

CREDIT SUISSE

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Ms. Elizabeth Murphy
Secretary
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC. 20549-1090

March 30, 2009

Re: **Possible Short Sale Price Test Proposals**

Dear Ms. Murphy:

Credit Suisse welcomes the opportunity to discuss with members and staff of the Securities and Exchange Commission (the "Commission") various proposals to regulate short selling in the US equity markets. We also respectfully submit this letter which summarizes our views.

We recommend that any short sale price test proposal considered by the Commission at its April 8, 2009 open meeting include an alternative popularly known as the "circuit breaker". We strongly believe that the "circuit breaker" alternative is best designed to address the issue of perceived "bear raids" on financial and other firms, and should be proposed by the Commission for notice and comment. Given the significant problems with other short sale alternatives, a circuit breaker proposal is a viable alternative that avoids the disadvantages of a tick or bid test.

The United States broker-dealer ("BD") subsidiary of Credit Suisse Group has been operating continuously since 1932, when the First Boston Corporation was founded. The most recent Greenwich Survey named Credit Suisse the top broker overall in the US Equities market.¹ We are also recognized as a leader in market share in electronic trading.²

As market professionals with significant knowledge and insight into the functioning of equity markets, it is our belief that a properly designed circuit-breaker would be more effective than a "tick" or "bid" test at addressing issues concerning abusive short selling into a declining market. Furthermore a circuit-

¹ Greenwich Survey, May 2008

² Tabb Report, November 2008

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breaker can accomplish this goal without the significant drop in overall liquidity, and the extraordinary compliance and enforcement burden that would result from a new tick or bid test. We also believe that the implementation period for a circuit-breaker could be significantly shorter, allowing a new rule to go into effect within this calendar year, which we believe would be impossible for a tick or bid test.

Problems with a “tick” or “bid” test:

The short sale regulation that has received the most attention thus far is the proposal to reinstate the “uptick” requirement that was in effect on exchanges (but not Nasdaq) until July of 2007. The rule in its old format would be unworkable, however, in the post-NMS market structure. The old uptick rule was in effect before significant Regulation NMS (National Market System) reforms were implemented, and thus reinstating the uptick rule is not practical for reasons we will now explain.

The old rule (SEC Rule 10a-1) did not apply uniformly to all equity markets. Markets other than the primary exchanges had inconsistent rules at the time. For example, Nasdaq applied a “bid test” (NASD Rule 3350) to all Nasdaq securities, while Nasdaq trades on the Arca Exchange (formerly known as the Pacific Coast Exchange) were originally not subject to any short sale restrictions. The NYSE and Amex referenced only last sale prices in their respective markets, while other exchanges used consolidated market data. Until 2005, the inconsistency of rules mattered little. The NYSE had an overwhelming amount of market share in its own names, with much of the rest of the volume being printed “upstairs” by NYSE member firms who generally abided by the NYSE tick.

Since the implementation of Reg NMS, equities volume has migrated to 11 exchanges and more than 30 Alternative Trading Systems. In a world in which 75% of the trading now takes place on “non-primary” systems, any meaningful uptick or upbid rule would clearly need to be inter-exchange, using consolidated market data.

Problem 1: Known tick / bid sequence does not exist in Reg NMS world:

An inter-exchange tick or bid rule raises a host of very difficult technology and Reg NMS issues that would need to be considered. First, true tick sequence simply no longer exists. BD firms such as ours receive market data directly from the high volume destinations, without waiting for data that has been aggregated by SIAC. This is done for two reasons. First, it is significantly faster than waiting for SIAC to gather and re-route the data. Second, it is significantly more reliable,

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as it eliminates SIAC as a single point of failure. All information systems occasionally fail. If it were mandated that all markets receive market data from a single approved source, this would create an operational risk that could result in significant market disruption. The only safe and practical method for distributing real-time data is to continue to permit the use of multiple data sources, including receipt of information directly from the market center.

With multiple data sources, there is no way of knowing the true tick order, with executions occurring micro- and milliseconds apart (one/one thousandth and one/millionth of a second, respectively). Each firm receives quotes and ticks in a different order, based on its location relative to each exchange, line bandwidth, network speed, etc. For example, if Broker A's data center is physically closer to Nasdaq's data center than is Broker B's data center, while Broker B is closer to the NYSE, Broker A will likely receive Nasdaq quotes more quickly, and Broker B will receive NYSE quotes more quickly. Prints will at times appear to have traded in a different order to Broker A and Broker B. So Broker A may see the tape read .56, .54, .55, while Broker B sees it as .54, .55, .56, resulting in the two brokers comprehending different uptick prices. This would add an arbitrary element to execution, or possibly even lead to high-speed shopping by clients, as they try to electronically probe for the broker who has the lowest price where shorting is allowed.

In a microsecond trading environment, even a requirement to provide high precision time stamps would not result in orders being reported in the correct sequence. Moreover, many trade reporting rules still permit 90 seconds for reporting, although electronic trades are generally reported immediately.

Similar to the "flickering quote" rule in Reg NMS, it is clear that some type of grace period would be necessary before any print would "count" for purposes of a tick or bid test. For example, a 3-second grace period could declare that brokers would not be penalized for short selling on a downtick, provided that the tick had only moved higher within the past 3 seconds. An exemption for flickering quotes solves much of the core technology issue, but in an age of millisecond processing and low-latency, high volume electronic trading, one can envision short selling occurring within the 3 second period.

Problem 2: Under Reg NMS, a tick or bid test would put an enormous and costly burden on BDs for the first time ever:

The responsibility of handling any short sale restriction could no longer be on the exchanges, as it was when the uptick and bid tests were last in effect. For the tick test to work in a post Reg NMS world, compliance will have to be focused on the

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order entry point, rather than the execution point. While essential for consistency with Reg NMS, this version of the tick test will place the compliance responsibility completely on the BD for the first time ever. This is largely due to how Reg NMS was designed.

At the core of Reg NMS is the Inter-market Sweep Order (ISO). When an exchange receives an ISO, its systems execute the order "no questions asked". The broker is responsible for sending a compliant order. The exchange prints the order if it crosses with anything on its order book, regardless of whether the exchange believes the order is outside the current market. The brilliance of the ISO order type is that if one exchange is receiving slow data, or publishing slow quotes, or has technology problems, BDs have the ability to bypass the market center, take on the compliance responsibility by marking the order "ISO", and continue trading through the bad quote. In this way, the ISO order makes the whole national trading "chain" as strong as its strongest link, instead of its weakest. The ISO mechanism is a key to explaining the extraordinary reliability of US markets.

To preserve the ISO order type, market centers would have to print ISOs regardless of the tick or bid, transferring compliance responsibility to the BD. Thus BDs would need to track upticks or upbids in their smart order routers in accordance with the new rules, and then preserve this tick history so that regulators can audit it. Building such systems would likely be as expensive and challenging as Reg NMS implementation was from 2005-2007, and would likely take more than a year to implement in a careful, planned way that does not overly expose the market to the risk of technology crashes. It is also likely that the compliance costs would disproportionately burden smaller BDs, who would likely be forced to route their flow through a handful of larger brokers, impeding competition and adding to systemic risk as flow is consolidated among fewer players.

Problem 3: A tick or bid restriction will dramatically reduce volume, and therefore widen bid/ask spreads and increase transaction costs and volatility:

The 14 day short sale ban in September and October of 2008 illustrated the market effects if short sellers were to disappear. According to our analysis, the bid/ask spreads in the banned names more than doubled vis-à-vis their counterparts that were not banned, even when controlling for volatility in the underlying stocks. We believe that the wider bid/ask spreads were due to the fact that "long/short" traders play a larger role in the market place than they historically have, making today's market much more sensitive to any changes in short selling.



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Due to the successful implementation of Reg NMS and the NYSE Hybrid model, the explosive growth of BATS and DirectEdge and other new market centers, and the removal of the uptick rule, today's market structure is significantly different from 2007. So-called "high frequency" traders (also sometimes called EMMs, "Electronic Market Makers") have largely replaced the role of the NYSE specialists and the old Nasdaq market-makers. We estimate that high frequency traders are responsible for more than 50% of the volume today. We believe they are a stabilizing and positive presence in the markets, and are largely responsible for the US currently having the tightest bid/ask spreads in the world.

We believe that without an electronic market-maker exemption, a tick or bid rule would serve as a huge impediment to these firms, and they would trade significantly less, causing what we believe would be a dramatic drop in volume and increasing transaction costs. High frequency clients have estimated that if a tick or bid test were enacted, their volume would drop from 20%-40%, depending on the specifics of the rule, with even higher estimates if the '5 cent' tick rule were to pass. (Requiring an uptick of more than one cent would be tantamount to a total ban for any stock that trades actively.)

Depending on the details of the rule, we believe that a tick or bid rule could cause a drop in volume of approximately 10% – 50%. This would mean retail investors would face higher costs in the form of wider bid/ask spreads, and institutional investors would face greater market impact on their orders due to the lower liquidity. The negative impact would be felt across the market place, including by pension funds and mutual funds.

Forecasting a drop in volume of this magnitude may sound extreme, but it is probably conservative in light of how much US equities volume has grown since 2007. In the first half of 2007, before the uptick rule was rescinded, US consolidated volume averaged 5.5 billion shares per day. In March of 2009, consolidated volume averaged 12.3 billion shares per day. Much of this phenomenal volume growth has come from long/short traders that have invested heavily in technology and built successful electronic market-making systems. We believe that a re-instatement of a tick or bid test will likely result in this liquidity disappearing and volumes declining towards 2007 levels.

Prior to 2007, numerous academic studies found that the tick test was an impediment to trading. The SEC in February of 2007 released an excellent and comprehensive study of both the uptick and the upbid rule, in its report titled "Economic Analysis of the Short Sale Price Restrictions." The study compared the performance of "pilot" stocks, which had no uptick rule, with "control" stocks, which were similar stocks that still had the uptick rule in effect.

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Key findings of the SEC 2007 analysis:

- **Tick and bid tests reduce trading volume, but do not reduce short interest.**

*"Both for Listed Stocks and Nasdaq NM Stocks, we find that price restrictions reduce the volume of executed short sales relative to total volume, indicating that price restrictions indeed act as a constraint to short selling. However, in neither market do we find significant differences in short interest across pilot and control stocks."*³

- **Removing the uptick rule did not lead to lower prices.**

*"When controlling for risk, the returns of the sample stock are about the same as the returns of the market portfolio. This suggests that the removal of the price restrictions will not... likely lead to prices being driven below their equilibrium value."*⁴

*"The frequency of negative alphas is statistically similar for pilot stocks and control stocks, providing further evidence against prices being driven below their equilibrium level."*⁵

*"The pilot and the control stocks had similar returns over the first six months of the pilot."*⁶

- **Restrictions are costly and hinder prompt execution.**

*"Price restrictions... affect the ability of short sellers to demand liquidity by getting prompt execution of market orders... to the extent that price restrictions inhibit the free movement of stock prices, they might make markets less liquid."*⁷

³ Economic Analysis of the Short Sale Price Restrictions, SEC, February 2007 ("OEA Study"), page 6

⁴ OEA Study, page 47

⁵ OEA Study, page 47

⁶ OEA Study, page 56

⁷ OEA Study, page 7

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*"Short selling volume increases... as a result of removing the tick test, suggesting that the tick test imposes economic costs on short sellers."*⁸

*"In summary, having examined the impact of the Regulation SHO Pilot on a wide array of market characteristics, we conclude that price restrictions constitute an economically relevant constraint on short selling."*⁹

The circuit-breaker solution:

We have carefully considered how regulators could address concerns regarding "bear raids", given that a tick or bid rule would not be compatible with Reg NMS, would be very expensive for the industry to implement, and would likely cause a large drop in volume and an increase transaction costs. By "bear raid" we mean a strategy to short stocks, with the intent of driving down the price in the hope of creating a self-fulfilling prophesy where investors and others lose confidence in the company because of its rapidly falling stock price, leading to the fundamentals of the company worsening and further stock price reductions.

Bear raids can be especially damaging to financial firms, whose ability to operate depends on perceived stability and solvency. While it is the subject of much debate whether financial firms in the fall of 2008 were actually the victims of "bear raids", that debate is beyond the scope of this letter. We have assumed for the purpose of our analysis that 'bear raids' do occur and need to be addressed. We believe that tick or bid tests, because of their enormous complexity and implementation cost, would not be the most effective means of addressing the issue, whereas a circuit-breaker, which is much cheaper and faster to implement, could be very effective.

A "bear raid" can still occur with an uptick or upbid rule in place. The short seller can sell into the uptick when it occurs. The seller also can show a large offer at the good tick price. Long sellers then make a rational decision to hit the bid, so they can get their sells executed ahead of the large short sellers, thus causing the stock to continue to drop rapidly, despite the presence of the tick rule.

Some non-market professionals have called for a complete ban on shorting, but as we saw during the 14 day ban, this creates serious negative effects for market efficiency, bid/ask spreads, and volume. This leads to the "circuit-breaker"

⁸ OEA Study, page 35

⁹ OEA Study, page 56

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proposal, which would allow the shorts to contribute to market efficiency and volume on normal days in normal stocks, unhindered by any restrictions, while shutting the shorts down in the event of a "bear raid" on an individual stock.

We believe that a properly designed circuit-breaker addresses "bear raids", without adding significant complexity to the market structure, without harming overall volume or liquidity, and without costing an enormous amount of time and money to implement and enforce.

Our circuit-breaker proposal:

We propose a "rolling" circuit breaker that would work as follows: if a stock drops more than 10% in a single day, or if it drops more than 20% over 3 days, shorting in that stock would be immediately banned for the rest of the day, and for the subsequent 4 trading days. The closing price on T+4 would then become the new benchmark when trading resumes. During the time that the circuit breakers are in effect, only market makers and persons engaged in hedging activities would be permitted to sell short.

The benefits:

1. *A circuit-breaker is a targeted solution to address the problem.* A tick or bid requirement is overly broad, damaging liquidity in thousands of stocks that are healthy and that would be better off without the liquidity impediment.
2. *A circuit-breaker is more effective at addressing "bear raids."* If short-selling is responsible for rapidly depressing a company's shares, a "time-out" from short-selling would be far more effective than just slowing the downdraft via a tick or bid rule.
3. *A circuit-breaker is transparent and easy to implement.* Our proposed circuit-breaker would be based off the previous day's closing price on the listing market (i.e., NYSE closing price for NYSE-listed stocks, Nasdaq closing price for Nasdaq-listed stocks). A "rolling" 3 day benchmark, it would be based on the official closing price on a rolling T-3 basis. The benchmark numbers do not change intra-day, are widely disseminated, and would be straight-forward to implement.
4. *A circuit-breaker works smoothly with Reg NMS.* When the circuit-breaker is activated, within 1 second (to allow for flickering quotes), exchanges, ECN's, and ATS's simply stop executing short sales and BDs will reject

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new short sale orders from clients. This is far less complex than continuous monitoring of the order of ticks or bids.

5. *Implementation could be fast and costs would be modest.* Listing exchanges already disseminate real-time status conditions as part of existing price feeds. By generalizing the existing "Regulatory Halt" flag to include a "Do Not Short" condition, both away trading venues and broker-dealers could react to the circuit breaker condition in real-time with very little new coding and testing.

Misperceptions concerning the circuit-breaker:

The two misperceptions frequently cited regarding circuit-breakers are implementation issues and the so-called "magnet effect". As one of the largest agency electronic trading houses in the US market, we believe we have good insight into the technological difficulties of implementation. A circuit-breaker is relatively easy to implement, and is dramatically less complex than a tick or bid test. We believe a circuit-breaker could be implemented by the entire marketplace within several months, as opposed to a period longer than a year for a tick or bid test.

The "magnet effect" is a more subtle issue. This refers to the question of whether or not stock prices would be drawn to the circuit-breaker level, as sellers rush to try to short before shorting is banned for a week.

Academic studies on the "magnet effect":

Although it sounds logical, the magnet effect does not appear to occur based on empirical studies. Many academic studies have looked at circuit-breakers in other securities and other countries and have not found evidence of a magnet effect.¹⁰

¹⁰ *Abad and Pascual (2005)* found that prices reverse or decelerate as they approach price limits on the Spanish stock exchange, rejecting the magnet effect.

Chan, et al (2005) found that daily price limits on the Kuala Lumpur Stock Exchange did not exacerbate order imbalance prior to limit hits.

Hall and Korfman (2001) examined activity around price limits in five agricultural futures contracts and found no support for a magnet effect.

Berkman and Steenbeek (1998) investigated Nikkei 225 futures contracts traded on the Osaka Securities Exchange and the Singapore international Monetary Exchange (SIMEX) and found a lack of a magnet effect.

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It is possible that the reason the "magnet effect" does not appear to exist is that traders tend to be rational players, and it is typically not a rational move to aggressively short a stock that is about to hit a circuit-breaker, and therefore have significant selling pressure removed from the market. Furthermore, Subrahmanyam (1997) extends the work of Easley and O'Hara (1987) and develops a theoretical model for the strategic behavior of informed traders. He concludes that "an informed trader knows that trading large quantities will cause the limit to be crossed, which will cause him or her to lose profit potential. Therefore, the strategic action would be to scale back his or her trading in response to the closure, contrary to the magnet effect."

Based on the empirical evidence in the academic studies cited above, we do not think that fear of a "magnet effect" is a valid reason to oppose circuit-breakers.

If the magnet effect is feared, the Commission could apply the rule for a temporary period to assess its impact.

In conclusion, it is our belief that a "rolling" circuit-breaker would be more effective than a "tick" or "bid" test at preventing a bear raid, would avoid many of the negative effects associated with tick or bid tests, and would not create an extraordinary compliance and enforcement burden for the BD community and for the regulators. It is also our belief that the implementation period could be significantly shorter, allowing a new rule to go into effect within this calendar year, which we believe would be impossible for a Reg NMS-compliant tick or bid test. In the aftermath of the 1987 crash, market wide circuit breakers were initiated to supplement the then existing and relatively ineffective \$0.125 tick test. We believe now as then, that a circuit-breaker provides the most effective and least intrusive solution to the short sale issue.

Exchanges' Proposed Circuit Breaker

On March 24, 2009, four exchanges wrote the Commission advocating a modified tick test in conjunction with a circuit breaker. Once an unspecified circuit breaker were hit, this proposal would ban short selling into a bid, unless the bid rose to the level of a preexisting limit order that was entered at a price above the bid at the

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Kuserk et al (1989) examined treasury bond futures daily price limits and found no evidence of a magnet effect.

Arak and Cook (1997) also examined treasury bond futures 8 years after *Kuserk*, and also found no evidence of prices accelerating towards limit down or limit up.

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time. While this proposal would be far preferable to a more traditional uptick or bid test, the exchanges' proposal would require significantly more technology work for the BD community than our proposal. It also would take longer to implement, would be more difficult to audit and enforce, and would be less effective at removing selling pressure in the event of a bear raid.

For these reasons, we respectfully ask the Commission to include our "circuit-breaker" alternative for public comment in its April 8th rule proposal.

Respectfully submitted,

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Managing Director
On behalf of Credit Suisse Securities USA,
LLC

cc: Hon. Mary Schapiro, Chairman
Hon. Kathleen L. Casey, Commissioner
Hon. Elisse B. Walter, Commissioner
Hon. Luis A. Aguilar, Commissioner
Hon. Troy A. Paredes, Commissioner
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Dr. Erik R. Sirri, Director, Division of Trading and Markets
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