Lone $4.1 Billion Sale Led to ‘Flash Crash’ in May

The Dow Jones industrial average dropped more than 600 points in minutes on the afternoon of May 6, then recovered almost immediately.

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Published: October 1, 2010

It was a stock market mystery that had everyone guessing for months: just what caused that harrowing flash crash last May?

On Friday, after months of investigation and speculation, federal authorities finally provided the answer: it all began with the click of a computer mouse in Kansas.

In a long-awaited report on one of wildest days in Wall Street’s history, regulators said that the automated sale of a large block of futures by a mutual fund — not named in the report, but identified by officials as Waddell & Reed Financial, of Overland Park, Kan. — touched off a chain reaction of events on May 6. The Dow Jones industrial average plunged more than 600 points in a matter of minutes that day and then recovered in a blink.

The finger-pointing and speculation that followed — Were high-speed traders behind it? A rogue computer program? Financial terrorists? — captivated Wall Street. But in the
report released on Friday, the authorities said they found no evidence of market manipulation. Instead, the temporary crash resulted from a confluence of forces after a single fund company tried to hedge its stock market investment position legitimately, albeit in an aggressive and abrupt manner.

The mutual fund started a program at about 2:32 p.m. on May 6 to sell $4.1 billion of futures contracts, using a computer sell algorithm that over the next 20 minutes dumped 75,000 contracts onto the market, even automatically accelerating its selling as prices plunged.

The regulators hope the report lifts the uncertainty that has hung over the nation’s exchanges — and investors’ minds — since the crash. Certainly, officials at the Securities and Exchange Commission and the Commodity Futures Trading Commission seemed confident they had established the causes of the crash and answered any final doubts, and the findings were welcomed by some in the markets.

But it also left lingering questions among many who felt it did not explain why the crash took place on that particular day in May, or provide any assurance that this could not occur again.

“Extreme volatility of the kind we experienced on May 6 could happen again,” said Representative Paul E. Kanjorski, Democrat of Pennsylvania, in a statement.

The regulators had already identified in a previous report the single large sale of futures contracts as having played an important role in the May 6 plunge. But in the new findings published Friday, the regulators emphasized the central role this large sale played on a day when markets were already under pressure because of the debt crisis in Greece.

“This report identifies what happened and reaffirms the importance of a number of the actions we have taken since that day,” Mary L. Schapiro, the S.E.C. chairman, and Gary Gensler, the chairman of the C.F.T.C., said in a statement.

“We now must consider what other investor-focused measures are needed to ensure that our markets are fair, efficient and resilient, now and for years to come,” they said.

The report set out the sequence of events that began with the sale by Waddell & Reed of 75,000 E-Mini Standard & Poor’s 500 futures contracts, using computer sell algorithms. Normally, a sale of this size would take place over as many as five hours, but the large sale was executed in 20 minutes, the regulators said.

The algorithm was programmed to execute the trade “without regard to price or time,” the report said, which meant that it continued to sell even as prices dropped sharply.

The algorithm is one used widely across markets. It was provided to the firm by Barclays Capital, but it was up to Waddell & Reed to set the parameters dictating the way it sold the futures contracts.

There was no explanation from officials why the firm chose to sell so many contracts all at once, except to speculate that it was already late in the trading day when it made the sale. Neither would officials explicitly say whether or not the firm was under investigation, but they pointed out that the firm had made similar trades in the past.

In response to Friday’s report, Waddell & Reed put out a statement it had already issued in May. It said it had sold the contracts because it was worried about the European crisis spreading to United States.
After the firm started to sell, the report found, many of the contracts were bought by high-frequency traders, computerized traders who buy and sell at high speed and account for a big part of trading in today's markets.

As they detected that they had amassed excessive “long” positions, they began to sell aggressively, which caused the mutual fund’s algorithm in turn to accelerate its selling.

Startlingly, as the computers of the high-frequency traders traded contracts back and forth, a “hot potato” effect was created, the report said, as contracts changed hands 27,000 times in 14 seconds, but with eventually only 200 actually being bought or sold.

The selling pressure was then transferred from the futures markets to the stock market by arbitrageurs who started to buy the cheap futures contracts but sell cash shares on markets like the New York Stock Exchange.

Automatic computerized traders on the stock market shut down as they detected the sharp rise in buying and selling. Altogether, this led to the abrupt drop in prices of individual stocks and other financial instruments like exchange-traded funds, and caused shares of some prominent companies like Procter & Gamble and Accenture to trade down as low as a penny or as high as $100,000.

The rout continued until an automatic stabilizer on the futures exchange cut in and paused trading for five seconds, after which the markets recovered.

The report’s findings will be put to a joint S.E.C.-C.F.T.C .advisory committee, which will determine if any new policies are needed.

Following the preliminary report in May, the S.E.C. announced it was instituting circuit breakers on all the stocks in the S.& P. 500-stock index, in an effort to prevent another crash.

It has since expanded the circuit breakers — which halt trading in a stock for five minutes if the price moves by 10 percent or more in a five-minute period — to a broader range of stocks.

In addition, Ms. Schapiro has said she wants to look at the use of stub quotes and also possibly limits on the speed of high-frequency trading, but some analysts said they still had questions.

“They didn’t explain why it never happened before and if it is unlikely to happen in the future,” said Adam Sussman, director of research at the Tabb Group. “In that, it is disappointing.”
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