

## EQUITY

# Volatile Markets: Are High-Frequency Traders to Blame?

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Our Head of Equities, Stephen Dover, takes a look at what's driving growth in high-frequency trading. He also explains why the algorithms behind the trading can lead to bouts of increased market volatility that may create opportunities for long-term investors.

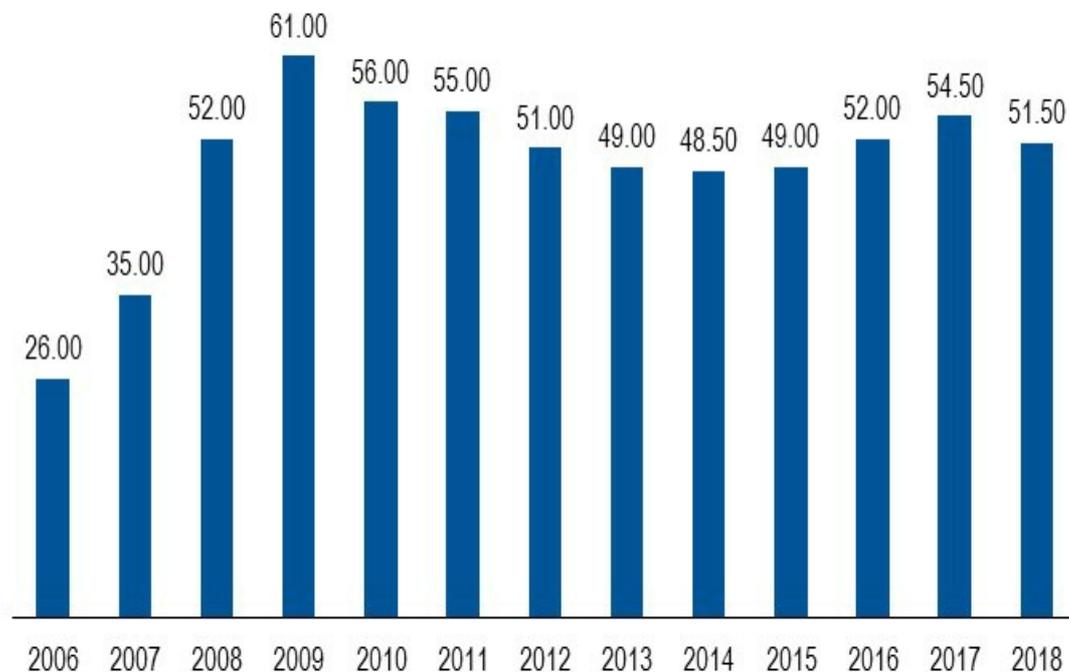
Over the past 10 years, the abundance of relatively cheap computing power has led to a rise in the use of algorithms to perform high-frequency trading (HFT). These algorithms often process millions of pieces of data per second and make rapid trades on their own, without human input or oversight. This has transformed the way trades are made and executed.

While the pros and cons of HFT algorithms may be debatable, the growth in their use has unequivocally transformed the entire US equity market. HFT has accounted for about half of US stock market trading volume on an annual basis since the global financial crisis (GFC) a decade ago. This explosive growth has led some market commentators to conclude that HFT could contribute to the next market meltdown or at least lead to increased volatility.

# High-Frequency Trading: Half of US Stock Market Trading Volume for Past Decade

## High turnover/high-frequency trading

As a % of US equity average daily share volume traded



Source: Tabb Group estimate. There is no assurance that any estimate, forecast or projection will be realized.

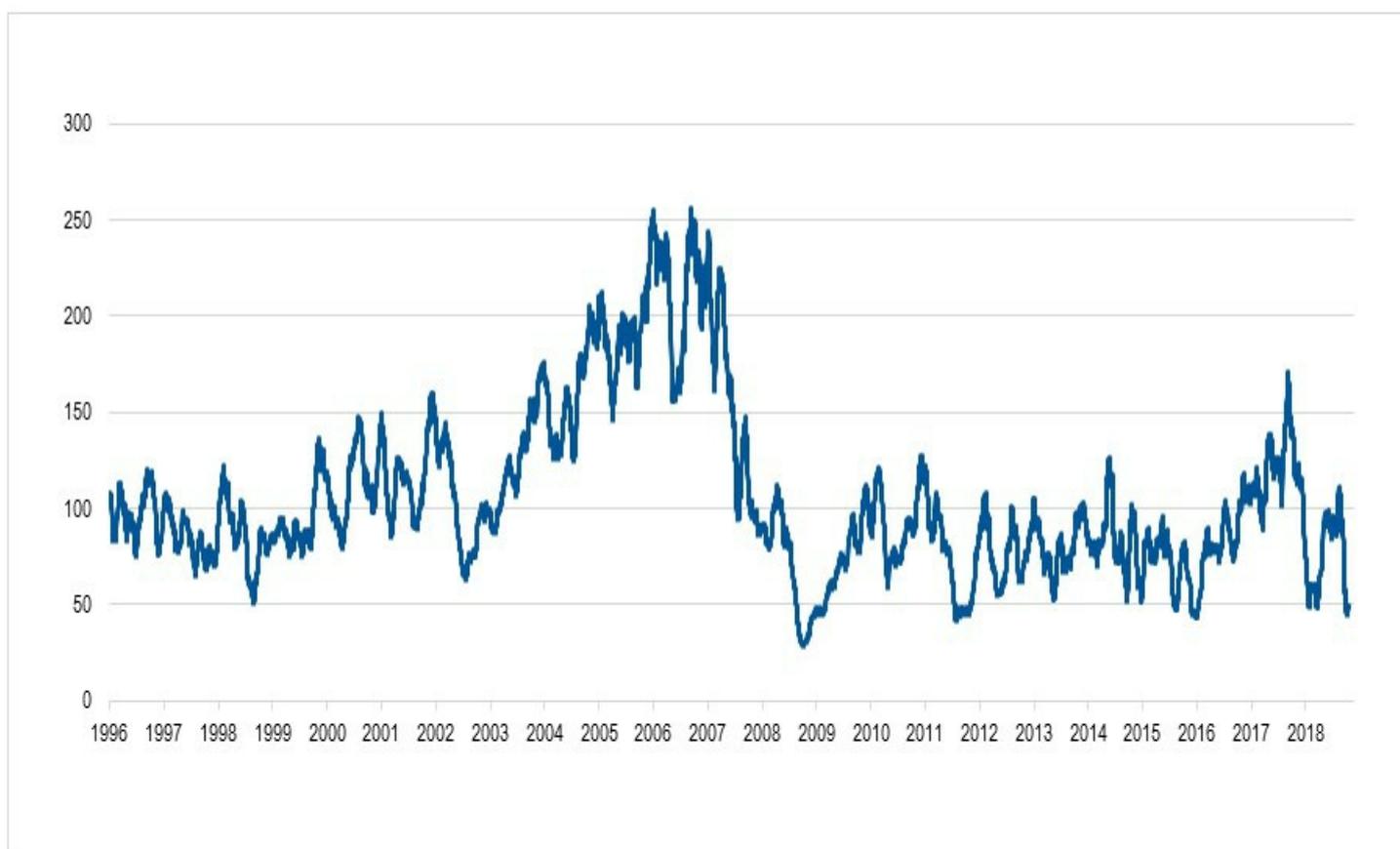
## Is High-Frequency Trading Responsible for Market Swings?

In our view, HFT plays a role in market meltdowns or melt-ups, which could be exacerbated when stocks or markets have low levels of liquidity. The US equity market, as represented by the S&P 500 Liquidity Index, has moved more for each dollar traded in recent years than it did historically. Reduced market liquidity can lead to more volatility, especially if the HFT firms exit a stock or market quickly.

# High-Frequency Trading: Reduced S&P 500 Index Liquidity Could Lead to Bouts of Volatility



## 30-Day Average of S&P 500 Liquidity Index Ratio of Value Traded to Average True Range



Sources: Bloomberg, S&P Dow Jones Indices. The S&P 500 Liquidity Index is calculated by Bloomberg as the ratio of value traded to average true range. The base index is the S&P 500 Index. Indexes are unmanaged and one cannot directly invest in them. They do not include fees, expenses and sales charges. Past performance is not an indicator of future performance. See [www.franklintempletondatasources.com](http://www.franklintempletondatasources.com) for additional data provider terms and conditions.

Instances of one-sided trades (more sells than buys or buys than sells) abound when news feeds and market data fluctuate, leading to algorithmic selling/buying across the board irrespective of long-term stock fundamentals.

Unlike many human investors, these algorithms don't typically consider long-term company fundamentals when making trades, nor do they have emotions, and they will execute when they identify pre-programmed opportunities. They usually trade based on their expectation of how other market participants will react to news feeds and data releases.

Some market commentators have said this disadvantage in processing nuanced fundamental information may lead HFT algorithms to pull back in moments of uncertainty. That, in turn, could trigger surprisingly large drops in liquidity that could exacerbate price declines.

## Investment Implications

On days when almost every type of stock sees a severe price correction—from stocks in the tech sector to stocks in what investors normally perceive as "safety sectors"—it's often a sign that selling may be approaching an end. According to our analysis, such widespread and intense selloffs tend to signal "capitulation bottoms."

Some of these one-day meltdowns—like the one seen in December of last year—may not be driven by humans, but rather by HFT. They are often programmed to sell large, liquid exchange-traded funds (ETFs), which can sometimes lead to a “sell-everything” trade as these large, liquid ETFs tend to hold stocks across an entire index.

We think these events can increase the potential for short-term market dislocations but have limited impact on the fundamental value of equities. Equity investors with a long-term view can potentially benefit by buying stocks that look especially cheap when there are “sell-everything” trades.

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## What Are the Risks?

**All investments involve risks, including possible loss of principal.** Stock prices fluctuate, sometimes rapidly and dramatically, due to factors affecting individual companies, particular industries or sectors, or general market conditions.