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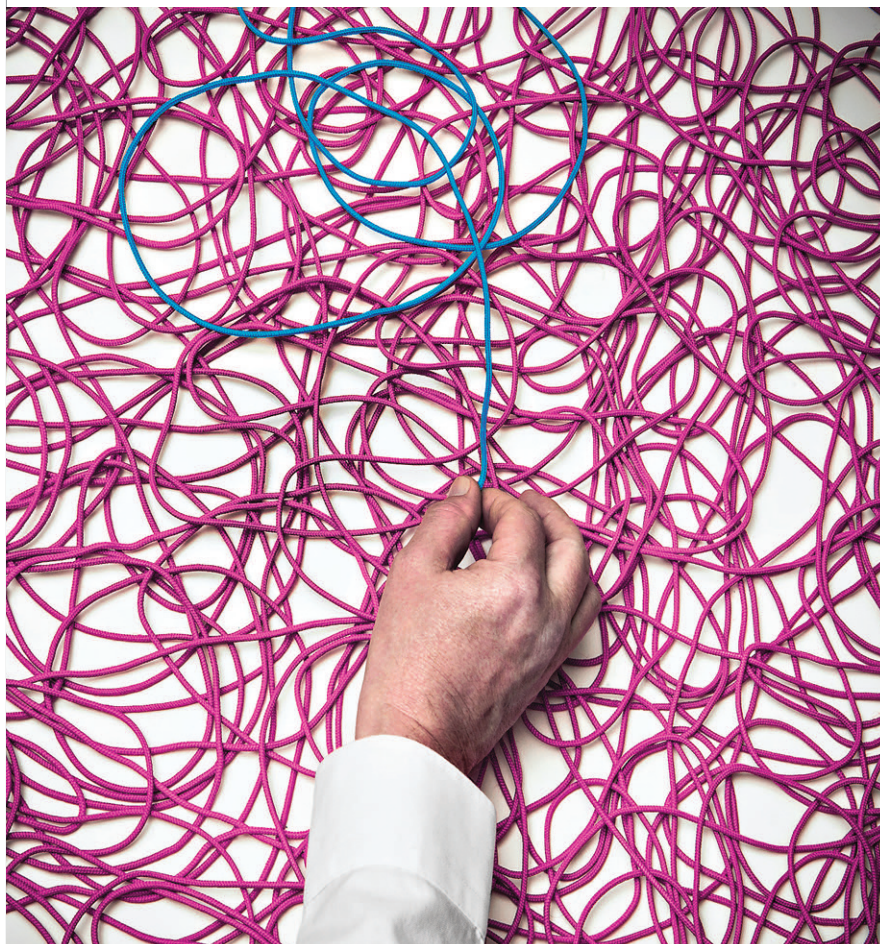the top hedge fund service providers

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BIG DATA, BIG FUTURE

ANALYZING REAMS OF SOCIAL MEDIA DATA CAN PROVIDE ALL KINDS OF INTERESTING INSIGHTS. BUT CAN IT MAKE YOU MONEY?

BY BARCLAY LEIB

TAKE A COLOR-CODED "heat map" of Twitter activity in teeming New York City. People lounging on the grass of Central Park tend to write tweets rich in positive words, while more-negative tweets emanate from individuals near, say, Brooklyn's fetid Gowanus Canal. This makes common sense. But can this information, simple as it is, be useful in making investment decisions? Can tracking the happiness or gloom of people in different locations make money in the markets?

Expanded from New York City to the world? Perhaps. Most of the big quantitative shops, such as D.E. Shaw & Co. or Two Sigma, won't talk about the edge they obtain from so-called big-data analysis of web-based information, but the next time you do a Google search or post a comment about your boss, somebody out there may be making a trading decision based on it, at least in part.

In fact, quantitative hedge fund managers are already systematically pinging for new information from data sources such as Bloomberg, FactSet and Thomson Reuters and websites like Google, Glassdoor, Twitter and StockTwits, to gauge market sentiment. The firms parse this information by key words and, after combining it with other data, enter automated trading decisions.

The trend is moving very quickly. In a world of Internet-enabled data democracy, information is ubiquitous — some would argue there's too much of it. Successful investing may always have been a function of adroit data management, but increasingly markets are moving to big-data themes.

"There is such a mountain of data now on the web that trading opportunities appear and disappear much faster. As a result, the speed at which you need to make investment decisions has accelerated," says Ryan LaFond, a former professor at MIT Sloan School of Management who now is a portfolio manager for the quant-centric BlackRock Global Long/Short Equity Fund, a liquid alternative mutual fund that has gathered more than $1.6 billion in assets since launching in 2012.

Speed of information delivery is one appeal of big-data monitoring. One service provider, Dataminr, spends considerable effort cross-validating the authenticity of breaking news that first appears on social media sites like Twitter. The firm then releases the information to subscribers, much faster than traditional news services. In a world rife with geopolitical eruptions, a 40-second edge in learning that a bomb exploded in Dallas may matter.

Others take a longer-term perspective. In 2010 the Gallup organization constructed the Global Negative Experience Index, which showed a marked deterioration of well-being in Egypt and Bahrain. When people are unhappy with their lives, bad market reactions tend to follow. Anyone attentive to that poll had a huge edge in anticipating the market decline that accompanied 2011's Arab Spring. By early 2012 the Market Vectors Egypt exchange-traded fund had fallen by more than 50 percent.

Today, Gallup offers a real-time tool, Gallup Analytics, that's increasingly used by hedge fund managers. "Many of these managers won't even tell us what they're doing with the data," says Jon Clifton, a director of Gallup Analytics, which polls

1,000 Americans across 50 states 350 days a year and provides subscribers with real-time access to results, on topics such as happiness, health care, consumer spending, work habits and leisure. Gallup also conducts an annual poll of 148 countries in which 1,000 people in each nation are personally interviewed.

The academic evidence on big data is mixed and depends largely upon time horizons — and it's tempered by transaction costs. Some experts find short-term outperformance of stocks with high Twitter activity. But others, such as Los Angeles–based MarketPsych, think a more profitable path is to use big data in a contrarian way, with a more intermediate time horizon.

"On a one-day basis, high Twitter activity may show some auto-correlation for higher prices the next day," says Market-Psych founder Richard Peterson. "But capturing these moves is generally too difficult and too expensive. We use big data more to identify situations where there is a longer-term extreme in sentiment that is overdiscounting a likely outcome."

MarketPsych is best known for analyzing web-based evidence of joy and fear related to different locales and sectors, and, when these emotions become too extreme, espousing contrarian views. For example, last fall the firm was bullish on countries in turmoil, such as Turkey and Indonesia, while eschewing more-popular equity plays in Japan and Canada.

Another firm that takes a contrarian approach to social media is West Chester, Pennsylvania–based TFS Capital, which manages both hedge funds and liquid alternative mutual funds. "If two stocks in the same industry with similar market capitalizations and similar trading volumes both advance by 10 percent, but on that day their social media characteristics differed dramatically, we think that this is useful information," explains TFS Capital portfolio manager Eric Newman. "It may speak to the quality of the real fundamentals underlying that move, especially if there is consistent message sentiment."

Typically, TFS will short a stock with sustained high tweeting activity relative to a basket of similar stocks. The strategy does suffer when a single high-tweet stock, such as Tesla Motors or Netflix, undergoes an upside price surge. When

those situations transpire, the firm is forced to rebalance its exposures using a variety of risk management techniques that limit individual position sizes. But even net of these rebalances, TFS has found attractive overall results.

"Social media often focuses on volatile stocks," says Newman. "But this is only one strategy in a much larger portfolio. Performance has been very good, even in a strong up market — arguably the worst type of environment for such a strategy. These are encouraging results."

Most quant models are longer-term. BlackRock has found interesting results from websites such as Glassdoor.com, where people post comments about their employers. "If you scrape for employee comments across the web, you have a huge edge identifying companies with a positive internal vibe and those with dissatisfied and unhappy employees," says BlackRock's LaFond. "Over the longer

"There is such a mountain of data now on the web that trading opportunities appear and disappear much faster."
Ryan LaFond, BlackRock

term companies with happy employees actually tend to rise far more than companies with dissatisfied employees." BlackRock also uses big-data sources like Twitter, Yelp and other websites to look for consumer feedback on product launches. The firm then compares the feedback with earlier product releases. For example, the new iPhone 6 generated more social media buzz than the iPhone 5, which BlackRock interpreted as an incrementally bullish sign for Apple.

Companies including Brighton, U.K.-based Brandwatch; Mountain View, California–based NetBase; Toronto's Sysomos; and Boston's Crimson Hexagon also conduct this kind of analysis. According to Crimson Hexagon CEO Stephanie Newby, "Our main audience involves marketing agencies and brand managers, but a number of macro funds have signed up to obtain a real-time pulse on the

consumer." Crimson Hexagon is working with a start-up, Alphamatician, to develop a real-time dashboard that shows side-by-side sentiment analysis of companies and their stock tickers. Alphamatician CEO Floyd Greenwood thinks hedge fund use of social media data is still early. "We are slowly creating a much more informed investment analyst," he says.

But in analyzing big data, less information may sometimes be more. "You have to know where to look," LaFond cautions. "People generally tend to research things on the web before they purchase them, but where they look is different in different countries. In Japan, for example, no one uses Google; they use Yahoo. We believe that it is important to recognize this and for us to be attentive to websites that matter, not the entire web."

In analyzing social media feeds, Black-Rock is also discerning about the tone and tense of blog posts. A post about the future is generally more important than one describing something in the past. BlackRock models tend to discount high blog posting volume on something that has already transpired but ride the coattails of high volume in forward-looking posts.

The firm searches for subtle differences in text among brokerage reports, conference calls and regulatory filings. How a company talks to the press and to regulators may indicate spin; subtle shifts in verbiage are important. How many positive or negative words were there? Who made a particular comment? Black-Rock has learned to put more weight on CFOs' comments than those by CEOs. "CFOs tend to be more balanced and correct in their views," LaFond says.

At the end of BlackRock's process, much of the information feeds into algorithms — pattern-recognition techniques that look for 50 to 100 features of stocks that signal whether they're likely to trend in a direction or mean-revert. "There is no way a human could synthesize all of this information into an informed decision, a high-probability trade," LaFond says. "But a computer can." If this plethora of content is where investing is heading, investors should take note: Innovation is begetting innovation, and the machine-based analysis of big data is changing the nature of price discovery. **a**