



Thought Leadership from the NewSquare Community

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JOSEPH S. RIZZELLO Chairman, NewSquare Capital



RYAN L. KIRK, CFA Portfolio Manager, NewSquare Capital

# Has today's high-speed, high-tech stock market—and the sophisticated traders who seem to dominate it—rigged the system against small investors?

By Joseph S. Rizzello and Ryan L. Kirk, CFA

High-frequency traders, "algos," and the electronic market structure aren't to blame for the market's swings. They haven't changed the heart of investing, either. They've just made it faster, more efficient, and cheaper. And that's a good thing.

When U.S. stocks declined sharply in December of 2018, hedge fund managers and other observers placed the blame on high-frequency trading and the "market structure," shorthand for the technological evolution of the high-speed, computerized plumbing that runs today's markets.

# **Today's Market Structure: Defining Key Terms**

**Electronic trading** is simply the trading of securities electronically, which has largely replaced floor trading (think of the loud, gesticulating traders on the floor of a stock exchange) and phone trading. Electronic trading makes transactions faster, far more efficient, and easier to execute, complete, and monitor.

**Algorithmic trading** is the trading of securities using coded instructions for computers, which rely on mathematical models and formulas—such as a certain price level or market condition—to facilitate buy and sell transactions in the marketplace at any given time. Automating the process drives instant transactions and typically lowers trading costs.

**High-frequency trading (HFT)** uses electronic systems and algorithms to buy and sell securities, often processing a large number of orders almost instantaneously, often aimed at generating small profits on each transaction. HFT increases market liquidity, which allows transactions to be executed quickly and easily.

In recent years, the so-called "Flash Crash" of 2010, when U.S. equities plunged in minutes before recovering, and "Flash Boys: A Wall Street Revolt," the 2014 book by best-selling author Michael Lewis, launched a new line of thinking. The theory—which seems to come up only during corrections, as opposed to the longer periods of smooth sailing of the last decade—is that the growing influence of computer-powered electronic, algorithmic trading and high-frequency traders has become a key driver of volatility, and even market inefficiency.

At NewSquare Capital, we believe that line of thinking isn't just wrong, it's potentially dangerous. Why? Volatility and market dips such as December's (which, it should be noted, reversed quickly as U.S. equities have bounced back to near all-time highs) are integral parts of investing. Big drops in the market are caused by people panicking. Periodic drawdowns shouldn't be feared, but instead viewed

as an opportunity for long-term, patient investors to build wealth. Volatility can be unsettling, and fear and emotions in investing can negatively impact long-term outcomes. Besides, worrying about why markets react a certain way distracts from an investor's ability to observe the markets' movements and respond accordingly.

# At last, a level playing field

When Philippe Jabre shuttered his once-wildly successful hedge fund, Jabre Capital, in December 2018, he wrote that today's technology has made the market "more difficult to anticipate," insinuating that today's technology has made old-fashioned analysis and common sense a thing of the past.

Indeed, market structures continue to evolve. Unlike Mr. Jabre, though, we believe that evolution continues to level the playing field for all investors.

That's not just our opinion; the facts back us up. If the markets are harder to predict, that may be a bad thing for hedge-fund managers, but for retail investors, it's good news. A predictable

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market, in our mind, is an inefficient one. Old-school hedge fund guys may love that, but market inefficiency generally means that the average investor isn't getting the information he

or she should. Remember, too, that these technologies enable everyone to invest with lower costs, more transparency, faster execution, more liquid markets, and increasing accuracy of trades, with fewer human errors.

Speaking of humans, our brains are behind this evolution. People create the algorithms, program the machines, and oversee the process. We design these tools to do the same thing human investors have always done: seek out value and identify opportunities. In our view, the markets have never been fairer and more efficient for everyone, including retail investors.

### Are markets moving faster? The numbers say no

On October 19, 1987, the S&P 500 dropped more than 20%, part of a 35% decline over two-plus months. On that Black Monday, stock exchanges were so overwhelmed by paper sell orders that they shut down. A then-record 604 million shares changed hands on the New York Stock Exchange as volume rocketed up from a daily average of 189 million shares.

Interestingly (and often forgotten), the market rebounded and finished the 1987 calendar with a positive return. The correction ran for three months, according to Morningstar, which measured by the Ibbotson® Large Company Stock Index, and the recovery (back to the point before the downturn) took 18 months.

Ben Carlson, CFA, the Director of Institutional Asset Management at Ritholtz Wealth Management (<u>read Mr. Carlson's article "Are Market Moves Happening Faster?" here</u>), recently wondered if the pace of significant market moves has quickened in the electronic trading era. "It certainly feels like markets are moving faster," he wrote. "But are they?"

The answer, based on his look at the S&P 500 corrections—defined as periods of a double-digit decline, which he capped at a 19% drop—is no. Carson found that the length of drawdowns and recoveries hasn't changed much, comparing 1950-1995 to 1995-2018 (see Fig. 1).

Fig. 1: S&P 500: Length of Corrections and Recoveries

Breakeven # of Days			Breakeven # of Days		
Average	Bear Markets	Corrections	Median	Bear Markets	Corrections
Pre-1995	563	137	Pre-1995	434	109
Post-1995	851	128	Post-1995	812	117

Calculated from market bottom to pre-drawdown level (price only, dividends not included).

A data dive from Morningstar shows similar results (Fig 2.), all the way back to the Crash of 1929: Downturns (and recoveries) in the electronic age haven't been shorter than in the past. In fact, this century's—the dot-com crash of the early 2000s and the great recession that preceded this bull market—were longer than most on both accounts.

Fig. 2: Market Downturns and Recoveries (1926–2018)

DOWNTURN	% LOSS	DOWNTURN TIMELINE	RECOVERY TIMELINE	RECOVERY
34 MONTHS	-83.4	Sep 1929-June 1932	July 1932-Jan 1945	, 151 MONTHS
6 MONTHS	-21.8	June 1946-Nov 1946	Dec 1946-Oct 1949	35 MONTHS
7 MONTHS	-10.2	Aug 1956-Feb1957	March 1957-July 1957	5 MONTHS
5 MONTHS	-15.0	Aug 1957-Dec 1957	Jan 1958-July 1958	7 MONTHS
6 MONTHS	-22.3	Jan 1962-June 1962	July 1962-April 1963	10 MONTHS
8 MONTHS	-15.6	Feb 1966- Sep 1966	Oct 1966-March 1967	6 MONTHS
19 MONTHS	-29.3	Dec 1968-June 1970	July 1970-March 1971	9 MONTHS
21 MONTHS	-42.6	Jan 1973-Sep 1974	Oct 1974-June 1976	21 MONTHS
14 MONTHS	-14.3	Jan 1977-Feb 1978	March 1978-July 1978	5 MONTHS
20 MONTHS	-16.5	Dec 1980-July 1982	Aug 1982-Oct 1982	3 MONTHS
3 MONTHS	-29.6	Sep 1987-Nov 1987	Dec 1987-May 1989	18 MONTHS
5 MONTHS	-14.7	June 1990-Oct 1990	Nov 1990-Feb 1991	4 MONTHS
2 MONTHS	-15.4	July 1998-Aug 1998	Sep 1998-Nov 1998	3 MONTHS
25 MONTHS	-44.7	Sep 2000-Sep 2002	Oct 2002-Oct 2006	49 MONTHS
16 MONTHS	-50.9	Nov 2007-Feb 2009	March 2009-March 2012	37 MONTHS

Data via Morningstar. Past performance is no guarantee of future results. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. Downturns are defined by a time period when the stock market value declined by 10% or more from its peak. © Morningstar. All Rights Reserved.

Additional NewSquare Capital Disclosure: the above chart is based upon month end data. The recovery time shows the number of months, from the trough of the downturn to the market's previous peak, on a total return basis (including dividends). The data assumes reinvestment of all income and does not account for taxes or transaction costs.

### Focusing on what matters: price

Maureen O'Hara, Ph.D., a Professor of Finance at Cornell University's Johnson Graduate School of Management and author of "Market Microstructure Theory," a book on the market structure that's used in graduate schools, agrees with us.

O'Hara says that today's technology and high-frequency traders have had a positive impact on the markets, making them fairer and more efficient. By trading at high volumes across different asset

classes, high-frequency traders have helped provide something very important: price discovery, driven by supply and demand. In short, she says, they've helped create a market in which retail traders benefit from dramatically increased liquidity and significantly reduced spreads. This dramatic reduction in the cost of execution benefits investors by positively impacting their returns.

"Michael Lewis wrote that book and told everybody the markets were rigged," O'Hara said. "I think everyone who worked in the markets really found a lot that they didn't like in that book. The markets are not rigged."

Instead, they are more efficient than ever, driven by today's high-tech market structure. The proof is in the numbers. On Black Monday in 1987, the volume of 604 million shares was too much

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for the system to bear. Now, jump ahead to the shortlived pullback at the end of 2018. On December 21, the biggest trading day of a volatile month. more than 15 billion

shares changed hands without a glitch. Drastic market moves to the downside are stressful, but it's comforting to know that today's leading-edge technology can handle whatever investors

throw at it, in a way that assures fairness for all investors, big or small.

Here's the bottom line: The underlying principles of what is happening in the markets has not changed, and it never will. The ups and downs of markets—and individual stocks, for that matter—aren't about what high-frequency traders are up to, or one day's headlines. We believe investors should focus instead on price, value, and supply and demand, while investing for the long term. We also believe there's no better time or place than now—in this technology-driven, highly-efficient electronic market to do so

At NewSquare Capital, we're doing just that, and we're using technology to our advantage.

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