Flash Crash: The Weakest Link

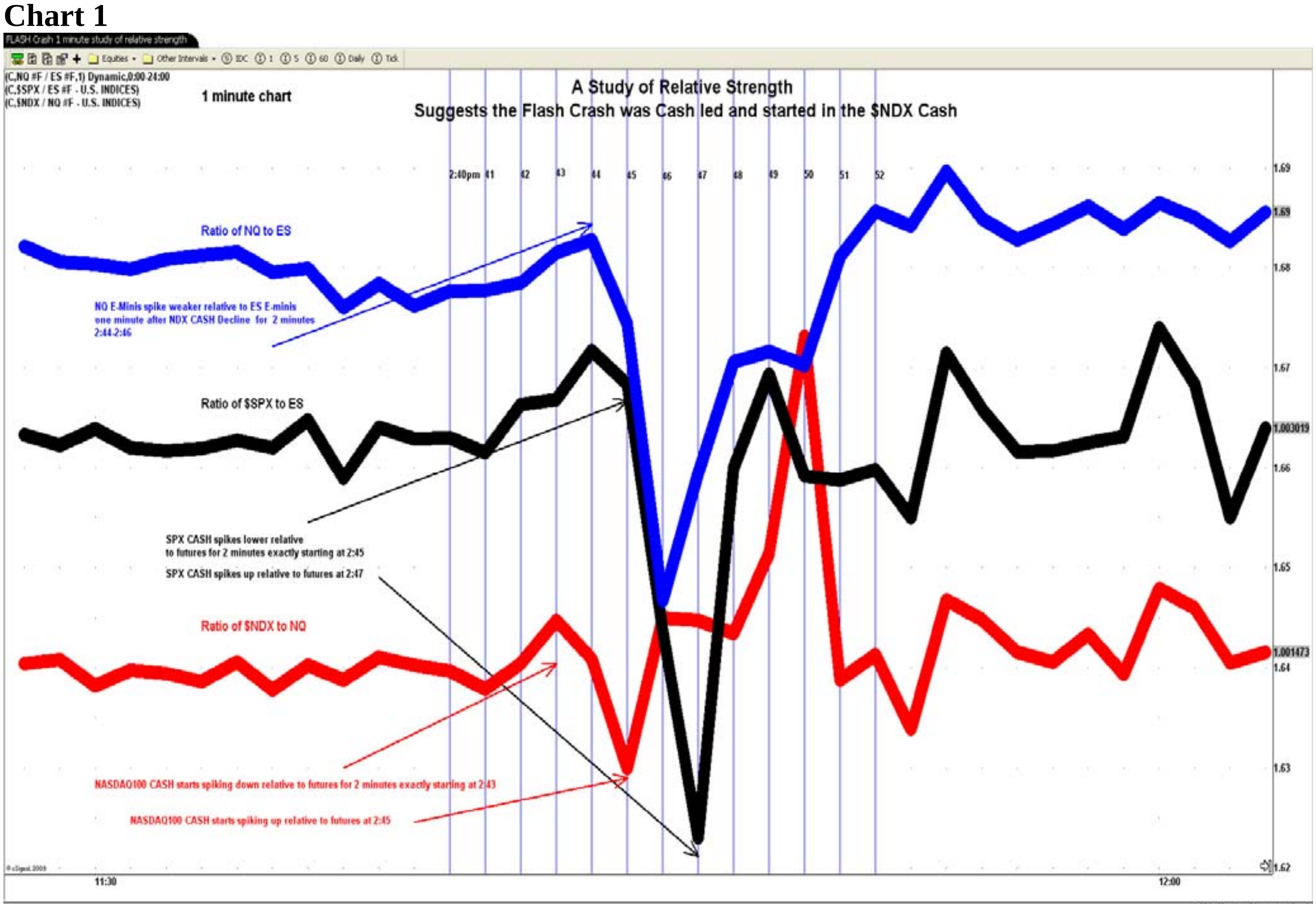
Ratio analysis in charting is most often used to determine relative strength between two markets or two securities. In the following one minute charts however, I use it to identify the weakest link during the “Flash Crash”. It turns out to be a very good tool for determining the weakest link in a chain of events that lasted only a few minutes.

Chart1 shows the moments leading up to, and during, the flash crash at 2:45pm on May 6, 2010, and in my opinion paints a clear picture of the events in the order they occurred:

- At 2:43pm the Nasdaq100 Cash index diverged lower on a **relative** strength basis to the Nasdaq100 E-Minis. The Nasdaq100 E-minis remained **stronger** than the S&P500 E-Minis, and the S&P500 cash index remained **stronger** than the S&P500 E-Minis.

- At 2:44pm the Nasdaq100 Cash index spiked down hard **relative** to the Nasdaq100 E-minis, the S&P500 E-minis turned down **relative** to the S&P500 cash, and the Nasdaq100 E-minis turned down **relative** to the S&P500 E-Minis.

Chart 1



- At 2:45pm the Nasdaq100 cash index **relative** to the Nasdaq100 E-Minis that had fallen hard for two minutes stopped and reversed, The S&P500 cash index spiked lower **relative** to the S&P500 E-Minis while the Nasdaq100 E-minis remained **weaker** than the S&P500 E-minis.

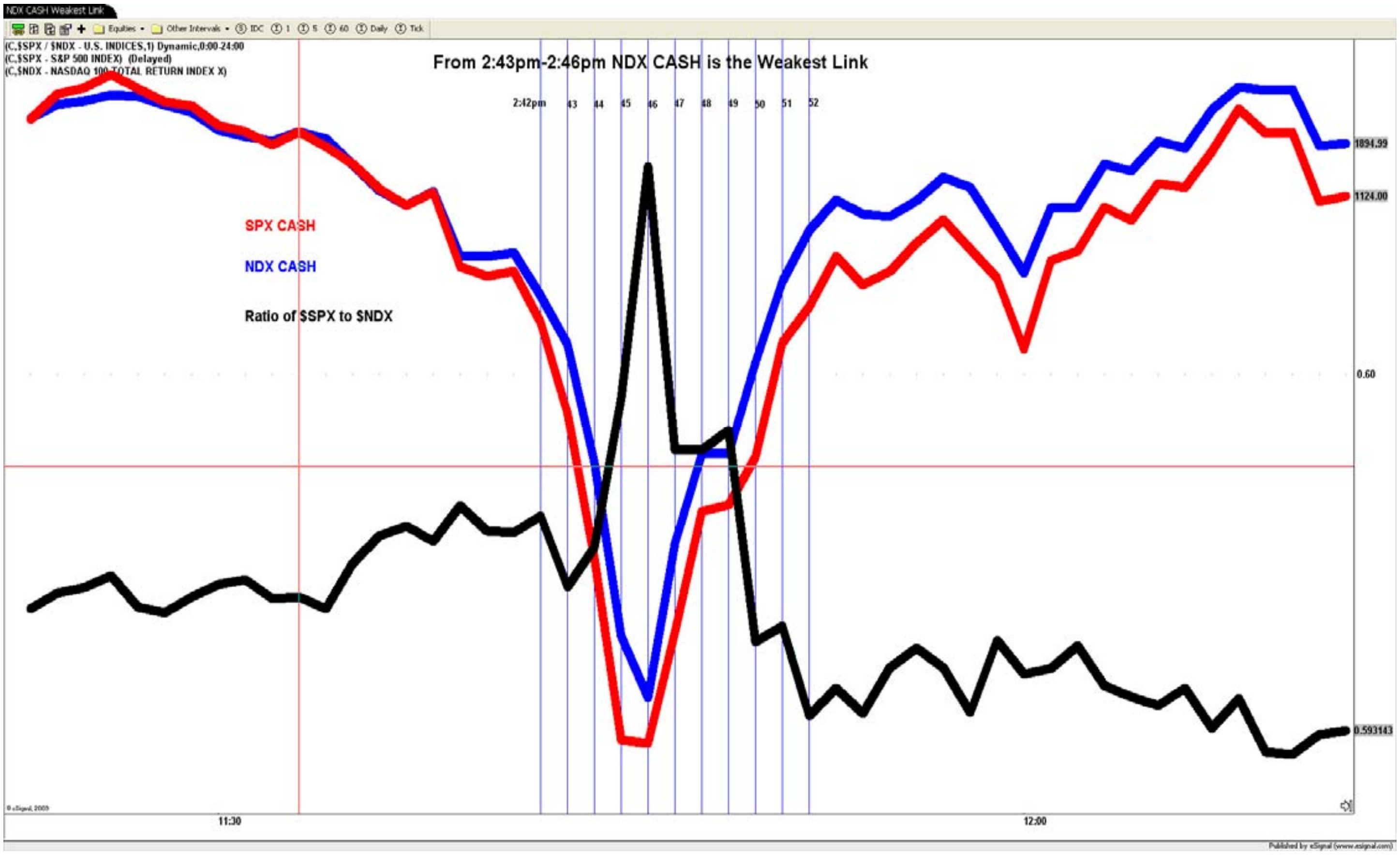
- From 2:46-2:48 the Nasdaq100 cash and Nasdaq100 E-minis ratio **balances** out and the Nasdaq100 E-Minis diverge sharply higher **relative** to the S&p500 E-minis that are still suffering from the S&P 500 Cash index sell off. At 2:46 the S&P cash index stops and **reverses** relative to the E-minis.

Chart 2 shows just the S&P500 E-minis combined with **ratio analysis of the S&P500 cash index to the S&P500 E-minis.** It is clear that for minutes 2:41-2:42 and 2:43-2:44 the E-minis were weaker than cash. That is generally what one expects in a healthy decline that is hedged. However, it is immediately followed by the cash index selling down hard relative to the E-minis from minutes 2:44 – 2:47.

Chart 2

Chart 3 highlights just the ratio between the Nasdaq100 cash index and the S&P500 cash index during the price decline. It highlights that the Nasdaq100 cash index spiked dramatically weaker than the S&P500 cash index at minute 2:43 and remained weaker until minute 2:46pm when it reversed just as dramatically.

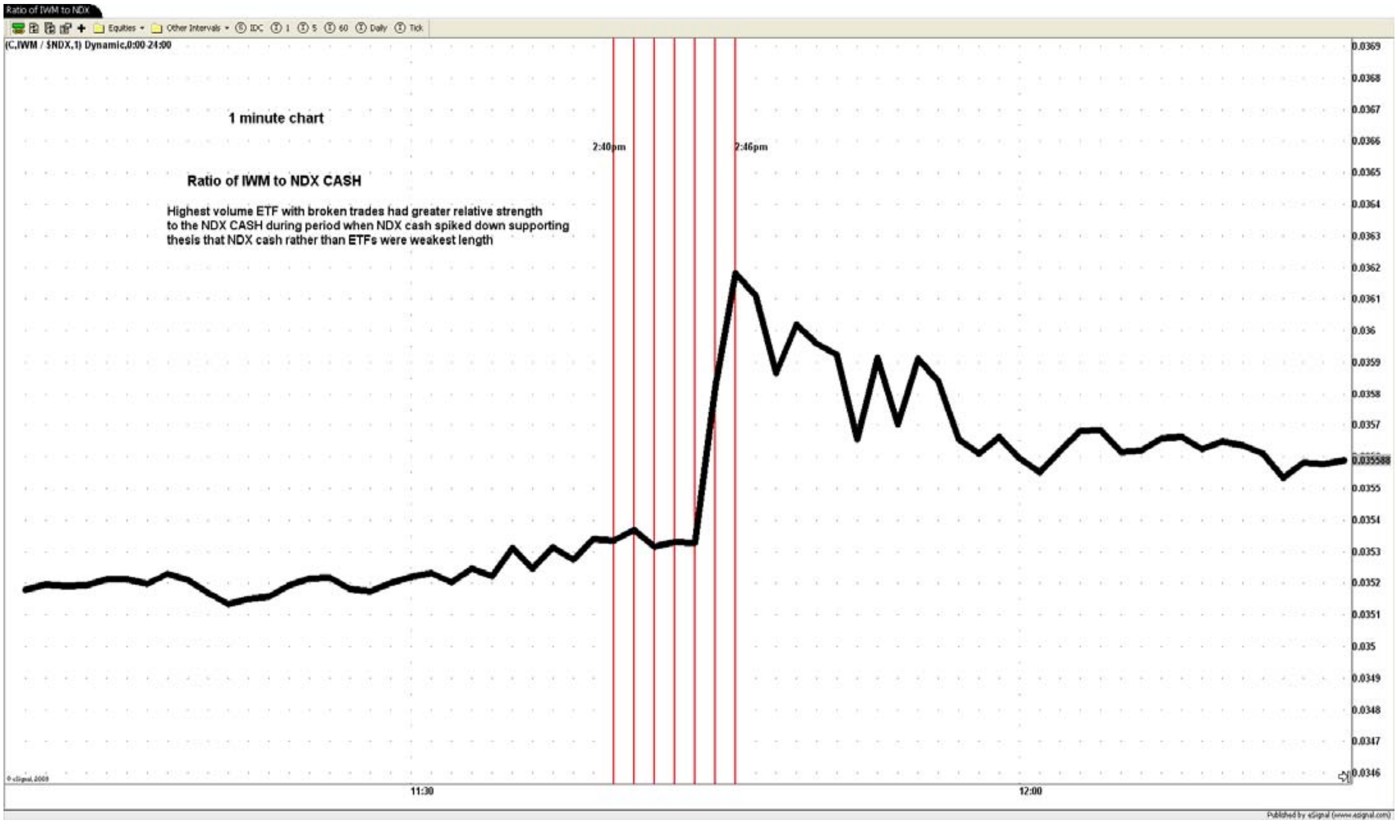
Chart 3



So far, I have presented good evidence that the Nasdaq100 Cash was the weakest link in the chain of events that lasted only a few minutes on May 6, 2010 that is now called the "Flash Crash". The only remaining comparison is against ETFs which suffered more broken trades than any other investment vehicle.

Chart 4 addresses the ETF factor. During minutes 2:44pm to 2:46pm the IWM ETF, which was the highest volume ETF with the most broken trades, was significantly stronger than the Nasdaq100 cash index on a relative basis.

Chart 4



Sincerely,

David Waggoner, CMT
TheMarketDetective.com