our decisions are better informed, testable, and repeatable with the use of data analytic tools. In the end, we believe this approach improves both judgment and performance.

While scale and size offer a competitive advantage in pursuing traditional methods of research through building out local offices, technology is leveling the playing field. Active and creative research tools, developed to access virtual information networks, have proven to be effective in generating performance. We believe the “art” of the investment business is enhanced by tapping into the vast information made possible by improving technology, available to smaller and larger managers alike.

In a world in which drones have replaced human pilots and satellites are the new spies, it should come as no surprise that big data, when used in assertive and imaginative ways, can offer added value to the portfolio management and research capabilities of a firm, regardless of size or location. Both the intelligence and investment management fields have changed forever.

172 N Broadway, Suite 300 | Milwaukee, WI 53202 | 414.755.0461 | www.nwpcapital.com

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