

(How) Do Price Tests Affect Short Selling?

Discussion by
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Basic Idea

Goal: Evaluate the effects of price tests on short selling for NYSE and NASDAQ stocks.

Reg SHO temporarily suspends the price tests (uptick rule and bid test) for a set of “pilot” stocks.

This study compares measures of liquidity, efficiency and prices by comparing changes in pilot stocks to changes in control stocks around the time of the program’s initiation.

The study’s design is an apples-to-apples comparison
...as long as everything else stays constant.

A Few Key Questions

Price Tests:

- (i) Allow unrestricted shorting in advancing markets.
- (ii) Prevent shorts from being used to drive markets down.
- (iii) Prevent shorts from accelerating a declining market.

Questions to ask about the pilot stocks:

- (i) Is short selling easy enough in advancing markets?
- (ii) Are these stocks subjects of bear raids?
- (iii) Does short selling accelerate price declines?

...and....

- (iv) Does the market respond to the removal of price tests?
- (v) Were the price tests doing anything in the first place?

Empirical Design

- Each pilot stock matched to a non-pilot stock.
 - By option availability and industry.
 - Then as close as possible for price, size, book –to-market, return and volume.
- Not all pilot stocks are used in the study: just the ones with the best matches.
 - Only top 50% of matches.

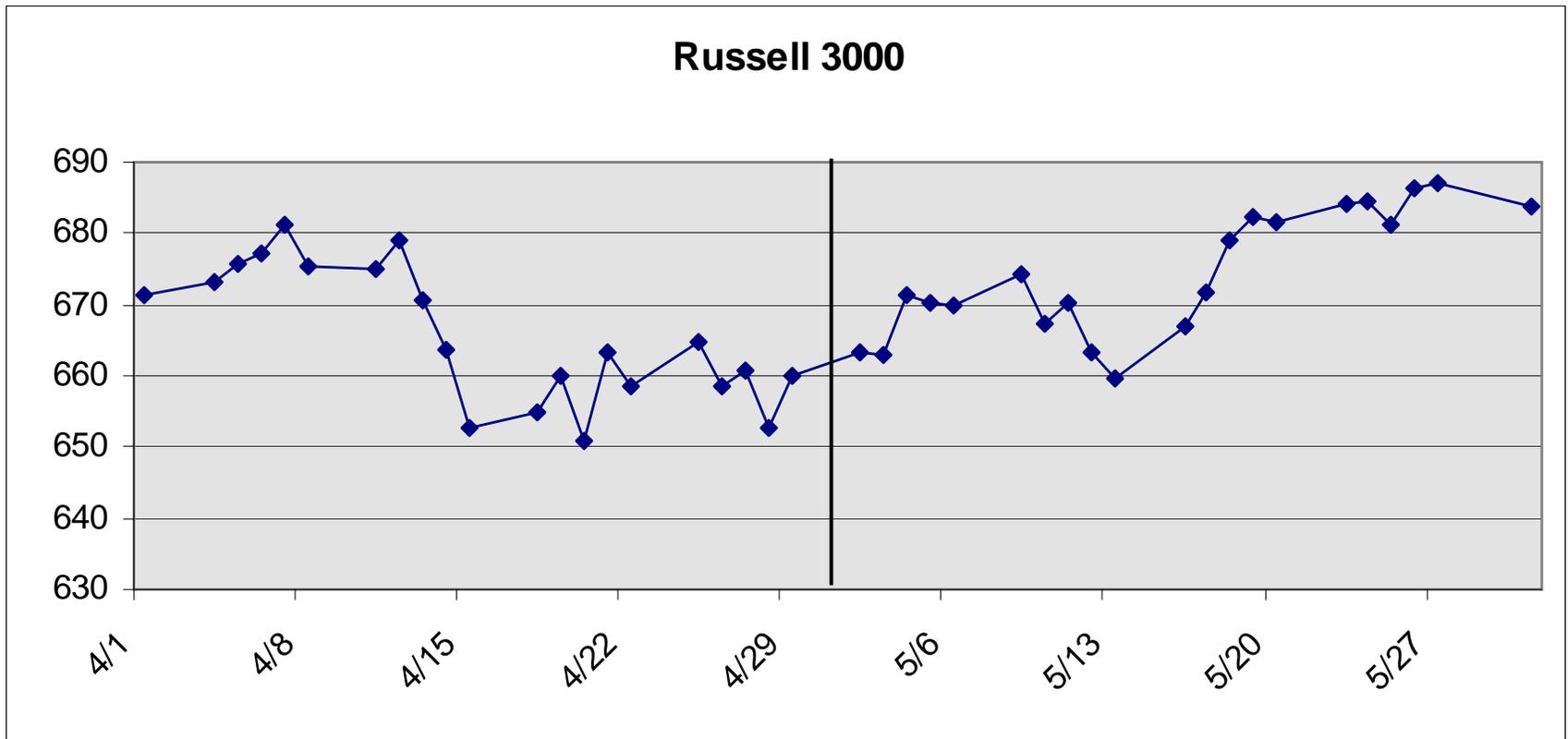
Which ones are left out?

- How do they respond to the removal of price tests?

Two Months of Data: Focus on the change.

- Just before and just after rule change: closest possible comparison.
- Avoids Russell 3000 reconstitution trading volume.
- But...

Is this a Representative Sample?



Main Results

- Returns
 - Announcement Returns: No difference between pilots & controls.
 - Initiation returns: No difference between pilots & controls.
 - Cumulative Returns: April < 0, May > 0, but no difference between pilot and controls.
 - No evidence that pilot stocks are subject to bear raids.
- Volume
 - Short Volume: No difference in short volume.
 - But...significant increase in NYSE number of short trades and decrease in size of trades.
 - Evidence that:
 - (i) trades are more broken up.
 - (ii) price tests reduce the number of trades without decreasing volume.
- Volatility: No Differences (Diether, Lee & Werner 2006)
- Market Efficiency
 - Autocorrelation and Upside-Downside R^2 show no differences.
 - Significant increase in the probability of a price *decline* in the second trade after a short on NYSE. (Not true for 3 later trades or NASDAQ trades).
 - Significant increase in the probability of a price *increase* in the first trade after a short on NYSE. (Not true for 4 later trades or NASDAQ trades).
 - Market movements *could* be behind result....but no strong suggestion that shorts accelerate price declines....*in these 5-trade sequences*.

Quote & Spread Results

- Spreads
 - Quoted Spreads & Relative Spreads decrease on NYSE and NASD for control stocks. (Diether, Lee & Werner 2006)
 - No change for pilot stocks or effective spreads.
 - Hard to interpret...but
 - (i) maybe market makers are relaxing protective spread in control stocks.
 - (ii) maybe more competition in non-control stocks.
- Depth
 - No change for NASDAQ stocks.
 - Bid depth decreases for NYSE pilot stocks.
 - Ask depth decreases for NYSE pilot stocks.
 - Price tests have some effect.
 - Is this a decrease in liquidity, or an increase?
- Trade Prices
 - Shorts of pilot stocks are *more* likely to be executed at prices closer to the bid-ask midpoint.
 - Shorts of pilot stocks are *more* likely to be executed at prices less than bid.
 - Shorts of pilot stocks are *less* likely to be executed at prices greater than the ask.
 - Overall, execution quality of shorts has increased.

Can We Trust the Conclusions?

The study's design has two layers of controls:

1. Controls for *differences across stocks* by comparing each stock only to itself across periods.
2. Controls for *market differences across time* by comparing changes in pilot stocks to changes in control stocks.

Caveats:

- There are only 407 pilot stocks being considered here (of 927 possible).
- The study only covers 2 months of data (of an eventual 27 month pilot period)

Overall

- Natural experiment focusing on the change.
- Study Shows:
 - Shorts are broken up.
 - Depth decreases on NYSE. (Jones 2003)
 - Execution quality improves for shorts.
 - No effect on volatility. (Diether, Lee and Werner 2006)
- Conclusions:
 - No evidence that shorts are being restricted in advancing markets.
 - No evidence that shorts are being used to drive down markets.
 - No evidence that shorts accelerate market declines.