

Hiding the Ball – Obscuring the Magnitude of Settlement Failures

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Executive Summary

There are two financial market practices that diminish the apparent volume and value of settlement failures. The first mechanism for diminishing the appearance of settlement failures is to “resubmit” the trades for a new settlement date. Consistent with the ordinary meaning of the term, trades can be resubmitted for settlement whenever there is a failure to receive or deliver the shares that were traded. By sending a failed trade back to settlement, market participants can be given additional time *without penalty* to effectively settle trades. When trades are resubmitted to net settlement at the Depository Trust and Clearing Corporation (DTCC), their records reflect that the failed obligation is no longer outstanding.

The second mechanism is called “mark-to-market,” a common accounting practice where the value of securities is carried at current market value, rather than at the original purchase price.¹ In the case of DTCC, marking the value of settlement failures to the current market price can reduce the apparent value of settlement failures. It also provides the means for unscrupulous dealers to get back any cash they were required to pay when they failed to deliver shares at prior days’ settlement. We explain in detail in this report how these mechanisms work to obscure the magnitude of settlement failures.

About the Author

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Introduction and Background

A significant value of settlement failures are currently being reported in US capital markets. A basic settlement failure occurs when the selling party fails to deliver shares to the buyer on trade settlement day, usually 3 days after a trade is executed. Institutional investors may have some protection from settlement failures, since the money they pay

¹ In their Rules and Procedures, DTCC may also refer to this mechanism as “mark-to-the-market” or “re-pricing.” Since mark to market is the more common term, we use it here throughout.

for shares they bought will earn interest until delivery is final.² Unfortunately, individual investors are not getting delivery/ownership of shares after making payment and they are not getting the interest earned on their money while they await delivery of the shares. Tragically, in many cases they are not even made aware that the trade failed to settle.³ Regardless of what some believe to be an underlying trading strategy that justifies failing to deliver securities once they are sold⁴, investors are damaged when the central counter party fails in this manner to provide secure, guaranteed, final settlement for trades. In the U.S., the central counter party for virtually all stock market trades is the Depository Trust and Clearing Corporation (DTCC).

Settlement failures can result from naked short selling. Furthermore, as we've stated before, a settlement failure can result even when short selling is accompanied by stock borrowing.⁵ Trades settled with borrowed shares leave open a failure to deliver at settlement even though the failure to receive has been closed. The distinction between failure to deliver and failure to receive is probably made clearest in the Annual Financial Statements of one of DTCC's subsidiaries, the National Securities Clearing Corporation (NSCC):

“...the failure of participants to deliver securities to NSCC on settlement date, and the corresponding failure of NSCC to redeliver the securities, results in open positions. ... When a participant does not deliver securities due to NSCC on the settlement date NSCC ... utilizes the Stock Borrow Program (SBP) to complete its delivery obligations to the extent that participants have made available for loan to the system shares of that issue. NSCC's borrowing from the SBP does not relieve a participant's obligation to deliver the securities to NSCC.”⁶

In other words, an open position *due to NSCC* results from a *failure to deliver* on the part of a Participant⁷; an open position *due by NSCC* results in a *failure to receive* on the part of a Participant. Failures to receive can be covered by stock borrowing, but that leaves

² On this, review comments by Arne Alsin at the October 19, 2006 panel discussion held in Los Angeles. Audio available online at <http://www.stpadvisors.com/Audio/STP2006Oct.php>

³ The Uniform Commercial Code permits a broker to credit the investors account with an “entitlement” so that it appears to the investor that the shares are in their account even though settlement has been delayed. For a comprehensive review of the process whereby a security entitlement arises when a financial asset is credited to a securities account maintained with a financial intermediary, see Charles W. Mooney, Jr. et al., *An Introduction to the Revised U.C.C. Article 8 and Review of Other Recent Developments with Investment Securities*, 49 *Business Lawyer* 1891 (1994).

⁴ For a description of settlement failures as a trading strategy, see Boni, Leslie (2004). *Strategic Delivery Failures in U.S. Equity Markets*, mimeo dated November 13, 2004, available from Securities and Exchange Commission, Washington, DC.

⁵ See Susanne Trimboth, Keynote Address, *Why Investors and Issuers Hate Short Sellers and Stock Lending*, 2006 Securities Lending Conference on the Changing Business of Securities Lending, New York, NY, September 18, 2006. Transcript available online at http://www.stpadvisors.com/Transcript_Trimboth_9_18_2006.pdf

⁶ This particular quote is from Note 9 Commitments and Contingent Liabilities to the 2006 Annual Financial Statements of NSCC. However, the general wording is common to all of the financial statements reviewed since 1999.

⁷ In this report, we capitalize Participant to denote a member of DTCC in contrast to any capital market participant. Direct quotes from DTCC will always use participant to mean a member, without capitalization.

open the failure to deliver with the receiver being changed from the original buyer to the lender at DTCC.⁸

DTCC has used the complexity of this idea to cloud attempts to explain this problem to lay persons and ordinary investors not familiar with “back office” operations of trade clearing and settlement. Compare the wording in the financial statements Note on Commitments and Contingent Liabilities (above) to the language used by DTCC’s General Counsel Larry Thompson when he refers to “...about \$1.1 billion of the ‘fails to receive,’ or about 20% of the total fail obligation” and “...fails to deliver and receive amount to about \$6 billion daily...”⁹ In fact the terms “fail to receive,” “fails to receive,” “failure to receive” and “failures to receive” do not appear anywhere in the final rulemaking publication for the SEC’s Regulation SHO, which was intended to alleviate the problem.¹⁰ The use of multiple terms (open position, fails to receive, fails to deliver, total fail obligation, etc.) to describe one problem has the effect of obscuring the underlying cause: the failure on the part of DTCC to provide secure, guaranteed, final settlement for trades.

In this report, we attempt to cut through the terminology in order to explain how the actual magnitude of the problem is being obscured.

Resubmitting Settlement Failures

In our research paper “Settlement Failures in Bond Markets”,¹¹ we warned of a rule-change filed by DTCC which would provide a way to resubmit bond settlement failures. Effective September 22, 2006, DTCC established a process to automatically resubmit settlement failures for all Government Securities Division (GSD) members. At that time, DTCC’s records “reflected that the failed obligations versus the GSD were no longer outstanding.”¹² This is the essence of problem: settlement failures are reflected as zero when they are resubmitted to settlement.¹³

This service for government bonds parallels the process already in place on the equity side where all settlement failures are resubmitted (and marked-to-market) daily. The most recently available financial statements reported \$273 billion due to and due from DTCC’s

⁸ The original buyer takes general ownership of the borrowed shares. That is, the buyer of borrowed shares receives dividends and casts votes in matters of corporate governance; they can re-register the shares, sell the shares and even re-lend the shares the same as any other registered shareholder. For more on this point, see Thomas Montrone, *The Saga Continues: Short Selling and Over-Voting*, The Corporate Governance Advisor, Vol. 14(6), p. 13-15, November/December 2006.

⁹ Naked Short Selling and the Stock Borrow Program, @dtcc interview with Larry Thompson, March 24, 2005. Available at <http://www.dtcc.com/Publications/dtcc/index.htm>

¹⁰ The word “receive” appears 36 times, primarily in the context of where the SEC has “received” comments. See Securities and Exchange Commission Release No. 34-50103; File No. S7-23-03. Federal Register, Vol. 69, No. 151, Friday, August 6, 2004, Rules and Regulations, pp. 48008-48031.

¹¹ Trimboth, Susanne (2007). *Settlement Failures in Bond Markets*, Working Paper STP2007-01, STP Advisory Services, LLC, Santa Monica, CA. Available online at http://www.stpadvisors.com/working_papers/STP2007_1_Fails_in_Bond_Market.pdf

¹² DTCC’s 2006 Development Agenda Third Quarter Update, Issued October 20, 2006, page 14.

¹³ The terminology used by DTCC may vary depending on the security type, the circumstances of the original failure, etc. For simplicity, we use “resubmit” to include re-net and re-cycle.

fixed income settlement subsidiary as of the end of December 2006 (i.e., fails to deliver and fails to receive). The figure for December 2005 was substantially higher at \$381 billion. This is the only settlement failure figure reported by DTCC that declined in 2006.¹⁴ Resubmits don't eliminate settlement failures, only delivery of the securities can resolve a failure to deliver. Resubmits restart the clock, obscuring the age of fails and making it more difficult to calculate the real value of the money taken from investors when paid-for shares were not delivered.

It is extremely difficult to trace these settlement failure events to specific stock market trades because of the process known as netting. In their annual reports, NSCC generally reports the total value of trades processed¹⁵ and the fact that "Netting eliminated the need to settle \$XX trillion in trading activity." Generally speaking, NSCC is able to eliminate about 98% of the value of processed trades.¹⁶ That is, after netting credits against debits for each Participant in each security, only 2% of the value remains to be exchanged at settlement.

Netting hides a failure to deliver

<i>Here's what happens if the investor's broker settles each trade directly</i>	
Investor buys	Broker receives from selling broker
100	0
200	200
500	500
-800	+700
After settlement: This broker is short 100 shares for its investors*	
<i>Now look at what happens at the end of the day after NSCC net settlement:</i>	
Seller's DTCC Account	9,000
Seller's Settlement Balance	-800
Seller delivers to NSCC	+700
Balance after settlement	8,900
There is no failure to deliver at NSCC that day because there were other shares in the seller's DTCC account to cover their bill. However, the sum of the investor accounts at the brokerage office will still be greater than the sum of the shares in the DTCC account.	

*Technically, the investor's account does not register the short because they receive entitlements for the shares. See footnote 3 above. Here we are counting only real shares.

¹⁴ See Note 10 to 2006 NSCC Annual Financial Statements.

¹⁵ NSCC uses the term "transactions" instead of "trades" to denote that settlement activity includes cash dividend payments, stock deliver orders, etc. We use the more common term "trade" here for clarity and because that is the present topic of discussion.

¹⁶ In 2005, another DTCC subsidiary, the Fixed Income Clearing Corporation, processed \$678 trillion in transactions and made settlement for \$206 trillion, a 70% reduction in obligations due to netting. This is substantially less than the reduction due to netting that NSCC achieves.

For settlement in this simplified example, some other shares from the “fungible mass” held at DTCC were used for delivery. The Participant did not have to actually purchase and receive additional shares on behalf of the retail investor.¹⁷

RECAPS: a clarification

Recently there was some confusion about DTCC’s mandatory service for failed ex-clearing trades¹⁸, known as the Reconfirmation and Pricing Service (RECAPS). Some people read the information made available in the online release of the RECAPS user guide to mean that the price recalculation was being done to bring the current value of the settlement failure in line with the price originally paid by the retail investor.¹⁹ In fact, the opposite is true: RECAPS eliminates the original value of the trade and replaces it with the current market value, which may be higher or lower than the amount originally paid by an investor. In essence, RECAPS requires Participants to change the settlement date for failed trades to 1 day in the future (from at least 5 days in the past).²⁰ RECAPS is a mandated service²¹ for all NSCC members that “reconfirms and re-prices members’ fails ... that represent positions that are currently failing *outside* of NSCC’s Continuous Net Settlement (“CNS”) system.” It reduces “non-CNS member fails” by rolling them into CNS where they are resubmitted “on a perpetual basis.”²²

Although DTCC touts this as a way to “eliminate” fails, it actually only eliminates the reporting of the fail. It does not eliminate the original fail, which can only be accomplished when the selling broker-dealer delivers shares. DTCC’s program to resubmit settlement failures re-starts the countdown to settlement so that the Participant has another day to deliver the shares before the settlement failure is (once again) officially counted. The danger is that this mechanism makes it appear as if the original failure was “settled,” thereby obscuring attempts to measure actual settlement performance. This point is made clear on slide 2 of the user guide where NSCC lists the benefits of using RECAPS:

“Minimization of the number of aged fails. RECAPS re-nets all open fails and assigns a new settlement date for the newly netted positions. The RECAPS settlement date replaces the original settlement date for the original fail.”

¹⁷ This mechanism may be used by unscrupulous Participants to avoid compliance with Federal Reserve regulations which prohibit an activity known as “Free-Riding.” Free-riding generally entails using the proceeds of the sale of a security to meet the obligation to pay for an earlier purchase of the same security. If a Participant can sell a security today and fail to deliver the shares yet receive the cash settlement credit, then they could use those proceeds to pay for securities purchased up to 3 days earlier.

¹⁸ We use the term “ex-clearing” in this context to denote trades that are recorded as failed to settle outside NSCC’s Continuous Net Settlement (“CNS”) system. Although technically these trades may have gone through formal clearing, we use the term here for brevity.

¹⁹ A user guide, available online at http://nsc.com/docs/RECAPS_User_Guide.pdf, provides a good overview and explanation of this service.

²⁰ Participants are required to submit “fails that are at least five business days old to the RECAPS system” (NSCC RECAPS User Guide, page 1). Since the fail begins on the original settlement date and since that date is 3 days after the trade date, any activity submitted to RECAPS must be at least 8 days after the trade date. References to any number of “days” in this document will mean “business days.”

²¹ Participation in RECAPS was mandated by the SEC on August 13, 1990.

²² NSCC Rules and Procedures, version March 2007, page 43.

Because fewer fails will be reported does not mean there will be fewer fails. Just that they get to restart the settlement clock by using this program.

**How Mark-To-Market Favors
Stock Price Manipulation with Failures to Deliver**

- An investor places an order with a broker to buy 100 shares at \$10/share. Three days later, the investor's brokerage account is debited for \$1,000 and credited for 100 shares.
- Although the investor is never advised of the event, the investor's broker does not receive the 100 shares in settlement at DTCC. The investor's broker has use of the \$1,000 until the 100 shares are delivered at DTCC.
- The selling broker initially owes 100 shares to DTCC and is scheduled to receive \$1,000 from DTCC. When they fail to deliver the shares at settlement, then the next day they are debited the market value of those shares.²³ The selling broker is given a \$1,000 payment on the original settlement date because it is no longer specifically related to the failure to deliver those specific 100 shares.²⁴ When the negative share position is carried over to the next day, they basically are debited \$1,000 which NSCC will hold until the shares are delivered.²⁵
- As time passes, if the closing price of those 100 shares falls to \$9/share, then the failing broker is credited with the difference between the original \$1,000 and the new \$900 market value. When the failure to deliver is marked to market, the selling broker is credited with \$100 in their cash settlement account.
- Under the scenario where the selling broker is engaged in price manipulation, the mechanism of mark to market can work in their favor to return most if not all of the original sale price to them through cash settlement at DTCC. If they can drive the price down further, more of the money will be returned to them.
- Throughout this process, DTCC claims that they "cannot force" the selling broker ever to deliver the actual sold shares. Therefore: the investor may never have actual shares to back up their entitlements and the investor's broker has use of the \$1,000 "on a perpetual basis" while the selling broker keeps money equal to any reduction they can manipulate in the share price.

²³ This payment is in addition to the minimal fees charged for failures to deliver securities (e.g., "\$1.00 per item short in CNS for more than 90 days at close of business." NSCC Rules and Procedures, March 2007, page 241.)

²⁴ This is the result of netting. Technically, according to NSCC Rules and Procedures, page 43, "...Short Positions or Long Positions outstanding in respect of prior activity are brought forward on a perpetual basis and ... are merged, netted and carried forward, leaving in each Member's account all transactions which have failed in delivery or receipt; and whereby the contract money of all Settling Trades is netted ... resulting in the closing CNS System money balance for each Member which, for the purpose of computing the CNS System money settlement (including marking any Long or Short Position of a Member at the close of business to the Current Market Price), is adjusted by the net market value of all Closing Positions."

²⁵ If the selling broker fails to make this payment, there are fines (e.g., \$100 for the first occasion of failing to pay a cash debit balance between \$0 and \$100,000) as well as an interest charge for the cost of borrowing to cover the cash settlement. See NSCC Rules and Procedures, March 2007, page 287.

Mark to Market

The note on Commitments and Contingent Liabilities to NSCC's financial statements draws a picture of the difference between settlement failures to deliver, failures to receive and stock lending. It also describes the process by which unscrupulous dealers are able to recover any settlement monies presented to DTCC for failed trades:²⁶ "Open positions are marked-to-market daily. Such marks are debited or credited to the involved participants through the settlement process." Under conditions where the broker-dealer Participant of NSCC is manipulating share prices downward, DTCC enables the scheme by crediting the Participant at settlement for the difference between the price of the shares when the sale was initiated and the price of the shares on any later date. The fact that the opposite is also true, that DTCC can debit Participant settlement balances when market prices rise, should provide an incentive to avoid failures and to close out fails as soon as possible.²⁷

There are valid reasons, even legal requirements, for a firm's holdings of stock, bond or other security assets to be marked to market. For example, during the Savings & Loan crisis of the 1980s, failing S&Ls were forced to carry their junk bond holdings at market value, rather than at purchase price, in order to fairly represent the liquidation value of assets during insolvency.²⁸ However, outside of DTCC it is unusual for a negative financial obligation (rather than a positive securities position) to be valued at market value in this manner. It would be as if the bank reduced your mortgage obligation when the market price of your house fell.

The difference between trade date value and mark to market value is a critical piece of information from the standpoint of individual investors. The investor paid the trade date value for securities when they made the initial purchase. When the seller is allowed to fail to deliver those shares they can replace them at some later date, possibly at a lower price than the original buyer paid. Therefore, the seller would have gains equal to the difference between the trade date value and the market value on the later settlement date. Unfortunately, settlement failures rose throughout 2006 and the duration of some failures has exceed one year.²⁹

In order to calculate this difference, we use data obtained by Mr. David E. Patch through a Freedom of Information Act (FOIA) request to the Securities and Exchange Commission. The FOIA data is the number of shares that failed settlement delivery on dates from January 2005 to May 2006. To estimate the trade date value of this activity,

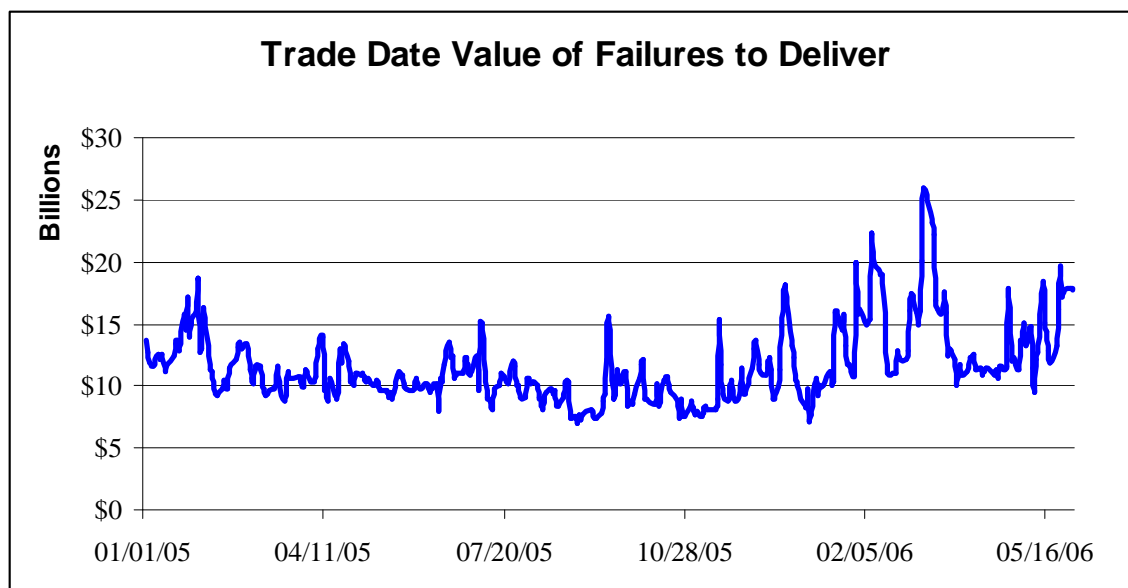
²⁶ Under certain circumstances, the DTCC will further oblige this scheme by declaring the securities "worthless," which allows them to destroy physical stock certificates and eliminate any remaining obligations. See Securities and Exchange Commission Release No. 34-49930; File No. SR-DTC-2003-09, June 28, 2004, Order Granting Approval of a Proposed Rule Change Relating Establishing a New Service to Destroy Certain Certificates.

²⁷ Unfortunately, settlement failures have been rising over time. For more information, see references in footnote 29 below.

²⁸ Internal Revenue Code Section 475 also specifies conditions for electing mark to market when recognizing the gain or loss of portfolio asset values.

²⁹ On this point see Shapiro, Robert J. (2006) 500 Million Shares of Stock Are Missing: A Report on the Impact of Allowing Stock Sales to Go Undelivered for Long Periods, March 2006, Sonecon LLC, Washington, D.C. Also see Christian, James W., Robert Shapiro, and John-Paul Whalen (2006). "Naked Short Selling: How Exposed Are Investors?" *Houston Law Review*, 43(4), pp. 1033-1090.

we multiply the number of shares reported as failed to deliver for NASDAQ issues by the daily average share price available from the National Association of Securities Dealers for each month. The same method is used for New York Stock Exchange listed issues. These figures stand in sharp contrast to the \$3.4 billion in settlement delivery failures reported by NSCC as of December 31, 2005. The estimated trade date value of shares that failed to deliver, as reported for that date in the FOIA data, is over \$10 billion for NYSE and NASDAQ failed trades only. The bottom line: more than \$6 billion in value may have been transferred from investors to DTCC Participants.



Note: failures to deliver for 3 dates were reported as 0. The following dates were excluded as anomalies: October 11, 2005; February 3, 2006 and March 13, 2006.

Hiding the Ball

As we made clear in our August 2006 comments on Regulation SHO, we find that DTCC also obscures the real magnitude of the problem with poor metrics and biased statistics. For example, in the Regulation SHO document, SEC offers NSCC statistics from two *unequal* time periods to support the statement that “Regulation SHO appears to be significantly reducing fails to deliver.”³⁰ NSCC releases statistics on average daily

³⁰ See footnote 10 for full citation to the document on Regulation SHO. Here we refer to the use of data for the 9 months from April 1, 2004 to December 31, 2004 to compare to the 17 months from January 1, 2005 to May 31, 2006. Comparing statistics from periods of different lengths is bad math, at best. Furthermore, it is well known that market data exhibit seasonal variation. It is particularly deceptive to include January in one and not the other, since the “January effect” is especially well-known and studied. For example, see Porter, R. Burt, “Measuring Market Liquidity” (October 2003 available at SSRN: <http://ssrn.com/abstract=439122>) which provides evidence of a strong January seasonal effect on liquidity, and which summarizes recent research suggesting that aggregate market liquidity varies over time. See also Kamstra, Mark J., Kramer, Lisa A. and Levi, Maurice D., “Winter Blues: A SAD Stock Market Cycle” (October 2003, Federal Reserve Bank of Atlanta Working Paper No. 2002-13a; available at SSRN: <http://ssrn.com/abstract=208622>) which demonstrates seasonal differences in market behavior using international data. For additional evidence, see DeGennaro, Ramon P., Kamstra, Mark J. and Kramer, Lisa

failures to settle as a percentage of dollar value in support of a statement that “the majority of trades settle on time”.³¹ Using figures based on the *value* of trades to explain a statement about the *number* of trades is also an inappropriate use of statistics.³²

Our main source for information about trade settlement failures is NSCC. They tell us that the current-market value of settlement failures by NSCC Participants at the end of 2006 was about \$7 billion. But NSCC does not provide separate settlement failure statistics for equities and bonds. They also do not release the trade-date value of settlement failures. The trade date value is the amount paid by investors for the securities in question. If a Participant is allowed to settle trades at a later date than the date on which the investor paid for the shares, then the Participant could benefit from a drop in the share price. The Participant that is allowed to fail to settle a trade could benefit by purchasing the shares at a lower price and delivering these cheaper shares for settlement. This provides an economic incentive for stock price manipulation.³³ The Participant would benefit directly by the difference in the price, in addition to benefiting from having the use of the funds in the interim period.

The Federal Reserve Bank of New York, on the other hand, releases the trade-date value of settlement failures in the bond markets. If, as is widely suspected, persistent settlement failures put downward pressure on prices by artificially inflating the number of securities available for sale, then one could reasonably expect current market value to be less than trade date value. Further, FRB reports gross settlement failures whereas NSCC reports only the net figure.³⁴ Finally, the FRB ages fails by accumulating data on fails across the number of days that any one failure remains open. NSCC resubmits failed trades daily so that each failed settlement is given a fresh starting date, creating the illusion of zero failed trades every morning.

The Danger of Inaction

The DTCC is supposed to be “a net settlement organization with a trade comparison facility that limits fails attributable to miscommunication, and a netting and novation facility that limits daisy chain and round robin fails among its members.”³⁵ “Novation” is the process whereby a new legal obligation is substituted for an old one; in this case,

A., "Seasonal Variation in Bid-Ask Spreads" (March 2006). Available at SSRN: <http://ssrn.com/abstract=624901>.

³¹ See page 3 of Securities and Exchange Commission Release No. 34-50103.

³² For additional examples of the deceptive use of statistics in this context, see Trimbath's comments on Regulation SHO, available online at <http://www.sec.gov/comments/s7-12-06/stribath7022.pdf>

³³ For a discussion of the use of penalties to create incentives to avoid settlement failures in the context of bond markets, see Fleming, Michael J. and Kenneth D. Garbade (2005). "Explaining Settlement Fails", *Current Issues in Economics and Finance*, 11(9), September 2005, Federal Reserve Bank of New York. Available online at www.newyorkfed.org/research/current_issues

³⁴ Recall earlier that only 2 percent of the value is exchanged at settlement.

³⁵ Guide to FR2004 Settlement Fails Data, Federal Reserve Bank of New York. A daisy chain occurs when a seller is “unable to deliver securities because of a failure to receive the same securities in settlement of an unrelated purchase ... A daisy chain becomes a ‘round robin’ if the last participant in the chain is itself failing to the first participant.” (Fleming, Michael J. and Kenneth D. Garbade (2002). “When the Back Office Moved to the Front Burner: Settlement Fails in the Treasury Market after 9/11,” *FRBNY Economic Policy Review*, November 2002, p35-57.)

DTCC steps in as the counterparty to every member's settlement obligation. Therefore, DTCC is ultimately responsible for final settlement.³⁶ And, since the new legal obligation to deliver and receive rests with the DTCC then they should have the legal authority to force delivery. The primary mechanism for forcing the close out of a failed trade is the "buy-in." In a buy-in, the party who has failed to receive securities is entitled to request that the shares be purchased on the open market and any difference between the original purchase price and the current market value of the securities is charged back to the party that failed to deliver. Yet DTCC insists:

"NSCC and DTC do not exercise regulatory or enforcement powers over their Members and Participants. They cannot, for example, initiate a buy-in – only brokers can do that. And they cannot compel brokers to initiate buy-ins. Regulatory and enforcement authority is vested in the SEC, the Exchanges and the NASD."³⁷

According to the Securities and Exchange Commission (SEC)³⁸, the purpose of a clearing agency is: "to be so organized, and have the capacity, to be able to: facilitate the prompt and accurate clearance and settlement of securities transactions." As a clearing agency, DTCC must be able to "enforce compliance by its participants with the rules of the clearing agency." DTCC is explicitly given the means to enforce the settlement of trades in the Exchange Act:

"A registered clearing agency may summarily suspend and close the accounts of a participant who . . . , (ii) *is in default of any delivery of funds or securities to the clearing agency.*"³⁹

Yet throughout this report we present evidence that DTCC neglects to take action against Participants who are in default of the delivery of securities even though DTCC is given that authority by Congress and the SEC.

The magnitude of the problem might be clearer if put into context. In 2005 (latest year for which figures are available), NSCC's peak settlement day was for \$14.7 billion; yet \$5.9 billion remained unsettled as of December 31, 2005. In other words, settlement failures at NSCC represent at least 40% of daily settlement value. The NSCC Participants' Clearing Fund (deposited to cover potential failures) stood at \$2.8 billion at year end 2005. That is, the fund "available to secure participants' obligations and certain liabilities of NSCC" was less than 50% of the value of failed trades alone.⁴⁰ How funds would be applied to

³⁶ The proper functioning of the system [financial markets] depends on the "guarantees of performance made by all the parties in the chain affirming that they will honor their obligations despite a default by another party in the system." See *Jackson v. Mishkin* (In re Adler, Coleman Clearing Corp.), 263 B.R. 406, 476 n. 47 (S.D.N.Y. 2001).

³⁷ *DTCC's Updated Critique of Section 4.1 of Prof. Finnerty's Paper, 'Short Selling, Death Spiral Convertibles and the Profitability of Stock Manipulation'* undated, posted online at <http://www.dtcc.com/ThoughtLeadership/keyissues/finnerty.htm>. The point is repeated by the SEC Division of Market Regulation in its *Responses to Frequently Asked Questions Concerning Regulation SHO*, Question 7.3; available online at <http://www.sec.gov/divisions/marketreg/mrfaqregsho1204.htm>

³⁸ *Nanopierce Technologies, Inc., et. al. V. DTCC et. al.*, Nevada Supreme Court Case No. 45364, District Court Case No. CV04-01079, Brief of the Securities and Exchange Commission, Amicus Curiae, on the Issue Addressed.

³⁹ Section 17A.a.5.(C). Emphasis added.

⁴⁰ Note 3 "Clearing Fund", 2005 NSCC Annual Financial Statements.

NSCC's liabilities is explained in more detail in the notes to the Annual Financial Statement:

“If a participant fails to fulfill its settlement obligations to NSCC and NSCC ceases to act on behalf of the participant, NSCC will liquidate that participant's guaranteed security receive and deliver obligations and apply that defaulting participant's clearing fund deposit to satisfy any net outstanding obligation and/or loss. ... In the event that a deficiency still exists after the application of the guaranty payments from the other clearing agencies⁴¹, before NSCC may assess its membership, NSCC is required to apply against the deficiency at least 25% of its retained earnings or such greater amount to be determined by the Board of Directors. NSCC may then assess the balance of the deficiency in accordance with NSCC's Rules.”⁴²

This assessment would be against the Participants, who are also the “owners” of DTCC. If the Participant fund isn't enough to cover failed settlements when investors demand delivery of the shares they have already paid for, then the owners of DTCC would ultimately be responsible for the delivery of shares or the return of the trade-date value paid. This gives DTCC (and its bank/broker-dealer members) economic incentive to minimize the appearance of the problem.

It seems clear from this discussion that the SEC neglects to take action to discipline the DTCC in regards to closing settlement failures. Based on my experience, the main reason that the SEC appears to allow the DTCC to operate in this manner is that many of the staff there do not completely understand DTCC. For example, in explaining their decision to permit the rule change prohibiting issuers from refusing to let their stocks be eligible for DTC services, SEC said “DTC does not allow its participants to establish short positions resulting from their failure to deliver securities at settlement.”⁴³ This is simply incorrect. As stated in DTCC's 2005 financial statements (page 7):

“Securities on deposit [at DTC]: ... *Short positions occasionally exist in participants' securities balances.* Such short positions are valued and collateralized daily by participants' cash aggregating 130% of the short position. DTC's obligation to return such amounts to participants is also reflected in

⁴¹ The clearing agency agreement basically provides that among the DTCC subsidiaries, if the defaulting Participant has accounts at any of the other clearing agencies, then each would chip in anything left over from what they need to satisfy their own needs of the resources of a defaulting Participant. This arrangement is described in the Note: “NSCC has entered into a netting contract and limited cross-guaranty agreement with DTC which includes certain arrangements and financial guarantees to ensure that securities delivered by DTC to NSCC to cover CNS allocations are fully collateralized. NSCC has also entered into a unilateral netting contract and limited cross-guaranty agreement with DTC, FICC and The Options Clearing Corporation (OCC) under which these clearing agencies have agreed to make payment to each other for any remaining unsatisfied obligations of a common defaulting participant to the extent that they have excess resources of the defaulting participant. NSCC and OCC have also entered into an agreement providing for payments to each other relating to the settlement of certain option exercises and assignments in the event of a mutual participant's failure.”

⁴² Note 10: Off Balance Sheet Risk and Concentration of Risk,” 2005 NSCC Annual Financial Statements.

⁴³ The Depository Trust Company Rulemaking, Order Granting Approval of a Proposed Rule Change Concerning Requests for Withdrawal of Certificates by Issuers, Securities and Exchange Commission (Release No. 34-47978; File No. SR-DTC-2003-02), June 4, 2003.

Payable to Participants. At December 31, 2005 and 2004, short positions amounted to \$18,253,000 and \$28,225,000, respectively.” [emphasis added]

Conclusion

The difference between trade date value and current market value is a critical piece of information from the standpoint of individual investors. The investor pays the trade date value for securities when they make the initial purchase. In the typical scenario of settlement failure, a trade fails to settle when the seller does not deliver securities on settlement date. Various exchange, self-regulatory organization and SEC rules could be invoked to eventually prevail upon the seller to deliver the securities to the buyer. In a best-case scenario, using SEC’s Regulation SHO, when the seller fails to deliver, the securities should be replaced 13 days after the original settlement date, or a total of 16 days after the original trade date. Under these rules, the seller could wait to purchase the securities at a later date, possibly at a lower price than the original buyer paid. Therefore, the seller would have gains equal to the difference between the trade date value and the later settlement date value. These gains are in addition to any gains from having the use of customer funds. Unfortunately, it is well known that substantial numbers of shares are left undelivered well beyond the 16 day limit.⁴⁴

The wealth of U.S. households is at risk now more than ever. In 1975, about half of Americans’ assets were in bank deposits (55 percent). Today, more than 60 percent of total assets are in capital market instruments. More than 80 percent of Americans’ liquid financial assets are invested in securities-related products, such as stocks, bonds, and mutual funds.⁴⁵ Furthermore, DTCC says that the size of transactions has been decreasing over time, so that 70% of all trades they process are for 300 shares or less.⁴⁶ These small trades are unlikely to be broker-to-broker or institutional trades; they are more likely to be the activity of individual investors.

Until the amount of fails to deliver is publicly disclosed, we will necessarily continue to rely on DTCC for information about problems at DTCC. Full disclosure of information about settlement failures would put investors on notice that they need to follow up on the delivery of paid-for shares from their brokers. Ideally, the disclosure would be by each broker of the aggregate fails to deliver (trades, shares and value) for each security. Having the broker make the disclosure would further protect shareholders as they would be aware if there is a problem with their particular brokerage firm. Providing the investing public with access to information about settlement failures by individual brokerage firms and on individual stocks is the only reasonable course of action to protect investors who are entitled to demand delivery of shares for which they have already paid.

⁴⁴ See footnote 29 above for references on this point.

⁴⁵ Federal Reserve Statistical Release, Z.1, Flow of Funds Accounts of the United States, release date March 8, 2007. Author’s calculations, using Table B.100 Balance Sheet of Households and Nonprofit Organizations.

⁴⁶ “...[A]pproximately 70% of equity trades currently submitted to NSCC are for 300 shares or less.” DTCC Important Notice A# 6218, P&S# 5788, March 15, 2006.