

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

TO: File

FROM: Office of Economic Analysis

DATE: April 16, 2009

SUBJECT: Impact of Recent SHO Rule Changes on Fails to Deliver

This memorandum examines fails to deliver before and after the elimination of the options market maker (OMM) exception in Rule 203 of Regulation SHO and the implementation of interim final temporary Rule 204T (T+3 Close-out Rule). This memo includes three additional months of data and updates results from earlier memos dated March 20, 2009 and November 26, 2008. The findings here are consistent with those in the earlier memos. In general, the current memo shows much larger declines in fails measures than the earlier memos.

Due to the contemporaneous implementation of these two rules, they are analyzed together.¹ Since the rule changes significantly shortened the window to close-out most fail to deliver positions and expanded the close-out provisions to all equity securities, we would expect to see a decline in average daily fails due to compliance with the new rules, all else equal. However, it is also possible that certain behavioral changes or other factors could mitigate or exacerbate any effect. For example, faster “cycling” of fails (more rapid fail-closeout-fail-closeout) could lead to full compliance with the new rules but no change in average daily fails.

In summary, the results indicate that fails to deliver decreased significantly after the elimination of the OMM exception and the implementation of the T+3 Close-out Rule. Fails declined by 56.6% across all securities and 73.5% for threshold stocks. In addition, there is some evidence that optionable stocks experienced larger declines than non-optionable stocks. There has been a large downward trend in fails since July 2008.

Background

The Commission approved a final rule to eliminate the options market maker exception from the close-out requirement of Rule 203(b)(3) in Regulation SHO. This rule change became effective at 12:01 a.m. ET on Thursday, Sept. 18, 2008. As a result, any new fails by options market makers after the effective date are subject to the same close-out requirements as other market participants under Rule 204T. The rule change also

¹ We also note that Emergency Order (Release No. 34-58592) temporarily prohibited any person from effecting a short sale in the publicly traded securities of certain financial firms during the period from September 19 to October 8, 2008.

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provides for a 35-settlement day phase-in period to close-out previously established fail to deliver positions by option market makers. In other words, since the effective date of the SEC Emergency Order (Release No. 34-58572) was September 18, 2008, the phase-in period ended prior to the start of trading on November 7, 2008. Any change in a fail position that is closed-out via a standard settlement trade on November 7, 2008 appeared November 13, 2008.

The Commission also adopted, on an interim final basis, a new rule requiring that short sellers and their broker-dealers deliver securities by the close of business on the settlement date (three days after the sale transaction date, or T+3) and imposing penalties for failure to do so. Rule 204T establishes that fail to deliver positions related to short sales must be closed out prior to the beginning of normal trading hours on the next settlement day following the settlement date of the newly-created fail (usually T+4). Fail to deliver positions related to bona fide market making or long sales have an additional two settlement days to close-out fail to deliver positions (usually T+6). Fail to deliver positions related to sales pursuant to Rule 144 have 36 settlement days to close out (usually T+39). One major distinction between Rule 204T and Rule 203 is that Rule 204T covers all equity securities whereas Rule 203 covers only threshold list securities. Since the close-out provisions of Rule 204T differ depending on the type of trade that led to the fail and the date the fail, Appendix A provides a summary table that lists important introduction dates for each category.

Since some previously-established fails in threshold list securities may have had up to 14 days to close-out, a large part of the effect of the new close-out requirements may not show up in the NSCC settlement data until October 10, 2008 (17 settlement days after the day prior to the effective date). Also, since some previously-established OMM fails have up to 36 days to close-out, the full effect of the new close-out requirements in optionable securities may not show up in the NSCC settlement data until November 13, 2008 (39 settlement days after the effective date). Also, pre-existing fails in non-threshold stocks are not required to be closed-out within any time period unless the security enters the threshold list. Since we do not want our analysis confounded by the grandfather exception elimination, we use the period from January 1, 2008 to September 22, 2008 (183 days) as the pre-Rule period.² The period from September 23, 2008 to March 31, 2009 (129 days) is defined as the post-Rule period.

² We note that the pre-period includes the period of the July Emergency Order that temporarily required pre-borrowing for the securities of publicly traded securities of 19 substantial financial firms prior to short sales (Release No. 34-58166). The July Emergency Order led to a significant reduction in fails in these securities. The length of the pre-period window and the small number of securities affected by the July Emergency Order largely mitigate any confounding influence from this inclusion. Further, any bias would be in the direction of finding a smaller impact from the September 2008 rule changes.

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All Securities (Table 1):

Table 1 shows the average daily fail to deliver measures pre- and post-Rule 204T and OMM exception elimination for all securities. The evidence shows significant declines in all fails to deliver measures. For example:

- The average daily fails to deliver shares decreased by 56.6%.
- The average daily dollar value of fails to deliver decreased by 74.8%.
- The average daily number of fails to deliver positions decreased by 58.5%.

Threshold List Securities (Table 2):

Table 2 shows the summary fail to deliver measures for threshold list securities. The evidence shows significant declines in all fails to deliver measures. For example:

- The average daily number of threshold list securities decreased by 77.5%.
- The average daily fails to deliver shares in threshold securities decreased by 73.5%.
- The average daily dollar value of fails to deliver in threshold securities decreased by 89.0%.
- The average daily number of fails to deliver positions in threshold securities decreased by 86.3%.

Threshold List Securities with Listed Options (Table 3):

Table 3 shows the summary fail to deliver measures for threshold list securities with listed options. The evidence shows significant declines in all fails to deliver measures. For example:

- The average daily number of optionable threshold list securities decreased by 82.1%.
- The average daily fails to deliver shares in optionable threshold securities decreased by 86.9%.
- The average daily dollar value of fails to deliver in optionable threshold securities decreased by 89.8%.
- The average daily number of fails to deliver positions in optionable threshold securities decreased by 88.2%.

Threshold List Securities without Listed Options (Table 4):

Table 4 shows the summary fail to deliver measures for threshold list securities without listed options. The evidence shows significant declines in all fails to deliver measures. For example:

- The average daily number of non-optionable threshold list securities decreased by 73.4%.
- The average daily fails to deliver shares in non-optionable threshold securities decreased by 67.4%.
- The average daily dollar value of fails to deliver in non-optionable threshold securities decreased by 82.4%.

- The average daily number of fails to deliver positions in non-optionable threshold securities decreased by 82.9%.

Any difference in the change in fails between stocks with listed options (Table 3) and threshold stock without listed options (Table 4) may indicate the impact of the elimination of the option market making exception. The comparison indicates that stocks with listed options saw larger percentage decreases than stocks without options. Depending on the measure, the declines are 5.3% to 25.7% larger for stocks with listed options.

Daily Fails to Deliver in All Securities (Figure 1):

Figure 1 shows the daily aggregate fails in all securities from April 1, 2004 to March 31, 2009. There has been a decline of 80.6% from the 2008 high of 2.21 billion shares on July 16, 2008 to 0.43 billion shares on March 31, 2009. It is important to note that we do not attempt to adjust fails to deliver for increases in trading volume over time. Assuming everything else constant, as the magnitude of trading (settlements) increases one would expect that the magnitude of fails to deliver would also increase. From April 1, 2004 to December 31, 2004 (Pre-Rule 203), the average daily fails were 810 million shares. From January 1, 2009 to March 31, 2009, the average daily fails were 363 million shares, a decrease of 55.2%. During the same periods, the average monthly dollar value of trading increased 130.4% from \$2.3 trillion to \$5.3 trillion.³ Therefore, fails have decreased despite greater trading activity.

Average Daily Number of Threshold List Securities (Figure 2):

Figure 2 shows the average daily number of threshold list securities for each month from January 2005 to March 2009. The average in March 2009 was 63.2 securities per day, a decline of 87.4% from its high in July 2008.

Daily Number of Threshold List Securities (Figure 3):

Figure 3 shows the daily number of threshold list securities from January 7, 2005 to March 31, 2009. There has been a decline of 88.3% from the high of 632 on July 14, 2008 to 74 on March 31, 2009.

Daily Fails to Deliver in Threshold List Securities (Figure 4):

Figure 4 shows the daily aggregate fails in threshold list securities from January 7, 2005 to March 31, 2009. There has been a decline of 83.0% from the high of 1.36 billion shares on July 16, 2008 to 0.23 billion shares on March 31, 2009.

³ The numbers are based on an aggregation of monthly Form R31 reports filed by SROs and exchanges.

Daily Fails to Deliver in All Securities (Figure 5):

Figure 5 shows the daily aggregate fails in all securities from June 2, 2008 to March 31, 2009. The chart denotes the settlement period where the temporary emergency order requiring pre-borrowing for short sales was in effect for 19 substantial financial firms. The chart also denotes the settlement period where the temporary emergency order banning short sales in about 800 securities was effective. Lastly, the chart denotes the effective date of Rule 204T.

Daily Number of Threshold List Securities (Figure 6):

Figure 6 shows the daily number of threshold list securities from June 2, 2008 to March 31, 2009.

Daily Fails to Deliver in Threshold List Securities (Figure 7):

Figure 7 shows the daily aggregate fails in threshold list securities from June 2, 2008 to March 31, 2009.

ETPs as a Proportion of All Threshold List Securities (Figure 8):

Figure 8 shows the daily number of threshold list securities and Exchange Traded Products (ETPs) as a proportion of all threshold list securities from January 2, 2008 to March 31, 2009. Post-Rule, ETPs have become a more significant portion of threshold list securities and on some days accounted for more than 50% of all threshold list securities.

Table 1
Summary Statistics on Fails to Deliver
All Securities
Pre- and Post-Rule

Measure	Pre	Post	Change	Percent Change
Number of Days	183	129		
Average Daily Dollar Value of Aggregate Fails (\$millions)	7,775	1,959	-5,815	-74.8%
Average Daily Aggregate Fails (millions)	1,103	478	-624	-56.6%
Average Daily Number of Securities ⁴	10,227	7,097	-3,130	-30.6%
Average Daily Number of Fail Positions ⁵	28,912	12,006	-16,906	-58.5%
New Fails⁶:				
Average Daily Dollar Value of New Fails (\$millions)	2,953	1,149	-1,803	-61.1%
Average Daily New Fail Shares (millions)	286	177	-109	-38.1%
Average Daily New Fail Positions ⁷	13,275	7,117	-6,158	-46.4%

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

Source: NSCC.

⁴ Since the NSCC fails data includes only securities with fails to deliver of 10,000 shares or more prior to September 16, 2008, the pre-period number of securities is grossed-up by a factor of 2.97 to account for the missing data.

⁵ Since the NSCC fails data includes only securities with fails to deliver of 10,000 shares or more prior to September 16, 2008, the pre-period number of positions is grossed-up by a factor of 2.21 to account for the missing data.

⁶ New fails are estimated each day by summing any positive change in the fails to deliver from the previous day for each security-clearing firm combination.

⁷ Since the NSCC fails data includes only securities with fails to deliver of 10,000 shares or more prior to September 16, 2008, the pre-period number of new positions is grossed-up by a factor of 1.76 to account for the missing data.

Table 2
Summary Statistics on Fails to Deliver
Threshold List Securities
Pre- and Post-Rule

Measure	Pre	Post	Change	Percent Change
Number of Days	183	129		
Average Daily Dollar Value of Aggregate Fails (\$millions)	4,124	452	-3,672	-89.0%
Average Daily Aggregate Fails (millions)	497	132	-365	-73.5%
Average Daily Number of Securities	480	108	-372	-77.5%
Average Daily Number of Fail Positions	2,361	324	-2,037	-86.3%
New Fails⁸:				
Average Daily Dollar Value of New Fails (\$millions)	866	127	-739	-85.3%
Average Daily New Fail Shares (millions)	74	25	-48	-65.5%
Average Daily New Fail Positions	1,306	178	-1,129	-86.4%
Fails Aged more than 17 Days:				
- Average Daily Dollar Value of Aggregate Fails (\$millions)	1,844	159	-1,685	-91.4%
- Average Daily Aggregate Fails (millions)	147	24	-123	-83.7%
- Average Daily Number of Securities	201	30	-171	-84.9%
- Average Daily Number of Fail Positions	299	34	-266	-88.8%

Bolded changes are significant at the 5% level using the Wilcoxon-Mann-Whitney test (nonparametric).
Sources: NSCC, NYSE, Nasdaq, OTCBB, and Amex web sites.

⁸ New fails are estimated each day by summing any positive change in the fails to deliver from the previous day for each security-clearing firm combination.

Table 3
Summary Statistics on Fails to Deliver
Threshold List Securities with Listed Options
Pre- and Post-Rule Amendment

Measure	Pre	Post	Change	Percent Change
Number of Days	183	129		
Average Daily Dollar Value of Aggregate Fails (\$millions)	3,697	377	-3,320	-89.8%
Average Daily Aggregate Fails (millions)	154	20	-134	-86.9%
Average Daily Number of Securities	224	40	-184	-82.1%
Average Daily Number of Fail Positions	1,526	181	-1,345	-88.2%
New Fails⁹:				
Average Daily Dollar Value of New Fails (\$millions)	783	106	-677	-86.5%
Average Daily New Fail Shares (millions)	27	5	-22	-82.0%
Average Daily New Fail Positions	894	106	-787	-88.1%
Fails Aged more than 17 Days:				
- Average Daily Dollar Value of Aggregate Fails (\$millions)	1,746	141	-1,605	-91.9%
- Average Daily Aggregate Fails (millions)	77	8	-69	-89.7%
- Average Daily Number of Securities	134	16	-117	-87.9%
- Average Daily Number of Fail Positions	215	18	-197	-91.7%

Bolded changes are significant at the 5% level using the Wilcoxon-Mann-Whitney test (nonparametric).
Sources: NSCC, NYSE, Nasdaq, OTCBB, and Amex web sites.

⁹ New fails are estimated each day by summing any positive change in the fails to deliver from the previous day for each security-clearing firm combination.

Table 4
Summary Statistics on Fails to Deliver
Threshold List Securities without Listed Options
Pre- and Post-Rule Amendment

Measure	Pre	Post	Change	Percent Change
Number of Days	183	129		
Average Daily Dollar Value of Aggregate Fails (\$millions)	427	75	-352	-82.4%
Average Daily Aggregate Fails (millions)	343	112	-231	-67.4%
Average Daily Number of Securities	256	68	-188	-73.4%
Average Daily Number of Fail Positions	834	143	-691	-82.9%
New Fails¹⁰:				
Average Daily Dollar Value of New Fails (\$millions)	83	21	-62	-74.4%
Average Daily New Fail Shares (millions)	47	21	-27	-56.3%
Average Daily New Fail Positions	413	71	-341	-82.7%
Fails Aged more than 17 Days:				
- Average Daily Dollar Value of Aggregate Fails (\$millions)	98	18	-81	-82.1%
- Average Daily Aggregate Fails (millions)	70	16	-54	-77.1%
- Average Daily Number of Securities	68	14	-53	-78.9%
- Average Daily Number of Fail Positions	85	16	-69	-81.5%

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

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

¹⁰ New fails are estimated each day by summing any positive change in the fails to deliver from the previous day for each security-clearing firm combination.

Figure 1

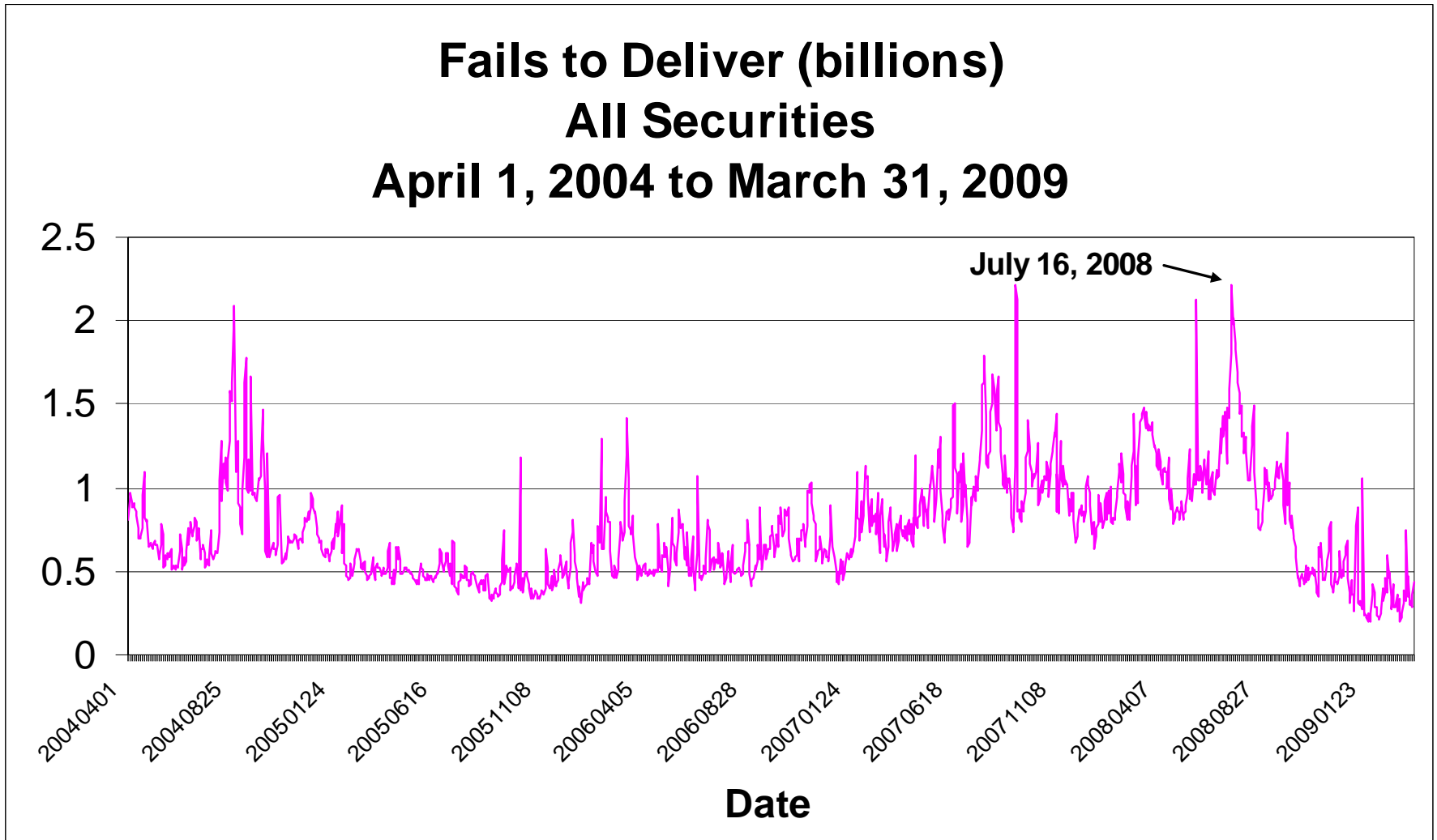


Figure 2

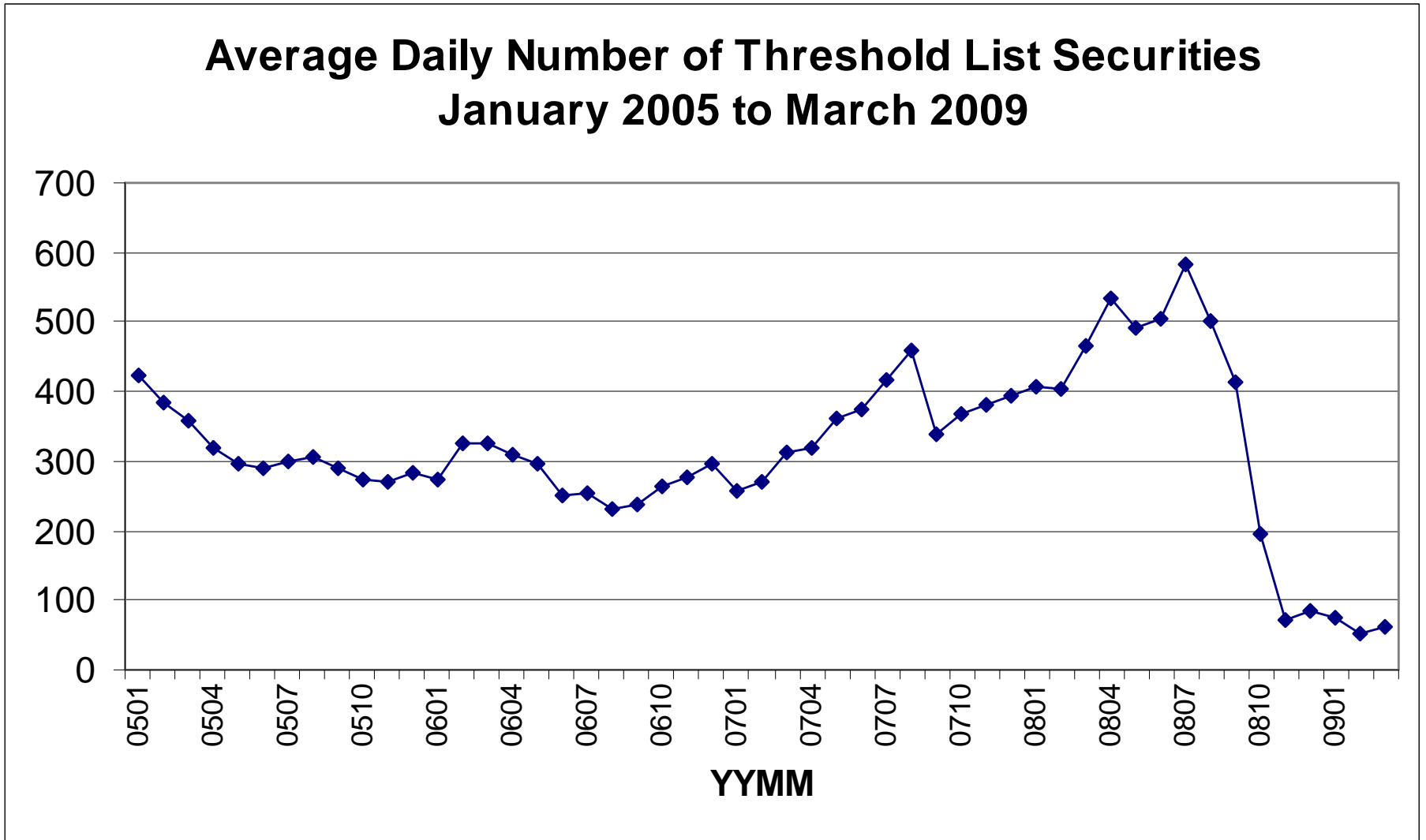


Figure 3

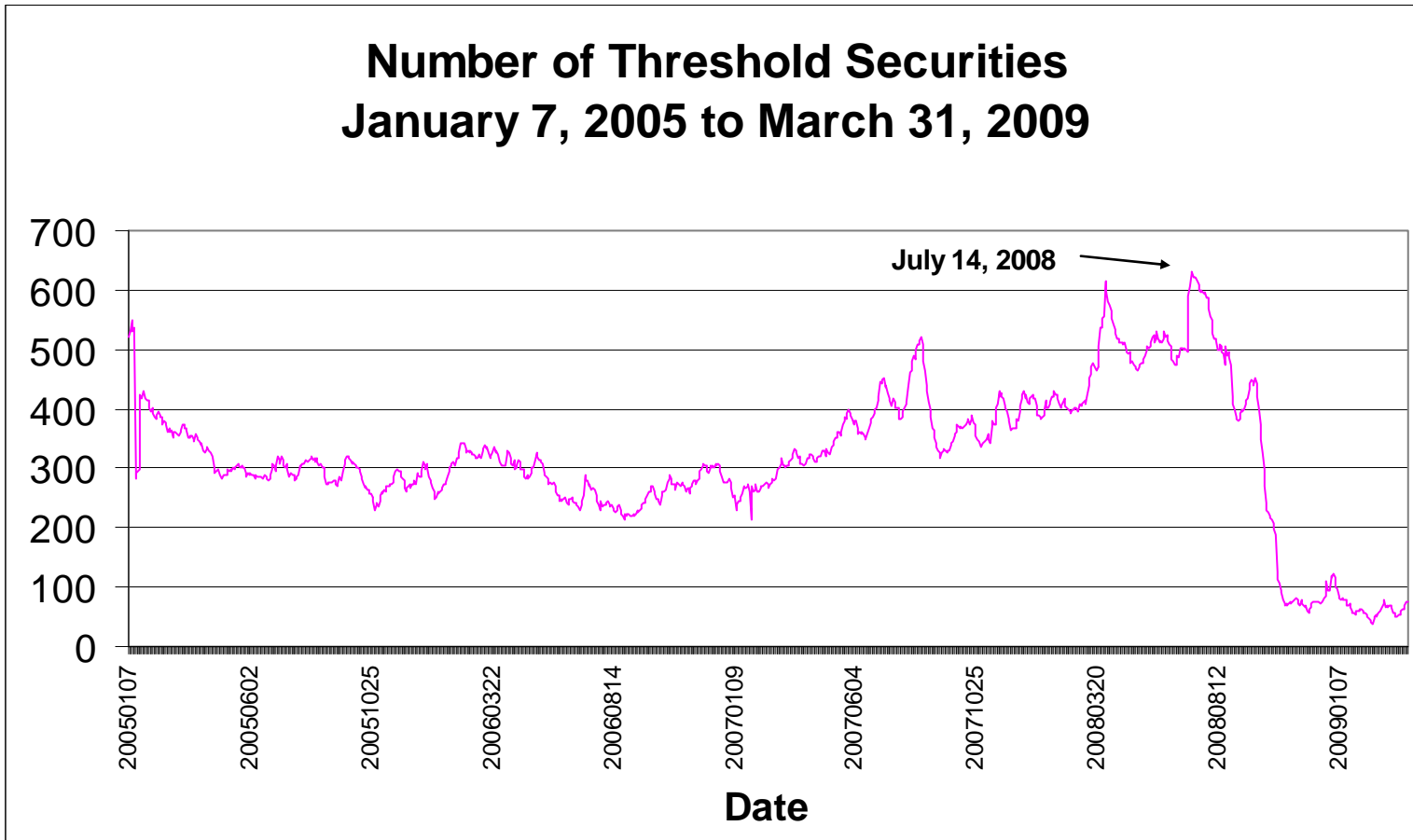


Figure 4

Fails to Deliver (billions) Threshold Securities January 7, 2005 to March 31, 2009

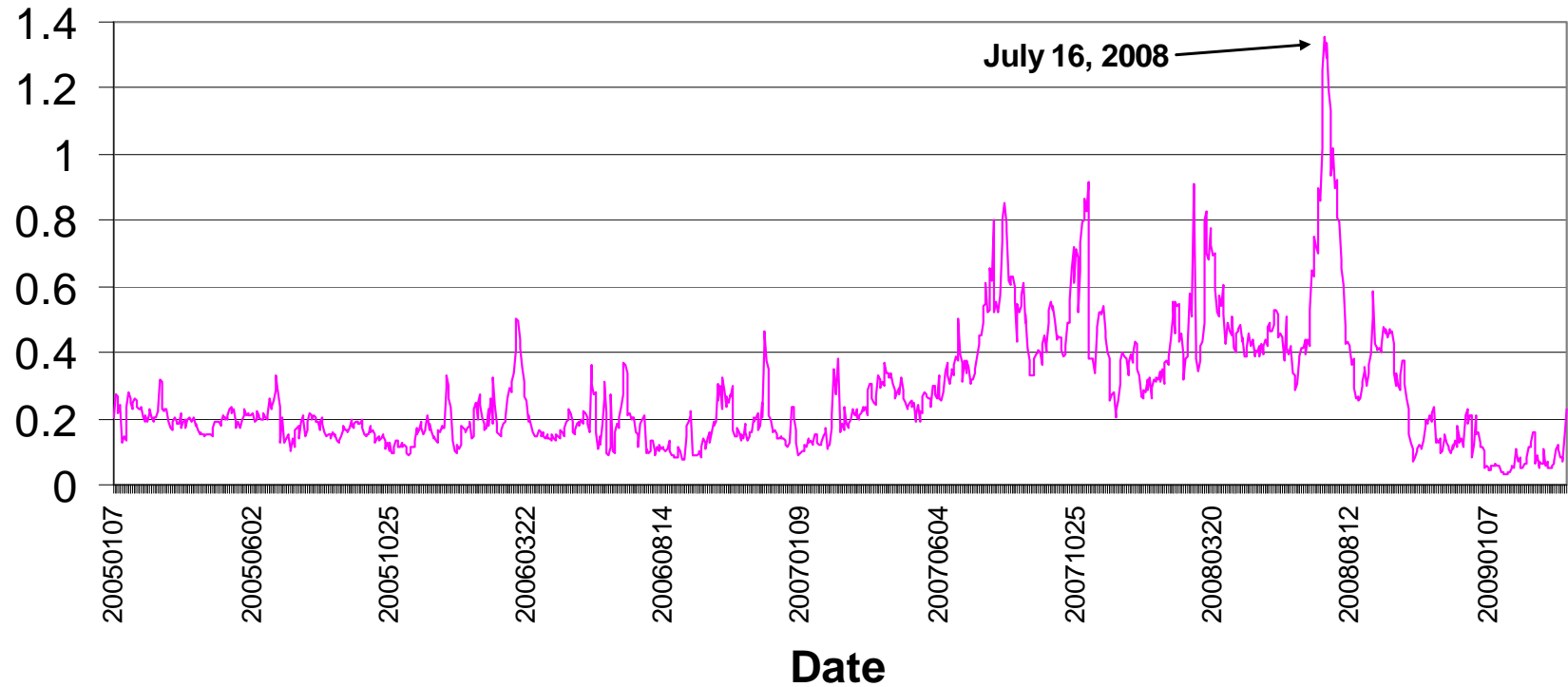


Figure 5

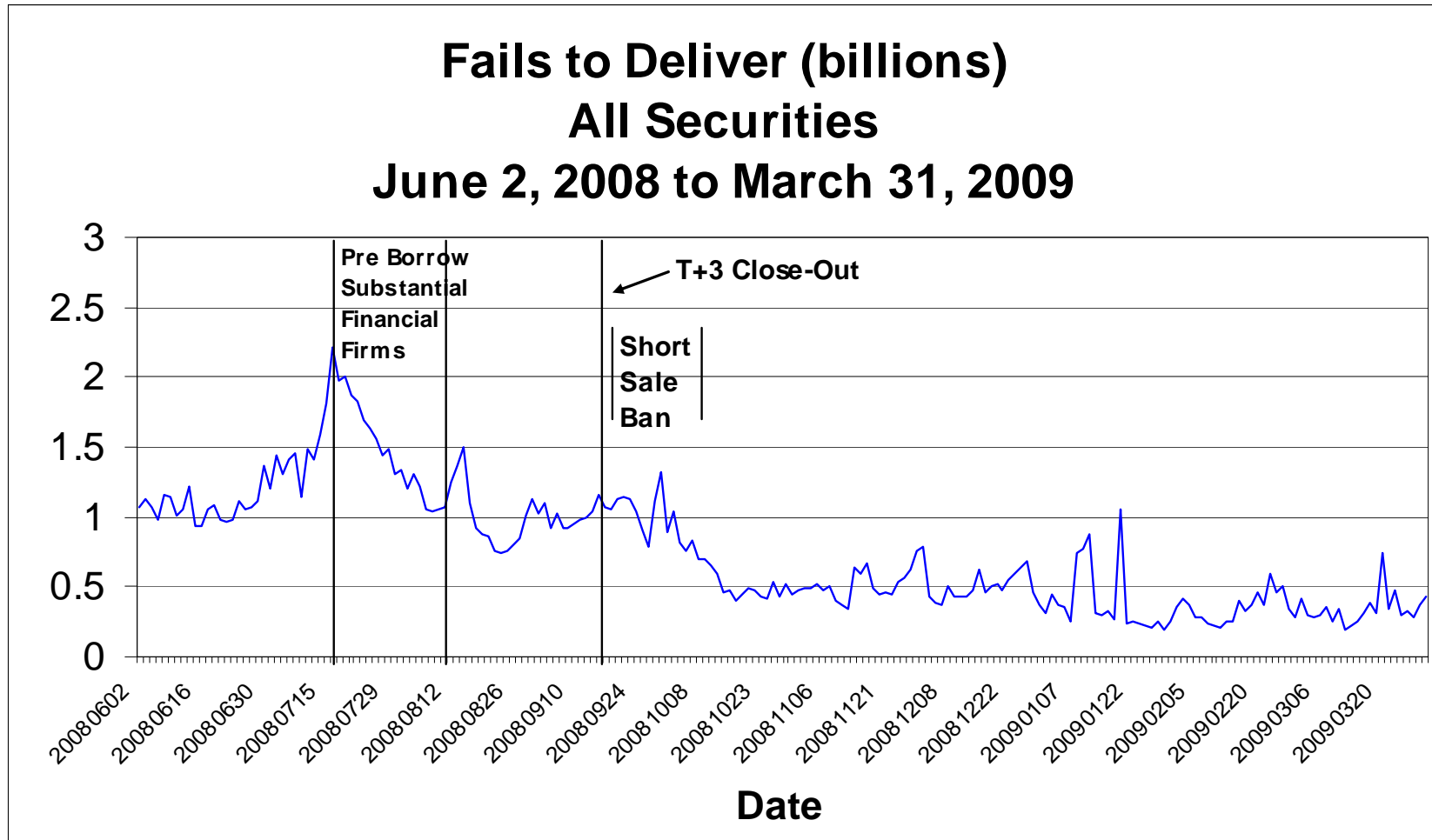


Figure 6

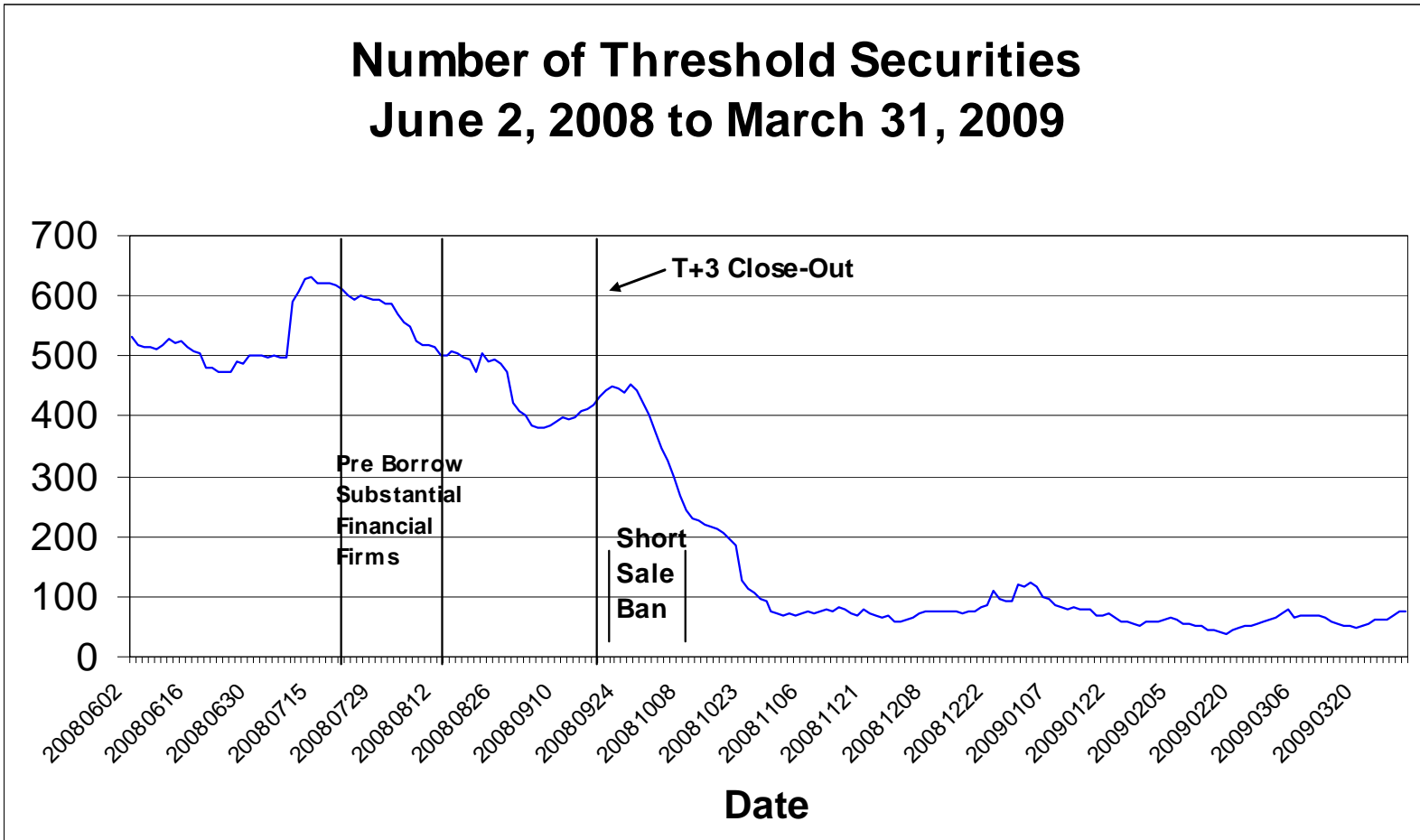


Figure 7

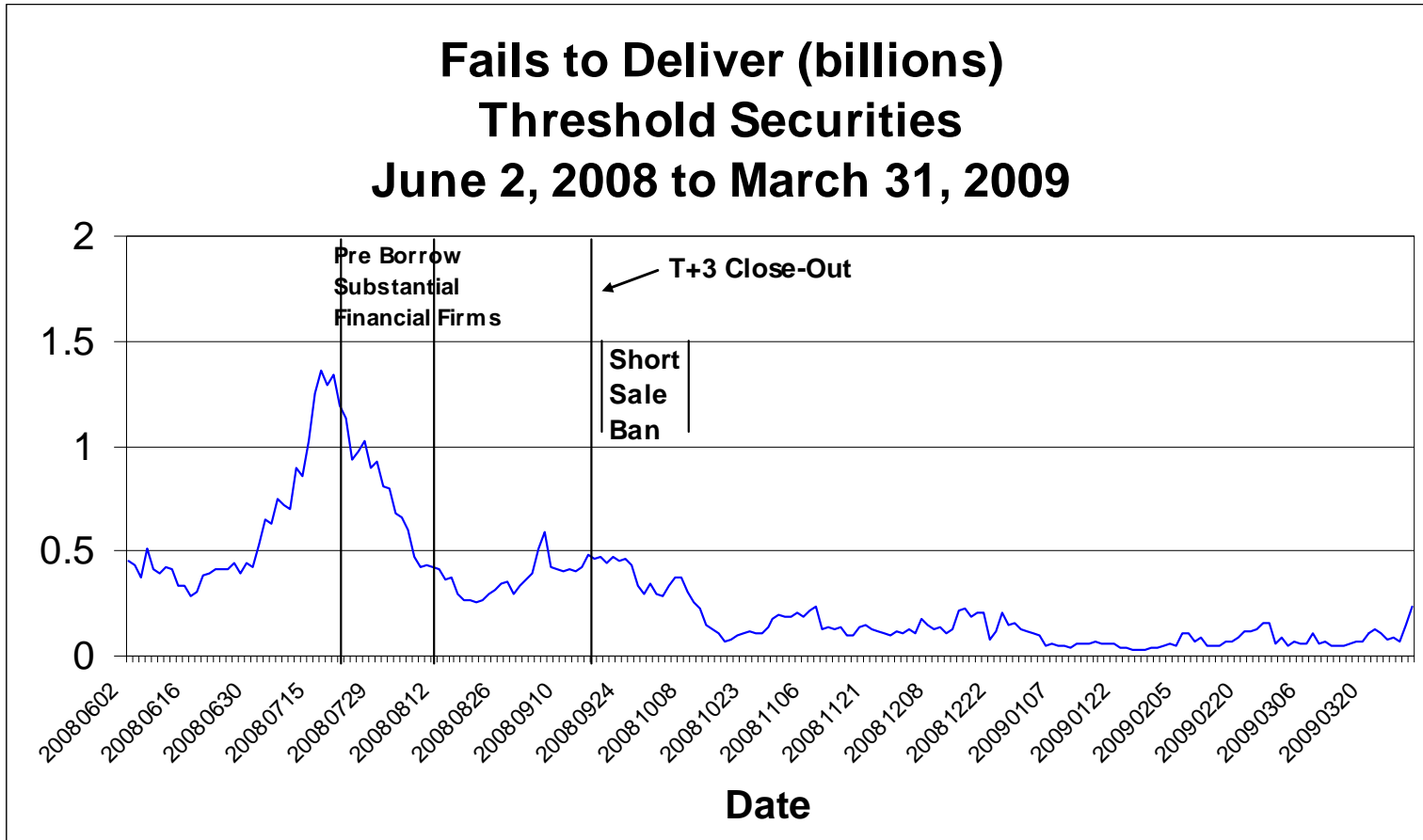
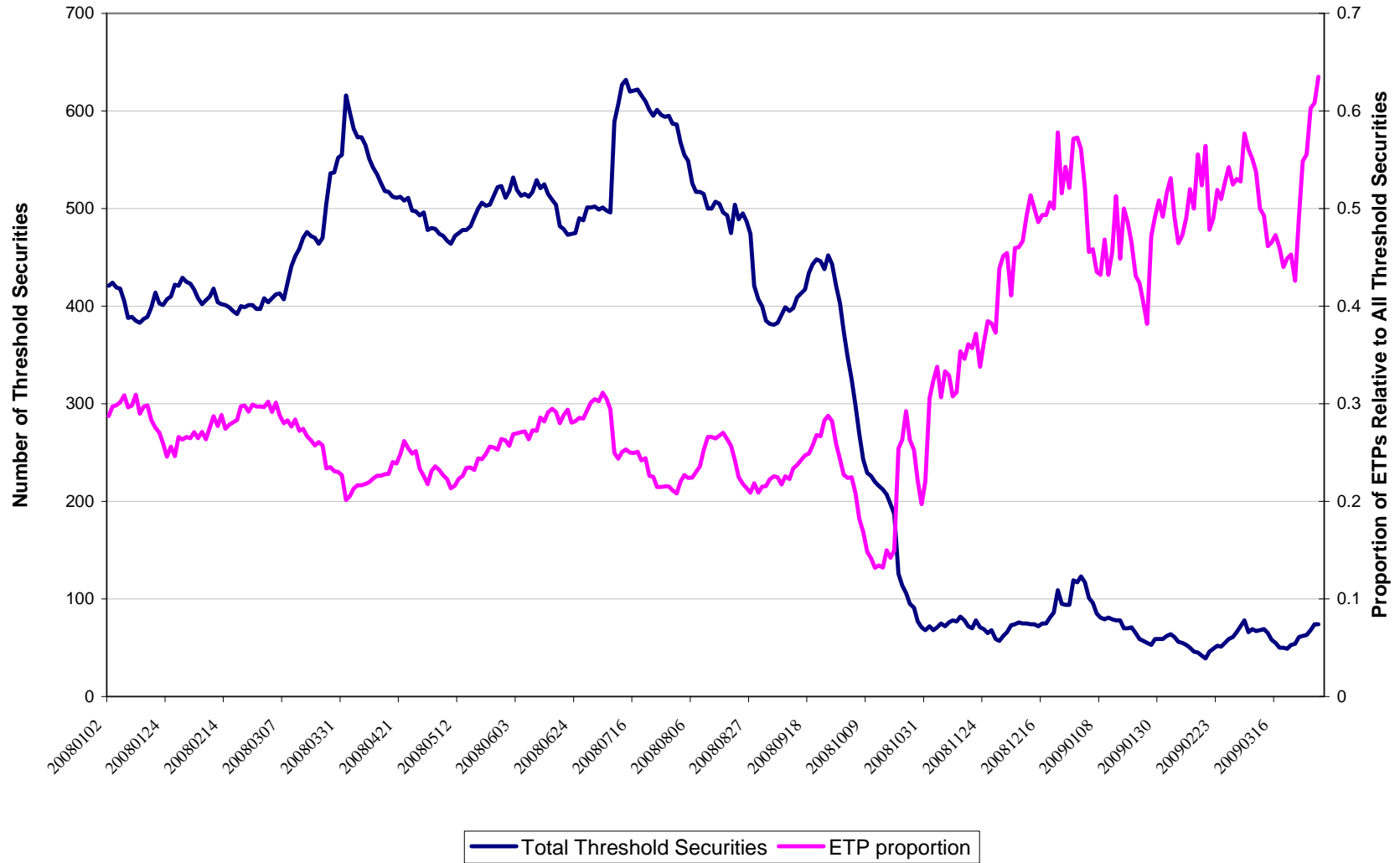


Figure 8

Number of Threshold Securities and ETPs as a Proportion of Threshold Securities by Day



Appendix A
Fail to Deliver Close-out Requirements of Rule 204T
Important Dates to Measure Impact

Fail Category	Settlement Days to Close-out Fail: Threshold Stocks	Settlement Days to Close-out Fail: Other Stocks	Last Trade Date to Close-out	Settlement Date Associated with Last Close-out Date
Pre-existing on September 17, 2008				
Not Option Market Maker	14 (or less)	None	October 7, 2008	October 10, 2008
Option Market Maker (OMM)	36	None	November 7, 2008	November 13, 2008
New fails on September 18, 2008				
OMM, MM, and long sales	3	3	September 23, 2008	September 26, 2008
Short sales (generally non-MM)	1	1	September 18, 2008	September 23, 2008
Rule 144 sales*	36	36	November 10, 2008	November 14, 2008

Note that the close-out aging begins on September 17, 2008 for pre-existing fails whereas it begins on September 18, 2008 for new fails.

* The longer time window did not initially apply to certain ESOP sales and certain sales associated with shelf offerings. However, the longer time window is applicable for these sales effective October 17, 2008.