

BIG DATA AND THE DEMOCRATIC FACTOR OF STOCK INVESTOR SENTIMENT

Professional traders used to have exclusive access to informational resources and sentiment about stocks. But technology intervened to make this information accessible to everyone and drive the growth of retail investing. Technology continues to blur the lines between institutional and retail.

An emerging area of technology that's helping to further democratize markets by providing broader access is the analysis of investor sentiment. This is the focus of the BUZZ Social Media Insights Index ("the BUZZ Index"): bringing the investor sentiment factor to all investors by using advancements in Artificial Intelligence (AI) technology to harvest insights from social media's Big Data.

The price of a stock should incorporate all publicly available information – from traditional sources (including news articles, press releases, financial statements and regulatory filings) as well as emerging sources (such as blog posts, social commentary and tweets). Naturally, there is a great deal of noise generated by social media. But research shows that when you use AI and machine-learning technologies to filter this raw and unstructured data, social sentiment matters.

One research study that examines the social media equity factor¹ shows a strong positive relationship between the daily time-series of tweet sentiments and their corresponding security returns.

The study measured tweet sentiment (both bullish and bearish) around 15 specific companies and found that the more popular a given stock is, as measured by total tweet volume, the more powerful its social media factor.

Not only that, but the social media factor survives the presence of traditional factors that have been widely employed for decades. Innovation from financial technology companies has provided us new forums to facilitate greater access and better communication. Advances in artificial intelligence and machine learning afford new tools to analyze data and understand huge amounts of information in ways never before imaginable.

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¹ The 'Sixth' Factor – Social Media Factor Derived Directly from Tweet Sentiments; Jim Kyung-Soo Liew and Tamás Budavári, John Hopkins University, January 6, 2016. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2711825

IMPORTANT DISCLOSURES & DEFINITIONS

An investor should consider the investment objectives, risks, charges and expenses carefully before investing. To obtain a prospectus, which contain this and other information please contact your financial professional or call 1.855.215.1425. Read the prospectus carefully before investing.

Sprott Buzz Social Media Insights ETF shares are not individually redeemable. Investors buy and sell shares of the Sprott Buzz Social Media Insights ETF on a secondary market. Only market makers or “authorized participants” may trade directly with the Fund, typically in blocks of 50,000 shares.

The Fund is new with a limited operating History.

The ability to invest based on social media analytics is relatively new and untested. The Fund may invest a significant portion of its assets in securities issued by companies in the information technology sector in order to track the Underlying Index's allocation to that sector.

These types of funds typically have a high portfolio turnover that could increase transaction costs and cause short-term capital gains to be realized.

The Fund is not suitable for all investors. There are risks involved with investing in ETFs including the loss of money. The Fund is considered non-diversified and can invest a greater portion of assets in securities of individual issuers than a diversified fund. As a result, changes in the market value of a single investment could cause greater fluctuations in share price than would occur in a diversified fund. Funds that emphasize investment in small/mid cap companies will generally experience greater price volatility. Diversification does not eliminate the risk of experiencing investment losses. ETFs are considered to have continuous liquidity because they allow for an individual to trade throughout the day.

Defined investment universe of US stocks – in order to be eligible for inclusion in the Underlying Index, a company's stock must be traded on one or more major U.S. exchanges, have a minimum market capitalization of at least \$5 billion, and have a 3 month minimum average daily trading volume of \$1 million.

Investing in companies based on social media analytics involves the potential for market manipulation because social media posts may be made with an intent to inflate, or otherwise manipulate, the public perception of a stock or other investment.

Text and sentiment analysis of social media postings may prove inaccurate; that is, high positive sentiment may not correlate with negative change in the value of a company's stock.

Natural language processing (NLP) deals with the application of computational models to text or speech data. NLP algorithms can be used in Sentiment analysis to identify and extract subjective information in source materials. Sentiment analysis is widely applied to reviews and social media for a variety of applications, ranging from marketing to customer service.

Artificial intelligence (AI) is the intelligence exhibited by machines or software. One of the central problems (or goals) of AI research include natural language processing (communication).

¹Big Data is a term for data sets that are so large or complex that traditional data processing applications are inadequate.

Social media, as it relates to the ETF, refers to social media sites.

Some examples of social media sites may include, but are not limited to, the following: Facebook, Twitter, LinkedIn, Digg, Reddit, RSS, blogs, Investopedia, stock forums, etc.

Social community refers to the users of the social media sites.

Bullish: expecting the price of stocks to go up; characterized by rising stock prices.

Bearish: expecting the price of stocks to go down; characterized by falling stock prices.

ALPS Portfolio Solutions Distributor, Inc. is the Distributor for the Sprott Buzz Social Media Insights ETF.