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Big data gives investors a big edge in fast markets



About a year ago, Toronto-based hedge fund manager Eric Jackson picked up on a huge spike in demand for Zoom Video Communications Inc.

ZM-Q (/investing/markets/stocks/ZM-Q/) +0.08% \triangle by users in China.

The city of Wuhan had just come off its first weekend under a sweeping lockdown designed to contain the spread of a deadly new pathogen. With millions forced to isolate and work from home, daily downloads of the Zoom app quintupled overnight.

Already a Zoom shareholder, Mr. Jackson promptly doubled his stake in the videoconferencing service.

Within a few months, working from home became a way of life in much of the world, elevating Zoom to household-name status. By the end of 2020, its stock was up by roughly 400 per cent on the year.

Getting in early on one of the pandemic's big winners did wonders for Mr. Jackson's returns – the long-short fund at EMJ Capital Ltd. gained 163 per cent last year.

"I'm trying to uncover the factors that are early indicators that a company is really going to take off, not whether they're going to beat or miss earnings next quarter," Mr. Jackson said. "I try to find them before they're household names."

In this case, one key piece of information – daily app-download data – foreshadowed a company on the cusp of something big.

In recent years, data providers have expanded well beyond the bounds of traditional market information and into the realm of alternative data, also interchangeably called high-frequency data, or Big Data. Satellite imagery can count vehicles in major retailers' parking lots, for example; credit-card transaction data can portend emerging consumer trends; and information mined from investor forums on social-media platforms can precede big swings in sentiment toward an individual stock.

Prior to 2020, this kind of non-traditional market data was steadily gaining a foothold in mainstream investing. But the global public-health crisis has supercharged demand for alternative data, by investors trying to get a real-time read on quickly changing economies and markets.

"Having datasets that update every week or every day is a big deal in the midst of a pandemic," said Abraham Thomas, the co-founder of Quandl, a Toronto-based alternative data provider that was acquired by Nasdaq Inc. in 2018.

"Where it's been transformational is with folks who haven't been using this kind of data in the past. Fundamental, discretionary, qualitative and long-term oriented investors have woken up to the speed advantage."

In other words, fast markets require fast data. The dawning of the pandemic era happened with such frightening speed that many of the old ways of economic and market forecasting were of little use.

In a stretch of about one month, North American stocks went from unprecedented highs to brutal bear markets, while economies, previously chugging along at close to full employment, were soon suffering from record unemployment and on the precipice of a depression.

Classic markers of the economy couldn't keep pace. High-frequency economic data such as mobility indicators, helped economists and policy makers adapt.

"We started looking at a lot of movement-related data – mobility trends, flight trackers, public-transit usage, traffic information," said Fardeen Khan, RBC Capital Markets' head of strategic initiatives.

"We used that to understand the impact of the pandemic, and they became key metrics for us to call the turning of economies."

Data from restaurant-booking platform OpenTable has served as a daily indicator of the pace of the rebound in discretionary spending. The year-over-year decline in reservations and walkin diners shrank from total lockdown, or a 100-per-cent drop, in the spring to around 50 per cent for most of July, in Canada, for example. (That figure is back to around an 80-per-cent decline from year-ago levels amid renewed pandemic-related restrictions.)

Last spring, the U.S. Transport Security Administration started publishing a daily total of travellers passing through airport checkpoints. "That's fantastic data," Mr. Thomas said. "Instead of waiting for airlines to release quarterly statements, you can see on a day-to-day basis how travel is changing."

The use of data in equity research, which has traditionally been rooted in backward-looking analysis and pegged to the quarterly earnings cycle, is quickly evolving as well. At RBC, analyst notes incorporating advanced data analytics saw a readership increase of four to five times, Mr. Khan said. "The pandemic was an event that forced people to really explore big-data technologies, and realized there is actually a value proposition."

An RBC analyst note in mid-July, for example, looked at Shopify Inc.'s SHOP-T (/investing/markets/stocks/SHOP-T/) -0.58% ▼ merchant base through data generated by BuiltWith, which examines the technology behind websites. That analysis concluded that the Canadian e-commerce company was expanding its merchant base quicker than the market assumed. Shopify posted a big earnings beat a couple of weeks later.

Other quantitative techniques look to data on investor behaviour for clues about where the market or individual stocks are headed. Amid an explosive runup in markets, retail investors have gravitated to the market in unprecedented numbers – a movement that accelerated with the recent trading craze surrounding stocks such as GameStop Corp.

GME-N (/investing/markets/stocks/GME-N/) +2.54% ▲

Products measuring investor sentiment using data scraped from various websites were widely available well before the GameStop episode. But having witnessed the power of the masses to

spark intense stock volatility, big investors are suddenly eager to surveil online stock speculation in real time.

New York-based data provider Thinknum Inc. has launched a tool called Reddit Mention, which, for US\$25,000 a year, gives investors the ability to track the stocks generating the most chatter on the social-media platform.

Toronto-based Buzz Indexes Inc., meanwhile, built a portfolio that pores through stock market discussion on StockTwits, Twitter

<u>TWTR-N (/investing/markets/stocks/TWTR-N/)</u> +4.87% and other sites, to identify the U.S. large-cap stocks with the highest sentiment scores.

"A lot of the individual investor community is online, sharing their thoughts and sharing their research," said Jamie Wise, Buzz's founder. "And since COVID, the amount and breadth of that conversation took a giant step higher."

One of the big trends emerging from the retail investing boom is the rising use of more sophisticated tools such as derivatives, through which investors big and small are doubling down on the bull market.

A call option, for example, gives the buyer the right to purchase a security at a specific price, amounting to a bet on an individual stock or a market index continuing to rise. Nasdaq recently announced that total equity options traded in 2020 rose by 52 per cent over the prior year.

Some relatively new datasets measure how investors are positioned in the derivatives market, said Adam Butler, chief investment officer at ReSolve Asset Management. "You can get a crowdsourced estimate of where the market is going to be at some point in the future. And that's very, very powerful."

The power of the data, however, is limited by the user's ability to analyze it. Without quantitative capabilities and machine learning, reams of raw data won't help an investor predict much of anything. Merely dabbling in alternative data can prove to be an expensive mistake, considering datasets can cost upward of \$250,000 a year. Some specialized satellite intelligence products cost as much as US\$1-million a year. "Having lots of data at daily frequency is not necessarily super useful," Mr. Butler said.

Even winning strategies tend to be perishable when it comes to investing. Consider the hedge fund industry. Once the darling of the finance world, the hedge fund model became a victim of its own success. As the strategy was replicated, it became less effective. And the market datasets that hedge funds once had cornered are now everywhere. "Good approaches, if they become overcrowded, can look really grim for years and years," Mr. Butler said. "You've got to find a niche."

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