

O E A M E M O R A N D U M

TO: File

FROM: Office of Economic Analysis

DATE: June 9, 2008

SUBJECT: Impact of Recent SHO Amendment on Fails to Deliver

This memorandum examines fails to deliver before and after the elimination of the grandfather exception in Rule 203 of Regulation SHO. The SEC recently adopted an amendment to Rule 203 that eliminates the grandfather provision from Regulation SHO and amends Rule 203 to now require all fails to deliver to be closed out within either 13 consecutive settlement days or, in the case of a previously-grandfathered fail to deliver position in a security that is a threshold security on the effective date of the amendment, 35 consecutive settlement days from the effective date of the amendment.¹ The effective date of these changes is October 15, 2007.

In summary, the results indicate that fails to deliver in non-optionable securities declined significantly after the elimination of the grandfather exception while fails to deliver in optionable securities increased significantly. Thus, the net impact of the amendment across all threshold securities was mixed. One explanation of these results is that the investors who previously failed to deliver in the equity market have now moved to the options market to establish a synthetic position. Since the option market makers still enjoy an exception to the close-out rule and tend to hedge their positions in the equity markets, the fails may now be coming from the option market makers instead of the equity investors themselves. Changes in fails to deliver may also be influenced by factors other than Regulation SHO such as changes in market conditions, changes in overall trading volume, and changes in the mix of securities being traded. For example, the mix of securities with fails to deliver tilted toward higher priced stocks after the amendment which caused the dollar value of fails to increase.²

The data, as reported by NSCC, covers all stocks with aggregate fails to deliver of 10,000 shares or more. Since some previously-grandfathered fails will have a grace period of up to 35 days, the full effect of the close-out requirements may not show up in the NSCC settlement data until December 10, 2007 (38 settlement days after the effective date). We began receiving closing price in our NSCC data feed on April 9, 2007 so we use that date as the starting point for our sample. The period from April 9, 2007 to October 14, 2007

¹ The close-out process must be initiated no later than the beginning of trading on the trading day following the 13th consecutive settlement day with a net short settlement obligation. In other words, a close-out that is initiated on day 14 will impact fails on day 17.

² For example, 37.2% of threshold stocks had prices below \$5 during the pre-amendment period compared to 33.7% during the post-amendment period.

(131 days) is defined as the pre-amendment period. The period from December 10, 2007 to March 31, 2008 (76 days) is defined as the post-amendment period. Since the maximum close-out cycle is 17 settlement days, the post-amendment period includes about 4 1/2 close-out cycles. Given that the maximum close-out cycle is 17 settlement days, we examine if there has been a change in fails that are aged more than 17 days as well as other aggregate measures of fails to deliver.

Threshold List Securities with Listed Options:

Table 1 shows the summary measures for threshold list securities with listed options. Overall, the Rule amendments did not lead to any reduction in fails to deliver for securities with listed options. Instead, the evidence supports a significant increase in fails to deliver in these securities. 11 out of 12 measures show increases after the amendment. We note that the close-out exception for option market makers still exists so this may be one explanation for lack of evidence supporting a decline in fails to deliver. Since the option market making exception may be obscuring the potential impact of the amendment, we investigate securities without listed options in next section.

Statistically significant changes are:

- The average daily number of optionable threshold list securities increased by 25.0%.
- The average daily fails to deliver shares in optionable threshold securities increased by 22.0%.
- The average daily dollar value of fails to deliver in optionable threshold securities increased by 17.7%.
- The average daily new fails to deliver shares in optionable threshold securities increased by 29.7%.³
- The average daily dollar value of new fails to deliver in optionable threshold securities increased by 1.1%.
- The average daily number of fails to deliver positions in optionable threshold securities increased by 46.3%.
- The average daily number of new fails to deliver positions in optionable threshold securities increased by 45.3%.
- For fails aged more than 17 days in threshold securities, the average daily fails to deliver shares increased by 16.3%.⁴
- For fails aged more than 17 days in optionable threshold securities, the average daily dollar value of fails to deliver increased by 73.4%.
- For fails aged more than 17 days in optionable threshold securities, the average daily number of fails to deliver positions increased by 30.7%.

³ New fails are defined as a positive change in the fails per security-clearing firm from the previous day. A position is assumed to zero if it did not exist the previous day.

⁴ The fact that persistent fails in threshold securities do not go to zero does not necessarily indicate any rule violations. We note that the existence of the close-out exception for option market makers could lead to persistent fails. In addition, a clearing firm could have a fail position aged longer than 17 days in a threshold security but have enough close-outs within that time frame to comply with the Regulation SHO close-out requirement.

- The average daily number of optionable threshold list securities with fails aged more than 17 days increased by 40.9%.

Threshold List Securities without Listed Options:

Table 2 shows the summary measures for threshold list securities without listed options. Overall, the evidence is mixed but provides some evidence that supports the hypothesis that the Rule amendment led to a reduction in persistent fails to deliver for threshold list securities without listed options. 3 out of 4 measures of persistent fails show significant declines after the amendments.

Statistically significant changes are:

- The average daily number of non-optionable threshold list securities decreased by 3.5%.
- The average daily dollar value of fails to deliver in non-optionable threshold securities increased by 18.5%.
- The average daily dollar value of new fails to deliver in non-optionable threshold securities increased by 66.2%.
- The average daily number of new fails to deliver positions in non-optionable threshold securities increased by 7.4%.
- For fails aged more than 17 days in non-optionable threshold securities, the average daily dollar value of fails to deliver decreased by 34.5%.
- For fails aged more than 17 days in non-optionable threshold securities, the average daily number of fails to deliver positions decreased by 38.8%.
- The average daily number of non-optionable threshold list securities with fails aged more than 17 days decreased by 32.6%.

Table 1
Summary Statistics on Fails to Deliver
Threshold List Securities with Listed Options
Pre- and Post-Rule Amendment⁵

Measure	Pre	Post	Change	Percent Change
Number of Days	131	76		
Average Daily Dollar Value of Aggregate Fails (\$millions)	2,853	3,360	+506	+17.7%
Average Daily Aggregate Fails (millions)	109	133	+24	+22.0%
Average Daily Number of Securities	152	190	+38	+25.0%
Average Daily Number of Fail Positions	993	1,452	+460	+46.3%
New Fails:				
Average Daily Dollar Value of New Fails (\$millions)	853	862	+9	+1.1%
Average Daily New Fail Shares (millions)	22	28	+6	+29.7%
Average Daily New Fail Positions	571	830	+259	+45.3%
Average Daily Traded Dollar Volume (\$millions) ⁶	149,508	161,121	+11,613	+7.8%
New Fails as a % of Traded Dollar Volume	0.57%	0.54%	-0.03%	-6.2%
Fails Aged more than 17 Days:				
- Average Daily Dollar Value of Aggregate Fails (\$millions)	671	1,164	+493	+73.4%
- Average Daily Aggregate Fails (millions)	44	51	+7	+16.3%
- Average Daily Number of Securities	63	89	+26	+40.9%
- Average Daily Number of Fail Positions	121	158	+37	+30.7%

Bolded changes are significant at the 5% level using the Wilcoxon-Mann-Whitney test (nonparametric).

Sources: NSCC, NYSE, Nasdaq, OTCBB, and Amex web sites.

⁵ Includes securities with aggregate daily fails to deliver of 10,000 shares or more.

⁶ The average daily dollar volume is composed of NYSE Group volume in NYSE-listed securities, consolidated volume in Nasdaq-listed securities, OTCBB, and Amex volume in Amex-listed securities.

Table 2
Summary Statistics on Fails to Deliver
Threshold List Securities without Listed Options
Pre- and Post-Rule Amendment⁷

Measure	Pre	Post	Change	Percent Change
Number of Days	131	76		
Average Daily Dollar Value of Aggregate Fails (\$millions)	286	338	+53	+18.5%
Average Daily Aggregate Fails (millions)	297	304	+7	+2.5%
Average Daily Number of Securities	170	164	-6	-3.5%
Average Daily Number of Fail Positions	729	714	-15	-2.0%
New Fails:				
Average Daily Dollar Value of New Fails (\$millions)	45	75	+30	+66.2%
Average Daily New Fail Shares (millions)	38	43	+5	+12.0%
Average Daily New Fail Positions	318	342	+23	+7.4%
Average Daily Traded Dollar Volume (\$millions) ⁸	149,508	161,121	+11,613	+7.8%
New Fails as a % of Traded Dollar Volume	0.03%	0.05%	+0.02%	+54.7%
Fails Aged more than 17 Days:				
- Average Daily Dollar Value of Aggregate Fails (\$millions)	64	42	-22	-34.5%
- Average Daily Aggregate Fails (millions)	83	89	+5	+6.2%
- Average Daily Number of Securities	71	48	-23	-32.6%
- Average Daily Number of Fail Positions	104	63	-40	-38.8%

Bolded changes are significant at the 5% level using the Wilcoxon-Mann-Whitney test (nonparametric).

Sources: NSCC, NYSE, Nasdaq, OTCBB, and Amex web sites.

⁷ Includes securities with aggregate daily fails to deliver of 10,000 shares or more.

⁸ The average daily dollar volume is composed of NYSE Group volume in NYSE-listed securities, consolidated volume in Nasdaq-listed securities, OTCBB, and Amex volume in Amex-listed securities.