SECURITIES INDUSTRY news

Anatomy of a Plunge: Geyser of Orders Put NYSE in 'Slow Mode'

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Karl Denninger stared at his terminal Thursday in disbelief as all but a handful of bids for Globex futures vanished in an instant. All of a sudden, what normally is a stack averaging 1,500 bids could be counted on two hands.

Thus began the most breathtaking 17 minutes in stock market history as the Dow plunged 582 from 2:40-2:47 and then rebounded 610 points between 2:50-2:57. While it's still unclear if the spark was the Greek debt crisis or a "b" for billion errantly entered instead of "m" for million in a trade at Citibank, the fallout was painful and scary.

"I have been trading since the 80s and have never seen anything like this," said Denninger, a technologist, financial blogger, trader and crusader against high frequency trading. The wild swing in prices may have even represented a departure from the Regulation NMS requirement that broker-dealers always execute orders at prices that equate to the National Best Bid and Offer prices.

Foreign exchange trading yesterday started out to be very volatile. He theorizes that prompted "a huge number of computers" to withdraw their futures bids from Globex, the Chicago Mercantile Exchange's futures trading platform.

"You normally have computers trading these contracts [in amounts of] 500-1,000 at any one time. When this thing started, a huge number of computers pulled their bids," he explains. "All of a sudden, a big bid stack disappeared. There were almost no bids on Globex futures."

Algorithms responded accordingly. They either stopped trading altogether or implemented a flood of stop loss orders.

The geyser of orders prompted the New York Stock Exchange to go into so-called slow mode and implement Liquidity Replenishment Points (LRPs), which are essentially circuit breakers to stem order imbalances, according to one technical expert familiar with what occurred at the NYSE. So instead of letting machines execute trades in milliseconds, NYSE "specialists" examined bids and offers within the allotted 30-60 second slow mode to determine if they were rational. If not, they were rejected.

"We've had a market model in place for years…which is a circuit breaker stock by stock. It's called an LRP. They're for use in extreme volatility positions," NYSE Euronext CEO Duncan Neiderauer said on CNBC Friday morning.

A NYSE spokesman declined to comment directly.

After all, the absence of bids drove blue chip stock Accenture down to a penny on alternative trading venues. "When someone comes in and says "sell everything" and there's not enough bids on the other side, the specialist is there to ensure an orderly market," said Denninger.

The problem was other electronic trading venues kept right on operating. So, while the price of shares in Proctor & Gamble stock never fell below $56 on NYSE, shares dropped under $40 elsewhere. Thus, the NBBO was corrupted, at least in Denninger's view.

Regardless, the NBBO buck stops with brokers who are responsible for their client well-being. After all, trading venues are only publishing what the market tells them to. For example, Accenture briefly traded for a penny on one exchange when it started the day around $42 a share.

Brokerages should have to eat the difference between one cent and [$42]. The fills should never have happened at one penny," Denninger says. But he acknowledges that won't happen given the billions involved.

On Friday, statements about who's at fault for Thursday's mess came out at a steady clip and many fingers were pointed at NYSE. Among the finger pointers was Nasdaq OMX Group CEO Bob Greifeld.

"[NYSE] did not call a halt [to trading], but they basically walked away from the stock. That lack of liquidity in the nervous period of time had a disproportionate effect on the stock" of Procter & Gamble and Accenture, Griefeld said on CNBC Friday morning.

"There's no walking away [or] abandoning our obligations," Neiderauer shot back on CNBC. "Everyone knows what the LRP is. We put the [slow mode] note out to the markets and they have two choices in that next 30-60 seconds: they can wait and work with us. Yet, the other choice the electronic markets [had] was to trade through us and that is what all the other markets did yesterday."

Operators of the electronic BATS Exchange also blamed NYSE's LRPs for exacerbating the problem "functionally rendering the NYSE irrelevant."

BATS, which competes with NYSE, said in a statement, that order handling "differences" between trading venues is a large part of the problem under such abnormal conditions. BATS was not blaming computers.

"Thursday was the second biggest day in US history at just over 19 billion shares, which were handled easily. It wasn't an issue of technology system failures either – all market centers were fully operational, accepting and processing customer orders throughout the afternoon," BATS said in its prepared statement.

From an operational standpoint, basic market technology, including software that assists high-frequency trading, did not crater.

"It's was just a normal processing day for us," said FTEN Inc. chief technology officer Doug Kittelsen. "At some point, everything is like a human trader. Software is going to look at why it doesn't understand what the market is doing and then capital preservation mode kicks in."

FTEN is a high-frequency trading and risk management platform service provider.

What traders and the financial industry did not anticipate Thursday was the speed and force of a massive algorithmic response triggered by an event no one seems can positively identify.

"We have created a market that [rewards] speed over size, a market where the wheat is harvested within dark pools and the chaff exhausted into the open markets," wrote Tabb group CEO and founder Larry Tabb. "All of this also occurs at microsecond speed, where we can forget about humans catching these problems…are speeds at such a point where it is even too fast for risk management machines to [catch the problem]?"

Should the blame be laid at the doorstep of computers? Ultimately, not so, because behind the computers are humans, notes Denninger.

"You have bunch of computers saying when x happens, do y. The algorithmic guys argue there's really no difference between a computer having a program programmed into it and humans having them programmed in their brains," said Denninger. "Under normal conditions, this is a true statement. The problem was what we saw Thursday wasn't normal."