

# Big data and investing: Four insights

## Powerful tool for disciplined managers but not silver bullet By John Chisholm, co-CEO, Acadian Asset Management

**A**s a quantitative investor for over 30 years, I have spent a lot of time with data. Where to get it, what questions to ask it, how to analyse it, and how to translate that insight into actionable investment ideas. The 'big data' trend has been exciting for our firm, but also one that we are approaching thoughtfully.

We are enthusiastic about broader data sets, potentially unique sources of information, and more powerful processing tools. But we are also cautious about the tendency to see Big Data as some kind of panacea or silver bullet. Here are some of our insights:

### Insight 1: Big data is truly not a one size fits all

When thinking about using alternative data sets, you need to match the data set and resulting signal to the way you invest – specifically, the breadth of your investment universe and your time horizon (i.e., turnover). Retail sales receipts data is fast moving and covers a relatively narrow universe. The resulting signal is low-breadth and short-term – not likely to work well for a diversified, low-turnover investment process. Brand sentiment data could produce a slower-moving set of signals useful for lower-turnover managers, but again represents a narrow universe of companies. The main point is that a given data set may be useful to some managers, but not to others.

### Insight 2: Not everything cool is actually useful

Satellite data has gotten a lot of attention, given growing availability and the software tools now available for processing it. You can now count cars in retail parking lots, or containers at shipping ports, to try to predict sales, trade, or economic conditions. While the data is very interesting, there are significant challenges in transforming it into actionable investment insights. The main issues are that the data is low breadth, imprecise, and typically provides a short-lived signal. And even if the conclusions are accurate, they are not necessarily bringing anything to the table you are not already getting from analyst estimates or economic release data. For many investment styles, satellite imaging data still has limited value, though it is gaining increasing use among commodity traders and among investors wanting a lot of depth for a small universe of securities.

### Insight 3: Big data is not machine learning

In coverage of investment data trends, I've observed that Big Data and machine learning are often written about as if interchangeable. In fact they are two very different things. Big Data is just that – data. The main difference between Big Data and any other kind is that it is huge in scale, unstructured, and granular. Its sheer quantity, while extremely noisy, offers new possibilities for analysis. You might think

of Big Data as gasoline – useful, but not much good without an engine. The engine that makes Big Data run is machine learning. Machine learning is intelligent, computer-assisted analysis. It's good at finding nonlinear patterns in complex information sets. Machine learning can also be useful for forecasting risk, transactions costs, and liquidity.

### Insight 4: This is not really new

Investment managers have been analysing data to try to make predictions about markets for many decades now. The growth in data sets and technology has been pretty steady over time. Big Data is a useful concept that helps characterise some of the largest data sets we now have. And they do offer promise. I am particularly excited about the opportunity to look at previously qualitative information (sentiment, corporate relationships) in quantitative terms. But using these data sets effectively remains difficult. We are keenly aware of the need to guard against data mining and be truly objective in assessing the value new data sources provide.

### Conclusion

In short, we are excited by the potential for Big Data and welcome the expansion of available information. But not as an end in itself. Big Data is simply one more resource for thoughtful, disciplined and innovative investment managers. ▣



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