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July 19, 2012, 4:01 PM

Sawtooth Trading Hits Coke, IBM, McDonald's, and Apple Shares

Article

[Comments \(8\)](#)[MARKETBEAT HOME PAGE »](#)By *Paul Vigna and Tom Lauricella*

Call it the rise of the machines.

The markets have been erratic lately, for sure. But erratic trading patterns in four blue-chip stocks on Thursday showed a bizarre correlation, setting the market chattering abuzz on an otherwise quiet summer afternoon.

Dow components Coca-Cola, IBM, McDonald's, as well as Apple (which isn't in the Dow) all traded with the same sawtooth pattern of rapid, tight swings throughout the trading day.

The pattern was almost identical for the four stocks: down for half an hour, up for half an hour; down for half an hour, up for half an hour. Even more curious: The peaks all came at the half-hour mark, and the lows all came at the start of the new hour.

We looked at a number of other stocks and didn't find the trading action repeated anywhere else. And the volume of stocks traded weren't out of the ordinary.

"Wow," one trader said. "Never seen anything like that."

Here's Coke's chart:

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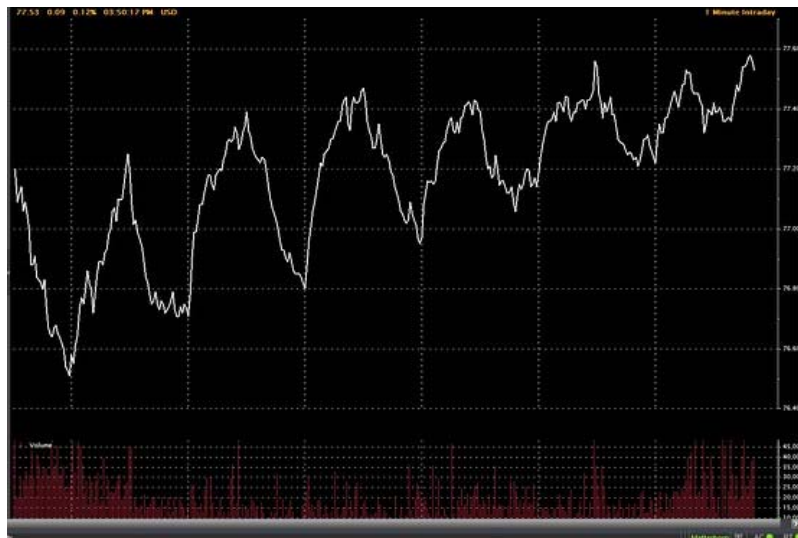
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MarketBeat looks under the hood of Wall Street each day, finding market-moving news, analyzing trends and highlighting noteworthy commentary from the best blogs and research. MarketBeat is updated frequently throughout the day, helping investors stay on top of what's happening in the markets. Lead writers **Paul Vigna** and **Steven Russolillo** spearhead the MarketBeat team, with contributions from other Journal reporters and editors. Have a comment? Write to marketbeat@wsj.com.

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But before we could get too excited with talk of crop circles and alien invasions, most traders agreed that it was likely the product of a computer algorithm known as a time-weighted algorithmic program, or a TWAP. These programs are designed to parse trades out over a set period of time, helping explain the clockwork-like consistency of the trading.

"I think some large institutional buyer is using a new algorithm," mused Eric Hunsader, chief executive of market data service Nanex.

Hunsader took a deeper look at the charts and picked out other notable features:

If you look at the cycles again, note how after 1 p.m., the tops and bottoms start forming earlier, but don't end until the time is up. The overall cycle period remains constant (60 minutes). This indicates that one side is an algo running by itself on a machine, and the other side are human traders trying to anticipate the next top and bottom. The machine sets up an oscillation with a constant period, while the humans slowly warp the price.

Why it was left to go on for so long is anyone's guess. And there's a chance that the owner of said algorithm could have had a painful day.

"There is no reason for someone looking to make money to continually buy it up and sell it down as they'd lose money," the trader said. "Perhaps an algo left unattended and got off the rails."

And looking closely at the charts, Mr. Hunsader said there are signs that the humans that spotted the trade began to see some easy pickings. The pattern started to deteriorate later in the day, he said. "The later cycles are clearly deformed from traders anticipating it," he said.

And as soon as the algorithm's master discovered the trading impact, it likely would have been switched off or tweaked.

"They probably don't realize (until now) that it made such an indelible footprint," Mr. Hunsader said in an email to MarketBeat. "Which means it probably will be adjusted and therefore disappear."

Here's McDonald's chart:

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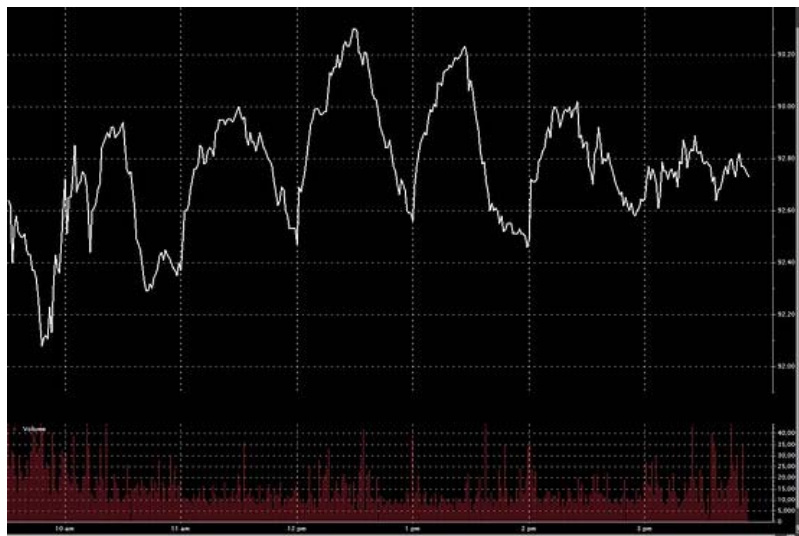
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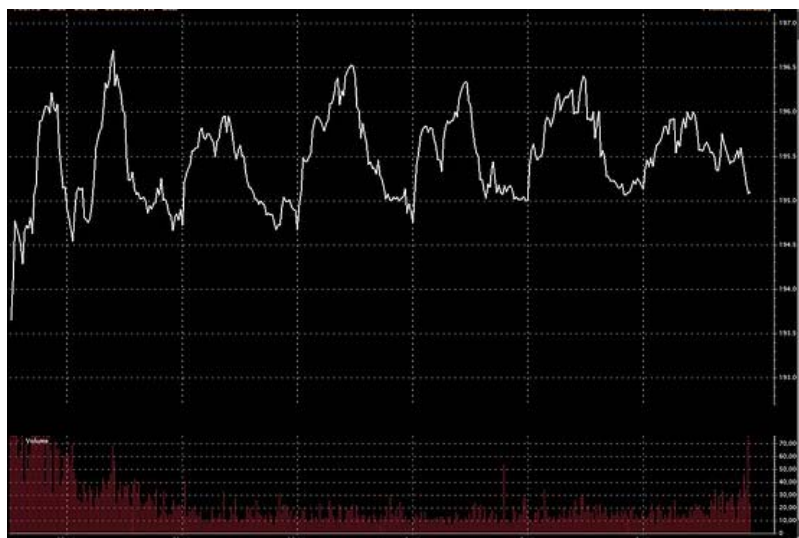
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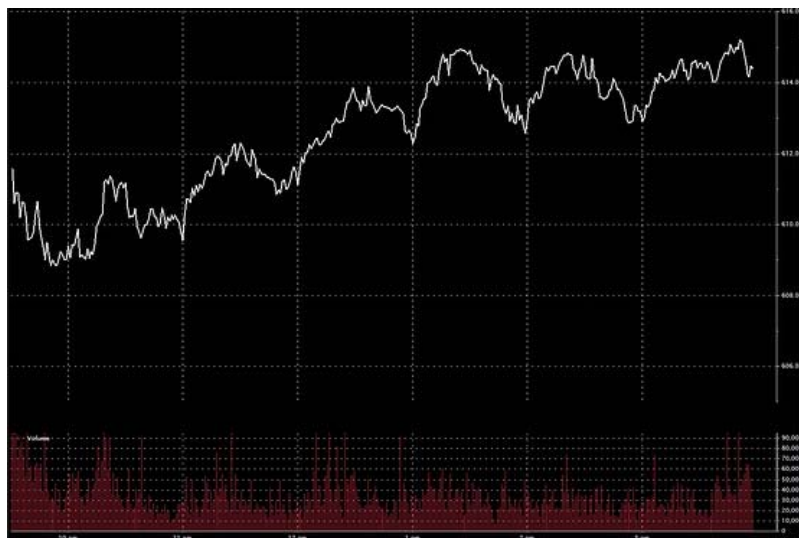
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Here's IBM's chart:



And, here's Apple's chart:



Somebody call Mulder and Scully.

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9:34 am July 20, 2012

Curious wrote :

I'm new to trading, so I don't think I understand something: How is it a problem to buy up a stock for 30 minutes and then sell it for the next 30? Maybe you don't make money doing it, but I'm not sure why that's automatically being called "manipulation" in some of the comments here. Who is being defrauded?

9:15 am July 20, 2012

Trader wrote :

Why do you think there are chart readers? And heck, it's not really manipulation, it's a plan to fake out the other guy. All trading, bargaining, etc, runs the same way. But, if you know it there you can take advantage of it.

9:18 pm July 19, 2012

Anonymous wrote :

Wow, it's almost like you haven't realized that this has been going on for a hundred years now, perhaps longer? Markets trade because of the ones doing the buying and selling – mankind, and an algorithm is just an extension of us. Spare me! They were talking about this in the 70s!!!

7:52 pm July 19, 2012

SECAsleepAtTheWheel wrote :

So where is the SEC..? HELLO..! I'm up today on \$AAPL but this can easily go the other way. Clear evidence of market manipulation. No wonder folks are avoiding the U.S. markets – it's a turkey shoot.

7:29 pm July 19, 2012

Aldrin Wong wrote :

Good article. I saw this manipulation at the first hour of the day and I took advantage of it. Adjusted my intraday positions in and out and ... Voila! I made some profit. I called surfing today watching these wave patterns on \$aapl.

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