

Mary L. Shapiro, Chairman  
Securities and Exchange Commission  
100 F Street, NE  
Washington, DC 20549

June 19, 2009

Dear Chairman Shapiro,

I have already shared my own views on the proposed amendments to Regulation SHO with the Commission in person during the recent SEC Roundtable in Washington DC. Therefore, I will refrain from repeating those views in this letter. Instead, I wish to elaborate on a point that was raised in our discussion of the proposed amendments to Regulation SHO during the Roundtable.

The Commissioners and Chairman Shapiro expressed concern about the impact of short selling on investor confidence. Specifically, you stated that you had heard from many constituencies that short selling negatively affects investor confidence. Therefore, you asked the academic panelists if we were aware of any academic research on the relationship between investor confidence and short selling. Unfortunately, none of the panelists (including myself) were able to provide you with any references to academic research on this issue.

After our roundtable, I discovered that there are several indices of investor confidence that may help shedding some light on this issue. For example, State Street Corporation and Yale School of Management produce such indices. I have received permission from the creators of these indices (**Professor Ken Froot** and **Professor Robert Shiller**) to include their data in this letter. I will first briefly introduce the data, and then graphically illustrate the relationship between these measures of investor confidence and short selling. While it is too early to draw conclusions from this data, the evidence presented below does not suggest that there is a negative relationship between short selling activity and investor confidence. Instead, it provides tentative support to previous research on short selling activity and returns which has shown that short sellers are contrarian.

### **Investor Confidence**

The State Street Investor Confidence Index<sup>®</sup> (State Street ICI) measures the attitude of investors to risk. It was developed by Harvard **Professor Ken Froot** and State Street Associates Director **Paul O'Connell**. The Index uses the principles of modern financial theory to model the underlying behavior of global investors. Unlike other survey-based confidence measures that focus on expectations for future prices and returns, the Index provides a quantitative measure of the actual and changing levels of risk contained in investment portfolios representing about 15% of the world's tradable assets.<sup>1</sup> The State Street ICI is available monthly (calculated roughly mid-month) both for Global investors, and for separate regions, e.g. North America.

The Investor Behavior Project at Yale University, under the direction of **Dr. Robert Shiller** since its beginning and now under the auspices of the Yale International Center for Finance, has been collecting questionnaire survey data on the behavior of US investors since 1984. As part of this project, regular questionnaire investor attitude surveys have been done continuously since 1989. The following reports on some stock market confidence indexes (Yale Confidence Indices) derived from this survey data. These indexes have a span of nearly twelve years, and thus are the longest-running effort to measure investor

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<sup>1</sup> [http://www.statestreet.com/industry\\_insights/investor\\_confidence\\_index/ici\\_overview.html](http://www.statestreet.com/industry_insights/investor_confidence_index/ici_overview.html)

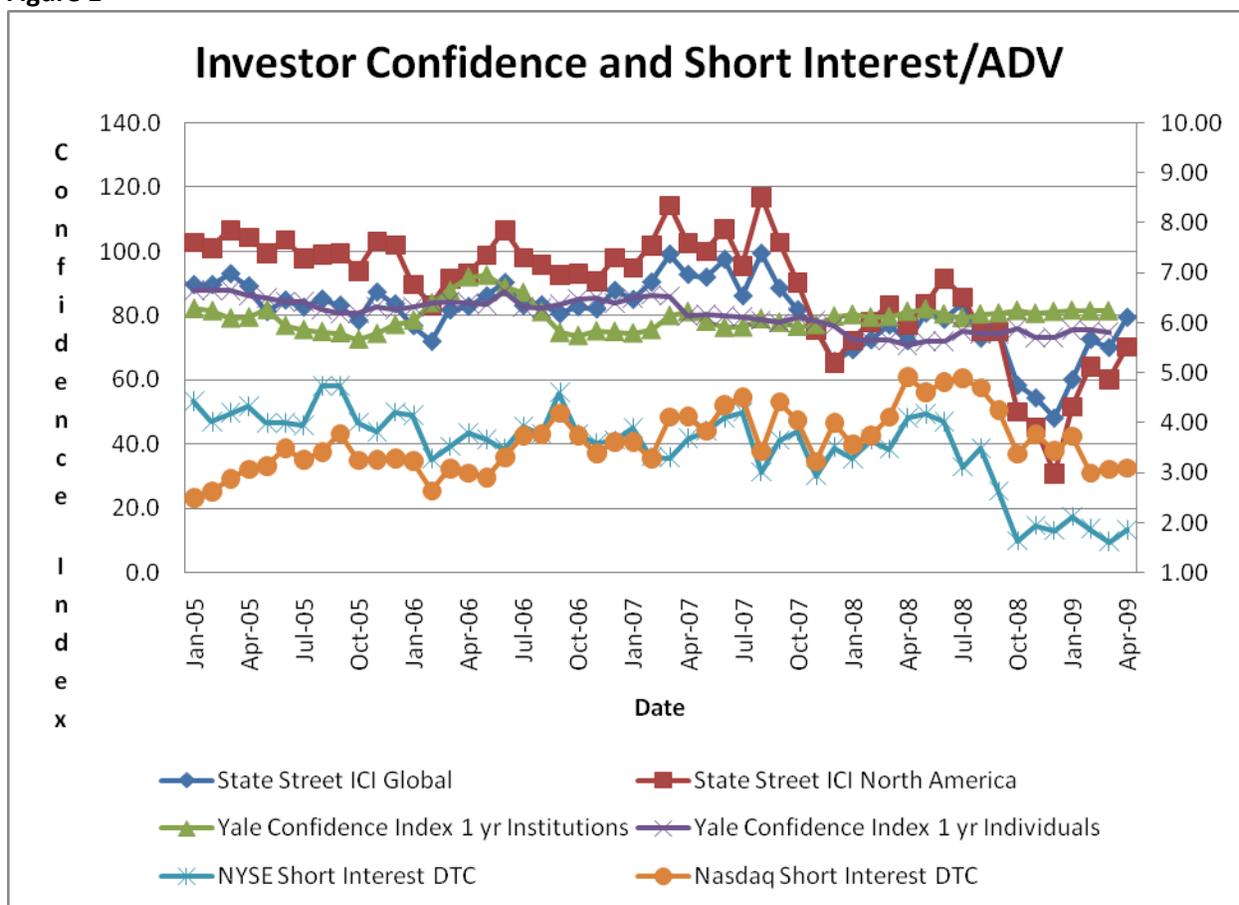
confidence and related investor attitudes.<sup>2</sup> There are four Yale Confidence Indices available, The One-Year Confidence Index, The Buy-on-Dips Confidence Index, The Crash Confidence Index, and The Valuation Confidence Index. The index that best captures the general theme of investor confidence is The One-Year Confidence Index (The percent of the population expecting an increase in the Dow in the coming year). Survey data is collected and indices are calculated separately from institutions and individuals. The Yale Confidence Index data is available monthly, and my understanding is that the survey is gathered roughly mid-month. It is generally publicly announced the last Tuesday each month.

### Short Selling Activity

There is also several possible measures of short selling activity. For the purpose of this letter, I will measure the extent of short selling as short interest (number of shares sold short) as reported each month. To match the timing of the data with the investor confidence indices discussed above, I will use the mid-month short interest reports for Nasdaq and NYSE listed firms. Moreover, I will calculate raw aggregate short interest time series expressed both relative to average daily volume (days to cover) and in billion shares across. The short interest data comes from a data vendor Short Interest Site.<sup>3</sup>

### Short Selling Activity and Investor Confidence

Figure 1



<sup>2</sup> <http://icf.som.yale.edu/Confidence.Index/>

<sup>3</sup> [www.shortinterestsite.com](http://www.shortinterestsite.com)

Figure 1 illustrates the relationship between investor confidence and short interests measured relative to average daily share volume (ADV) starting January 2005 up until May 2009. The light blue and orange lines are short interest for NYSE and Nasdaq stocks measured against the right-hand vertical axis. The rest of the lines are for various measures of investor confidence indices measured against the left-hand vertical axis. Note that the graph assumes that the reporting of investor confidence coincides with the collection of the short interest data.

Based on the State Street Confidence Indices in Figure 1, there was a sharp decline in investor confidence in the fall of 2007. However, there is no consistent contemporaneous relationship between short selling activity and investor confidence. Investor confidence rebounded in early 2008, and this increase coincides with an increase in short selling activity. Both investor confidence and short selling activity peak during the summer of 2008, and then both series decline significantly. Finally, there is evidence of a strong rebound in investor confidence but a somewhat weaker rebound in short selling activity based on the State Street Confidence Indices in the spring of 2009.

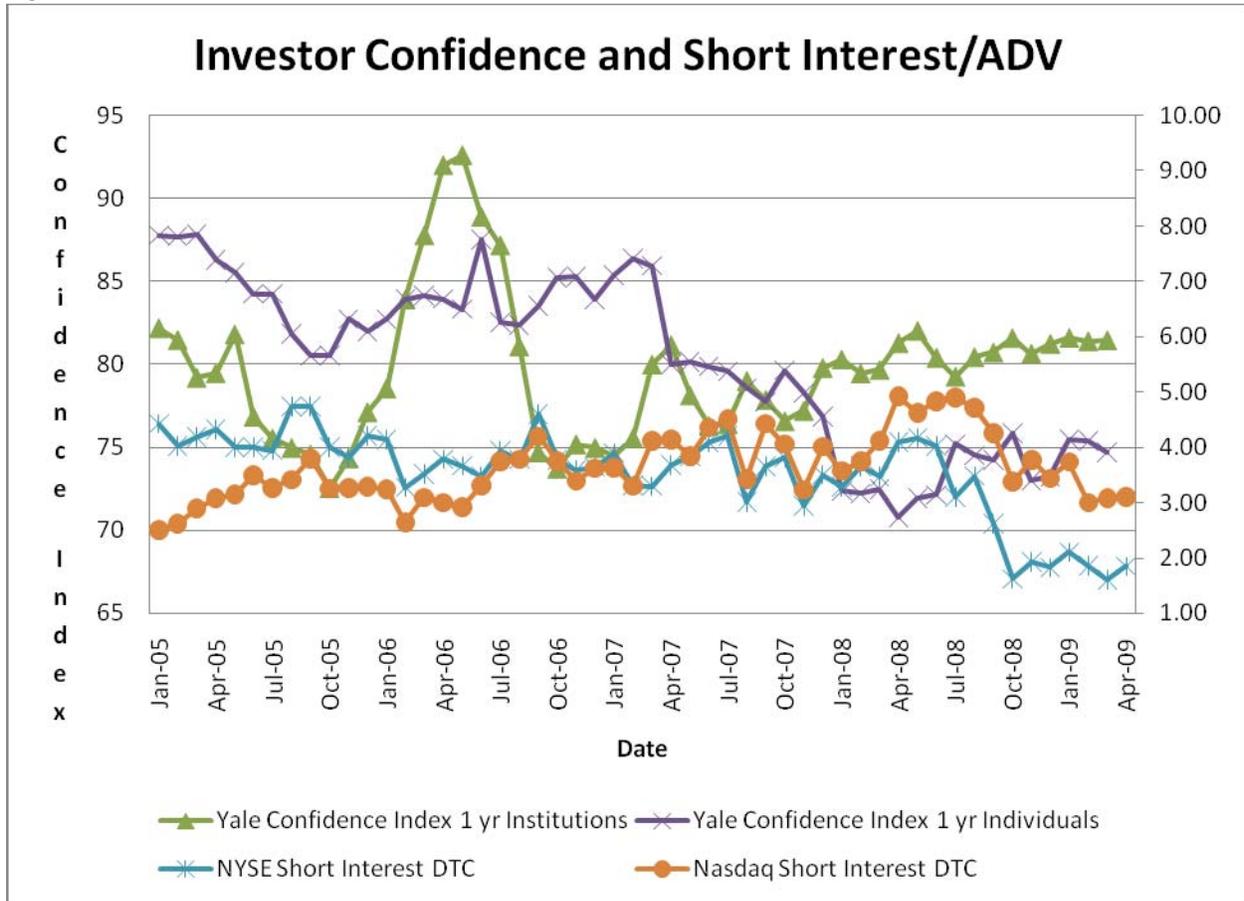
My overall conclusion from Figure 1 is that when institutional investor confidence is high, short selling activity tends to be high. When institutional investor confidence declines, short selling activity also tends to decline. In other words, short sellers appear to be contrarians.

The amplitudes of the swings based on the Yale Confidence Indices are smaller, which makes the ocular inference more challenging. Therefore, Figure 2 reports the results for the Yale Confidence Indices and short selling activity measured as short interest divided by ADV. The green line is the investor confidence based on surveys among institutions while the purple line is investor confidence based on surveys by individuals.

Overall, the amplitude of the swings in investor confidence seems dampened in the latter part of the sample compared to the first part of the sample. It is unclear why. Individual investors surveyed experience a decline in confidence in the fall of 2007 which mirrors the evidence based on State Street ICI discussed above. However, institutional investors surveyed by Yale University disagree judging from the continued increase in institutional investor confidence during the same period. As a result, the relationship between the Yale investor confidence indices and short selling is much less clear.

Figure 2 shows that there appears to be much less of a consistent relationship between short selling activity and the Yale Confidence Indices, particularly during the latter part of the sample period which covers the recent financial crisis.

Figure 2



In sum, based on these graphical illustrations it appears that short sellers are contrarians in that they sell short when investor confidence is high. This confirms a growing body of academic evidence that shows that short selling is high following high returns. There appears to be no evidence of a contemporaneous negative relationship between short selling and investor confidence during the past 18-24 months. In other words, there appears to be no evidence supporting the hypothesis that high levels of short selling activity contributed to low levels of investor confidence during the recent financial crisis.

This evidence is admittedly tentative. Therefore, I would encourage the Commission to investigate these datasets more carefully to generate a more comprehensive answer to the question raised by the Commissioners about the relationship between short selling and investor confidence.

Sincerely,

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