NEW SHORT SALE RULE

STOCK LIKELY TO REVERT AFTER A LARGE DROP

SUMMARY

Based on extensive quantitative analysis on global markets, in particular Taiwan market with similar regulations to the US short sale rule, we expect similar price reversions to occur for stocks which trigger the new short sale rule in the US:

When stocks drop for more than 10% for the first time of the day:

- On average, the price is expected to revert within a couple of hours.
- Volume levels tend to be high during and after this price drop.

We observed that the larger the initial price drop, the more likely the stock reverts in the Taiwan market.

BACKGROUND

On February 28, 2011, the SEC implemented the "alternative uptick rule" for short sales (Rule 201 of Reg SHO): when a covered security decreases by 10% or more from the prior close, the uptick rule is triggered where a short sale order can be only be displayed or executed at price higher than current national best bid, and this rule remains in effect for the rest of the day and the next day.

Questions arise on how this rule could impact the market. More specifically, after uptick rule is triggered, does price expect to stay flat, revert or continue the down trend?

WE ANALYZED TWO SCENARIOS TO PREDICT THE EFFECT OF THE NEW SHORT SALE RULE IN THE US MARKETPLACE, AND WE TESTED OUR HYPOTHESIS AFTER THE RULE WAS IMPLEMENTED.

1. US MARKET PRE-RULE: FLAT RETURN AFTER A LARGE DROP

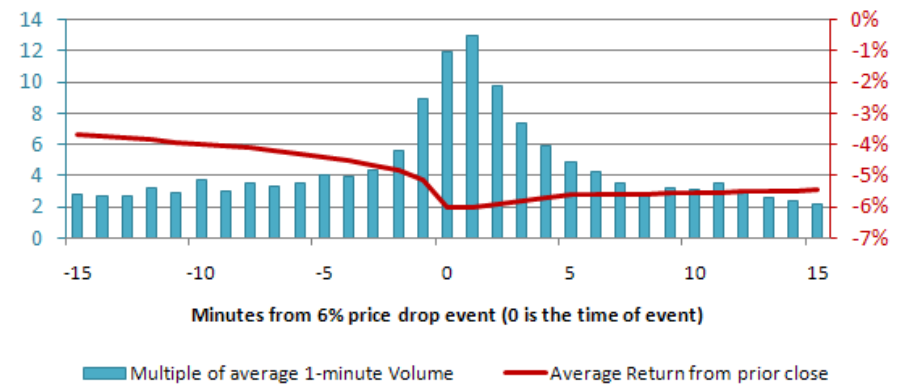
Based on second half year data for all stocks in SP 500 in 2010, after the stock price drops close to 10% for the first time of the day, we found no reversion effect: the price stays flat on average within an hour. The return profile closely resembles those under normal trading conditions.

2. TAIWAN MARKET: PRICE REVERSION EFFECT WITH DOWN LIMIT

The Taiwan market has a daily price limit of 7% up or down from prior close. The market can still trade after reaching these limits but only within these bands. While this rule is not exactly same to the short sale rule in US market, we used the Taiwan market as a proxy for analysis.

Based on second half year of data for all the stocks in the Taiwan TAIEX index in 2010, we found statistical evidence of price reversion effect when prices drop close to the 7% price limit. We confirmed that the reversion was not due to wider market influences.

Figure 1: Price/Volume Pattern in Taiwan market after stock drop 6% from prior close



For example, the chart in Figure 1 shows the average price return and volume pattern within 15 minutes before and after a price drop of 6% for the first time of the day. Each stock's return is normalized in the graph, and each stock's volume is normalized by its 30-day average one-minute volume.

- Price on average moves up 0.40% in 5 minutes and stay in 0.40~0.56% until 15 minutes, while market index movement is neutral.
- At 15 minutes after the drop, 67% of the time, the price reverts, 22% it trends down and 11% it stays flat
- Volume and volatility spikes at the around a large drop in price. Volume levels before/after event are higher than normal levels.
- In general, the price reversion and volume spike effect are stronger when the drop percentage is closer to the 7% limit.

The two analyses for stocks in major indices show that after a significant price drop, the price does not continue downwards but stays flat in the US market pre-short sale rule. In the Taiwan market, however, it reverts with a limit down rule. Using the Taiwan market as a proxy, we predicted that there is likely a price reversion effect after the rule implementation, especially for relative liquid stocks in major indices.

3. US MARKET AFTER RULE

Analysis was done the following week after the short sale rule was in effect. From February 28, 2011 to March 4, 2011, there were 7 stocks triggered in the Russell 1000. Out of these seven stocks, six of these stocks showed reversion within an hour after triggering.

For example (Figure 2), HCBK (Hudson City Bancorp Inc), bounced back 2% one hour after triggering the short sale rule. Volume is also consistently higher than normal levels.

We will continue to monitor this market dynamics and conduct additional quantitative analysis.

CONCLUSION

We expect that, on average, stocks are likely to revert after they trigger the short sale rule.

Currently, the SEC is also proposing to implement a limit up/down rule for US equities. We also expect similar price reversion effect to take place if this rule is implemented.

Furthermore, in our research, we have also found the price does not show significant reversion effect after a large price increase.

For more details, please contact James Wang (zwang90@bloomberg.net) or Tradebook's algo desk.

Contact Bloomberg Tradebook to learn more about how to leverage our quantitative research and global market experience.

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