The Naked Truth: *Examining Prevailing Practices in Short Sales and the Resultant Voter Disenfranchisement*

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Literature on short-selling activity is a common topic for financial, economic, accounting, and legal authors and has been since the very first journals were established (De la Vega [1688]). Short sales occur when a shareholder sells a share of stock he does not own (by borrowing shares), and only later acquires them, which then closes out the transaction. In so doing, there may be various borrowing costs associated with the transaction. The short seller profits from the transaction if the share price declines more than the all-in costs of the transaction by the time he closes out the transaction.

In this oft-studied sequence of events, there is one aspect or stage of the process, which has to date received scant attention, but which may well have the most significant impact. This is the period between when the stock is borrowed and sold and when it is subsequently purchased to end the transaction. There is also the case when the stock is sold but shares are never borrowed and never purchased in the market to properly close out the transaction. This event is called a naked short.

There is substantial literature that considers the effect of short sales restrictions on stock prices in an environment of heterogeneous investors (Zhang [1997]; Bai, Chang, and Wang [2006]). These papers are generally united on two issues: first, that short sellers are generally underrepresented in the market, due to the costs associated with shorting stocks, thus leaving only optimistic investors and the resulting inflated asset prices; and second, that there are a number of short sales constraints that reduce or limit the number of short sellers. These constraints include:

- Borrowing costs. The shorter has to be able to borrow and provide securities to the purchaser of shares. The proceeds are then retained by the broker serving as collateral for the securities lender. The interest that is paid is theoretically paid to the lender, who then must pay a portion stipulated by contract to the borrower, referred to as the rebate rate. This rate is generally lower than the interest rate paid by the borrower on the collateral but can be negative, on restricted supply shares, so that the short-seller pays additional fees to the lending broker.
- Shortages of certificates available for borrowing; in addition many pension fund and mutual fund managers are barred by prospectus from engaging in short sales.
- The risk of a forced cover.
- Short sellers are prohibited from short selling after a down-tick in the securities price or after a zero-minus tick.[1]
- The risk of a stock price jump that may force the short seller to cover earlier than

he desires or if the broker can no longer borrow the shares.
- Using the proceeds from the short sale as collateral until the position is closed.

With naked shorting these constraints no longer apply.

THE MECHANICS OF A SHORT SALE, OR HOW TO NAKED SHORT

The process of settling securities involved in shorting a stock is actually rather complicated. While the general details are rather well understood, the difficulties lie in the details. Conceptually, it is rather simple.

In a normal transaction, an investor purchases a stock anticipating a price increase, on which he may then realize on the future sale of the stock. Having purchased the stock, the investor believes he is entitled to all the rights and privileges thereof, including future dividends and voting rights. The short seller takes a contrary position, first selling the stock, then expecting a price decline, at which time he may purchase the stock and pocket the difference between the sale price and his purchase price. It is also commonly understood that the seller of an issue has three days to deliver the stock. Note that the payment and delivery are at different times. The U.S. markets are among the few that have discordant timing of buying (the purchaser's cash account is debited immediately) and delivery (not required for three days).[2]

The short sale is commonly facilitated by the borrowing of shares.[3] When borrowing a security, the short seller deposits collateral (normally the sales proceeds from the initial sale) as security for the borrowed stock, and thus is deprived of the use of the sales proceeds to hedge his short position. The broker receives the interest generated off of this collateral (rebate rate) with the difference between the market and rebate rates (rebate spread) going to compensate the original owner of the securities. In addition, the short seller may be required to increase the amount of collateral held in the margin account when a shorted stock's value rises significantly.

The requirements are delineated by Federal Reserve Regulation T (Reg T). This regulation requires an initial margin of 50 percent of the initial market value of the shorted shares, which increases as the share price increases. The maintenance margin requirement imposed by Reg T is 25 percent. Broker-dealers also have the flexibility to establish higher margin requirements, with some requiring at least 30 percent equity in the account.[4]

If the seller does not purchase or borrow the securities for delivery within the normal T+3 (sale date plus three days), he has "failed to deliver" (FTD). This is what is known as a naked short. This singular event and its consequences have received scant attention and are the focus of this article.

Interestingly, the ability to sell a stock and then FTD is completely legal for a certain type of investors: market makers (including broker-dealers registered as market makers). According to SEC Rule 203(b)(2)(iii), market makers do not have to deliver shares on short sales for "bona-fide market making activities in the security for which this exception is claimed." And who determines what are "bona-fide market making activities"? It is left to the discretion of the market maker, who may find it necessary to short the security for liquidity or market stabilization reasons or perhaps other uncertain reasons. There have been no mentions in the literature that we have found of market makers having to defend their use of this exemption.

Other unique characteristics of this exemption for the market makers are that there are no borrowing or transaction costs. Not having to borrow or actually go out in the market and buy the security, as well as not having to pay the bid-ask spread, effectively eliminates some of the greatest constraints for short selling. In addition, the market makers have no margin requirement, are not subject to Reg T, and are not required to post collateral. They have full use of the proceeds—immediately—to "hedge" the transaction.

This raises the question of what then happens to the buyer's account, with the buyer having unknowingly purchased these naked short shares. He doesn't receive any security, either bought or borrowed, so what does he receive? In this case, the brokers will place a marker or a pledge to deliver the shares, which are made by the seller's clearing firm. To the buyer, he is unaware this has occurred. On his statement, it appears as if the securities were acquired and made "good delivery." The buyer is oblivious to the fact that there are no shares in his account. He sees the debit in his account and has a statement reflecting the securities purchase. There is absolutely no way for the purchaser to know or determine if he has a real share or a marker.

There are no hard and fast numbers publicly available on the number of FTDs; the Securities and Exchange Commission (SEC) and the Depository Trust and Clearing Corporation (DTCC) as well as the brokers have usually refused to release the information, even to the issuers, but there are some clues. In a study of options market makers, Evans, Geczy, Musto, and Reed [2003] noted that one of the top five market makers failed to deliver in 52 percent of the positions requiring delivery. They found the risk of being forced to actually have to deliver the shares was also small, with forced buy-ins occurring only 0.12 percent of the time. They also noted that put prices remained high, though the options market makers could "collect rents on their unique ability to hedge put options without borrowing a stock."[5]

Boni [2006], with data gathered while she was at the SEC, documented the widespread prevalence of naked shorting across all markets and affecting all industries, including stocks with no listed options. She offered evidence that market makers strategically fail to deliver when the borrowing costs are high. In this way, they can avoid paying the rebate spread, and they know they have low risk of a forced buy-in (Evans, Geczy, Musto, and Reed [2003]).

Clark, Russell, and Bachrodt [2007] find evidence that stocks with listed options have stronger persistence for the continuation of the naked short position, lending support to the market maker exemption as a source for a significant level of naked shorting.

EXPANSION OF BENEFICIAL OWNERSHIP

Hu and Black—Empty Voting and Morphable Ownership

Hu and Black [2006] examined the decoupling of the voting rights from the economic ownership of shares. Voting rights can be used to one's advantage in proxy contests and on governance issues. They define hidden (morphable) ownership as:

> … indirect economic ownership that disclosure rules do not cover (or are reasonably interpreted by the person as not covering), coupled with likely possession of informal voting rights. These informal voting rights will generally not be verifiable by outside observes and will depend on market customs and private incentives.

Hu and Black argue that buying shorted securities affords additional voting power, at little cost or risk. They show how this phenomenon has affected proxy voting and its use by large fund or hedge fund managers to increase their leverage and expand beneficial ownership. We suggest the concept be expanded by including naked shorts in the realm of hidden ownership and vote buying. Naked short shares represent true empty shares, created by fiat but possessing the rights of ownership, or so the purchaser believes, which the brokers and the clearing firms accommodate through various machinations that serve to obscure from the purchaser his true position in the stock.

The act of shorting, or naked shorting, creates a share which is not an actual share. They are not issued nor authorized by the company. These shares are not registered with the Securities and Exchange Commission nor are they beneficial to the company or its legitimate owners. The short sellers are denied the use of their funds, the purchaser accounts are debited by the brokers, no delivery of the securities has taken place, and none may never take place. So how does this situation arise, and who actually owns the properly issued shares?

The Clearing Process and Custody Practices

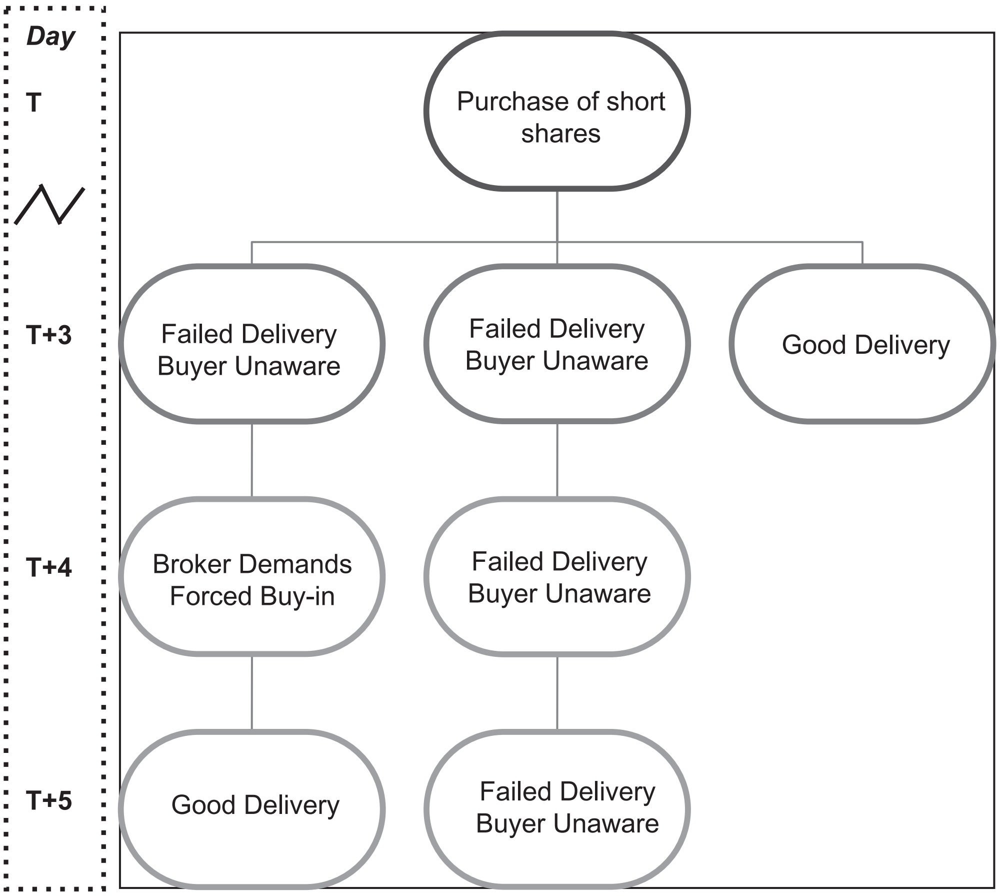
The clearing and settlement process is illustrated in Exhibit 1. This schematic shows the ordinary clearing, failing, and buying-in process over a timeline for an investor who has purchased shares that were sold short. It does not reflect whether the shares were cleared through the DTC system or in an ex-clearing (intra-broker) process. The clearing broker is responsible to ensure the shares are settled with "good delivery."

These processes are known as "back room" and are largely hidden from view from the investor, who isn't burdened with the matters of the delivery and settlement process. When there is an FTD, with the forced- buy-in, the shareholder receives by day T+5 good delivery on shares issued by the company. If good delivery is not made, a marker is placed in the shareholder accounts and a confirmation statement is issued. The purchaser remains unaware that his securities have not delivered, having received the same confirmation statement.

EXHIBIT 1

The Clearing Process

This schematic shows the clearing, failing, and buying-in process over a timeline for an investor who has purchased shares that were sold short. It does not reflect whether the shares were cleared through the DTC system or in an ex-clearing process. The clearing broker is responsible for ensuring the shares are settled with "good delivery." T is the initial date of purchase, with T+3 the conventional settlement date.



The records and data collected by the SEC and DTC on FTDs are not readily available, and there is little transparency in the process. So the exact details and numbers of FTDs in any specific issue are somewhat opaque. But there is much that is known.

One contributor to FTDs is the implementation of a new custody system in 1973. Prior to 1974, settlements were conducted by the actual delivery of physical certificates. The legal power to transfer the certificate would be executed on the back of the certificate, endorsed in the favor of the purchaser. Each time a trade was concluded, a physical share certificate was delivered by runners who then literally collected a physical check from the purchaser's broker to return to the selling broker for crediting to the seller's account. To execute a short sale it was usually necessary to first identify and obtain a certificate to borrow. The lender with certificates registered in their names would have to endorse the stock over to the borrower, to enable the short seller to sell the certificate.

This practice of physical transfer of certificates was a significant constraint to the marketplace. With the increasing volume of securities being issued and sold, the NYSE would often close one or two days a week to allow the brokers to get caught up on their paperwork. Obviously the system bottleneck was becoming a breakpoint.

What changed were the custody rules. Starting in 1973, the practice began of holding securities in nominee name (or street name) through varying intermediaries, including investment banks, broker-dealers, and depository trusts.[6] The Depository Trust Company (DTC) was created as a subsidiary of the Depository Trust Clearing Corporation (DTCC) and privately owned by its member institutions, the brokerage firms. It operated as a clearinghouse for the brokerage firms. Its commission and design was to promote the efficient, secure, and accurate custody in a central location and to expedite post-trade processing services for both stocks and bonds. The DTC is charged with retaining physical custody of all stock certificates in trust on behalf of its members. Its computers and vaults contained approximately $31 trillion in securities as of 2005.[7]

The DTC operates a computerized book-entry accounting system, which serves to replace physical certificates for those stock and bond holders who do not wish to hold physical certificates. The certificates for all of the securities are held in what are known as fungible bulk.[8] That is, the aggregate amount of each security held by each participating brokerage firm is held in one certificate by the DTC. The DTC has no record of individual ownership, only the gross amount held by the different brokerages, and it is considered the nominal holder of the certificate. All customer transactions and record keeping are the responsibility of the brokerage firm.

This means the investor, despite the language or terminology used by brokers and most other investors, owns something other than a security. The investor owns a right, or a "security entitlement," as detailed in the Uniform Commercial Code, Article 8. This "entitlement" or claim is held against the broker for the account, which in turn holds a claim against the DTC. The ownership of the accounts is recorded in broker accounts at the DTC.

All agree the DTC system provides a valuable safekeeping service, as well as economies of scale to the market by permitting low-cost processing and speed. The DTCC, in 2007, processed approximately $1.86 quadrillion of securities trades a year, of which approximately $3.9 trillion a month were equities trades.[9] These are amounts that would be virtually impossible to accomplish if physical certificates were the norm.

There are also ways to transfer security ownership without having to go through the DTC transfer process. The National Securities Clearing Corporation (NSCC), another subsidiary of the DTCC, exists to offer clearing, netting, and settlement services for member firms. The NSCC acts as a clearinghouse with the responsibility of ensuring all transactions of members are properly cleared and the obligations discharged.

The NSCC continuously updates trades during the day for each member in each security. In addition, it assists in processing transactions, referred to as "ex-clearing," for share transfer handled outside the DTC system. These transactions are settled through the Continuous Net Settlement (CNS) system (Exhibit 2). In essence, the NSCC nets buy and sell transactions in an effort to cut down the number of stock transactions that would require transfer of securities positions held by the DTC. During an average trading day, the CNS nets all the buys and sells in the various securities. At the end of the day, the member's net long or short position in each stock is passed to the DTC, and the appropriate securities are transferred and member accounts adjusted. An FTD occurs when an NSCC member fails to deliver the stock at the T+3 settlement date. In these cases, the NSCC looks to a member's account to see if there are enough shares to cover the outstanding transactions. If the member is short of shares, the long member may request a buy-in. If it doesn't request a buy-in, the shares remain in a persistent failure state.

Another way for the NSCC to resolve open positions created by FTDs is through the Stock Borrow Program (SBP). In this program, members may opt to "lend NSCC available" securities from their DTC accounts. At the close of trading, NSCC members identify which stocks they have available and notify the NSCC. During the CNS processing run that evening, open positions are compared to this list of available securities to borrow, and if shares are available, they are used to make delivery to members with open positions.

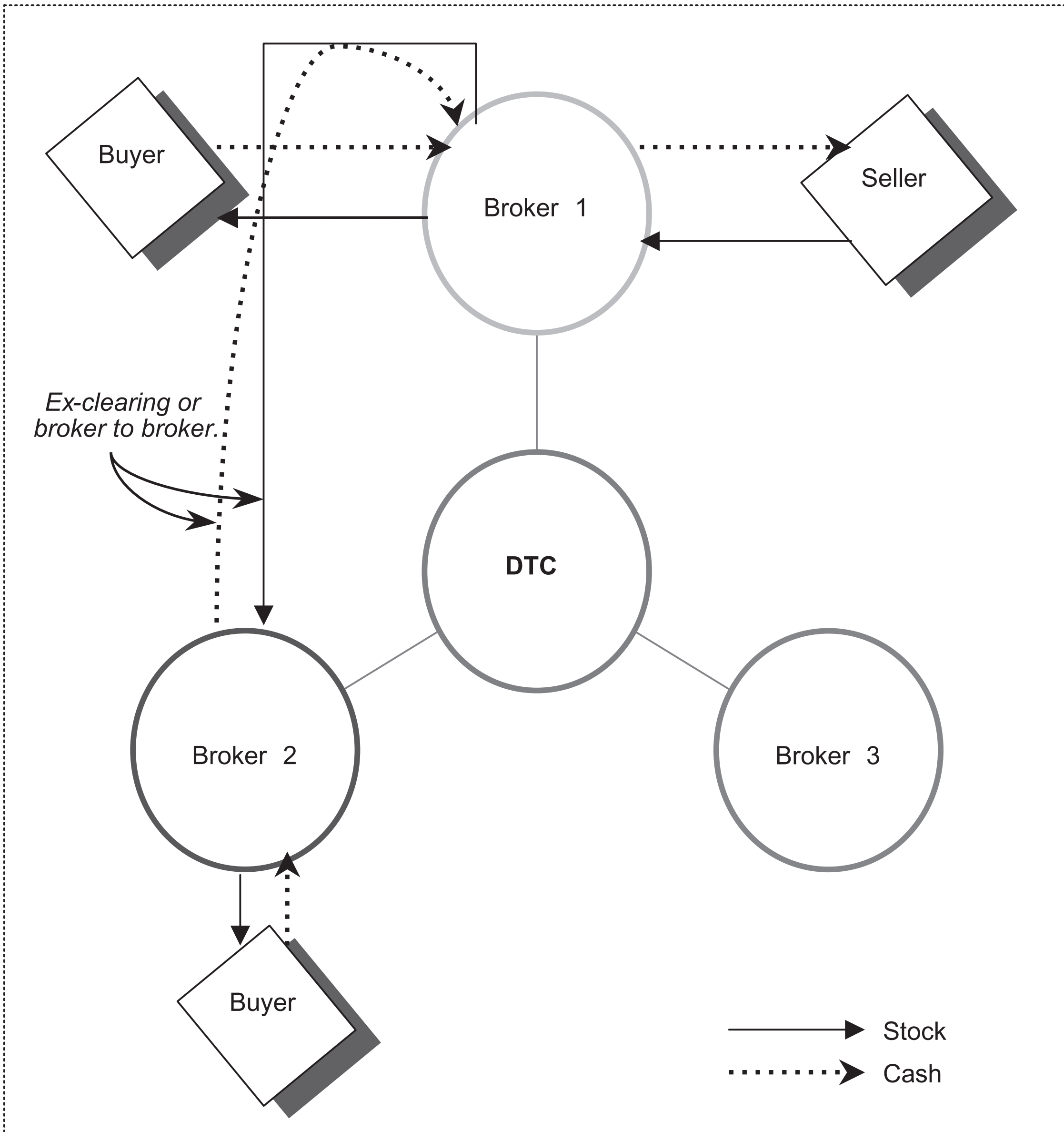
It is important to note that in this system, for all its complexity, there is no ability to identify which sellers have failed or which buyers have acquired such shares. The DTCC admits such, in a reply to Finnerty's [2005] article:[10]

> Because of the CNS netting process, it is not feasible to trace any particular delivery or fail to deliver by a seller to any particular receive or fail to receive by a buyer. The system, in that sense, is entirely anonymous.

As an example using the schematic in Exhibit 2, if Broker 1's customers sell to Broker 2's customers 1,000

EXHIBIT 2
The CNS System

This exhibit illustrates two ways in which the clearing of stock sales is handled in the ex-clearing system. Participating members (in the DTC/NSCC clearing systems) are identified by circular organizations. These can either be intra-broker, inter-broker (ex-clearing), or processed through the DTC transactions. The CNS (for ex-clearing transactions) system will net out buys and sells between brokers, with the net differences in each issue reported to the DTC so the bulk certificate can be adjusted. If the net transactions conducted intra-broker equal zero, then zero transfers are reported to the DTC.



shares of Gonzo stock, and Broker 2's customers sell to Broker 1's customers 1,000 shares and to Broker 3's customers 500 shares of Gonzo in unrelated transactions, then netting out the sales between Brokers 1 and 2, the NSCC would report zero transactions to the DTC for adjustment on their books. The sale of Broker 2's 500 shares to a customer of Broker 3 would be processed through the DTC system, and each broker's certificate amount of Gonzo stock held at the DTC would be changed at the end of the day. Each firm, Broker 1, 2 and 3, would be required to adjust its books reflecting the customer changes in the ownership of the Gonzo stock. However, the fungible certificates (book or physical) at the DTC for Brokers 1 and 2 would remain the same and unadjusted, based on these netted transactions.

In the absence of physical transfer of certificates, the only evidence individual customers have of any transactions in their accounts are the brokerage and trade confirmation statements they receive. It should be noted also that the brokerages do not track individual certificate numbers, but rely on the same fungible bulk system to accurately reflect the net shares held by their customers. They account for each individual client's number of shares, not as an individual certificate, but as a part of the bulk—client A owns 1,000 out of 1,000,000 shares of Gonzo Company, for example, with the one bulk certificate held by the DTC.

The system of resolving shorts is in theory very straightforward. Each of the short positions passed through the ex-clearing system is then compared to the number of aggregate shares in a member's DTC account. If there are sufficient shares at the DTC to effect settlement, the DTC will transfer an amount equal to the number of shares shorted to the NSCC, and the shares are considered to have been borrowed. If a member institution holding a short position does not have sufficient shares to borrow in order to cover the short position, then the NSCC/DTC can either borrow shares from another account and, if shares are not available to borrow, then demand a dealer buy in; buy the shares itself in the open market; or break the trade.

Systemic Presentations of Opportunity

The simplicity is masking a deeper complexity. The stock borrowing (lending) program actually facilitates or presents the opportunity for naked shorting in several ways. The NSCC can usually borrow shares covering the position, allowing the sellers to fail to deliver. If the NSCC borrows the shares, this removes from the seller the burden to buy in the stock at the market. Interestingly, this process potentially allows for the reuse of the same shares, allowing a single share to be relent several times, an effect referred to by regulators as multiplicity. In Exhibit 3, the process of naked short selling and multiplicity is illustrated. We begin with an issuing firm with three shareholders, each holding 100 shares of the 300 authorized and outstanding. There is then a progression of a normal short sale: the use of the market maker exemption to naked short shares, and multiplicity, or the use of the same shares to satisfy the locate rule in short selling. These latter two examples of naked short selling in effect give rise to multiple forward contracts, undated and unhedged, which are tantamount to phantom shares.

This complexity in tracking the transactions is further compounded by the fact that the typical customer margin account agreement allows the broker to hypothecate (lend) the securities without notice. In addition, the agreements stipulate that the broker receives all interest on the loan of the securities, and not the lending shareholder. This is for the benefit of the broker economically and is a practical result of the broker's inability to determine which shareholder owns which certificate or shares in any specific company. The broker simply has no idea which customer's stock has been lent because of the aggregation of certificates in a fungible pool that serves as the source for loans. If a customer owns stock held by the broker in street name, there is no specific certificate that can be linked to that customer.

The Mystery of Ownership

If there is no certificate that the individual can identify as his in a particular company, how does he claim the benefits of ownership? We know the customer in margin accounts legally waives his right to the voting rights of the lent, but has he done so practically? Remember, before 1973, when a stock was shorted, the lender of the stock surrendered his voting rights while the short seller guaranteed to reimburse the lender for any dividends received while the stock was borrowed. This waiver of the voting right was essential to the transaction. This waiver, which was attached to a specific security, no longer exists with dematerialized securities. This is critical to understanding the influence or impact of naked shorts on matters of corporate control.

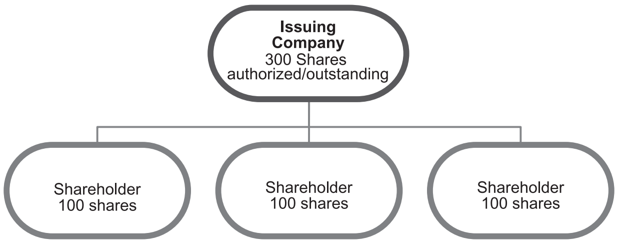
This problem most clearly manifests itself in corporate governance or proxy votes by creating a form of Hu and Black's [2006] "empty shares." Prior to a vote of shares, the company will announce a date of record, which identifies those entitled to vote. For most public companies, their largest shareholder is "Cede & Company"—the nominee name of the DTC. The issuing company

EXHIBIT 3

Short Sale Illustration

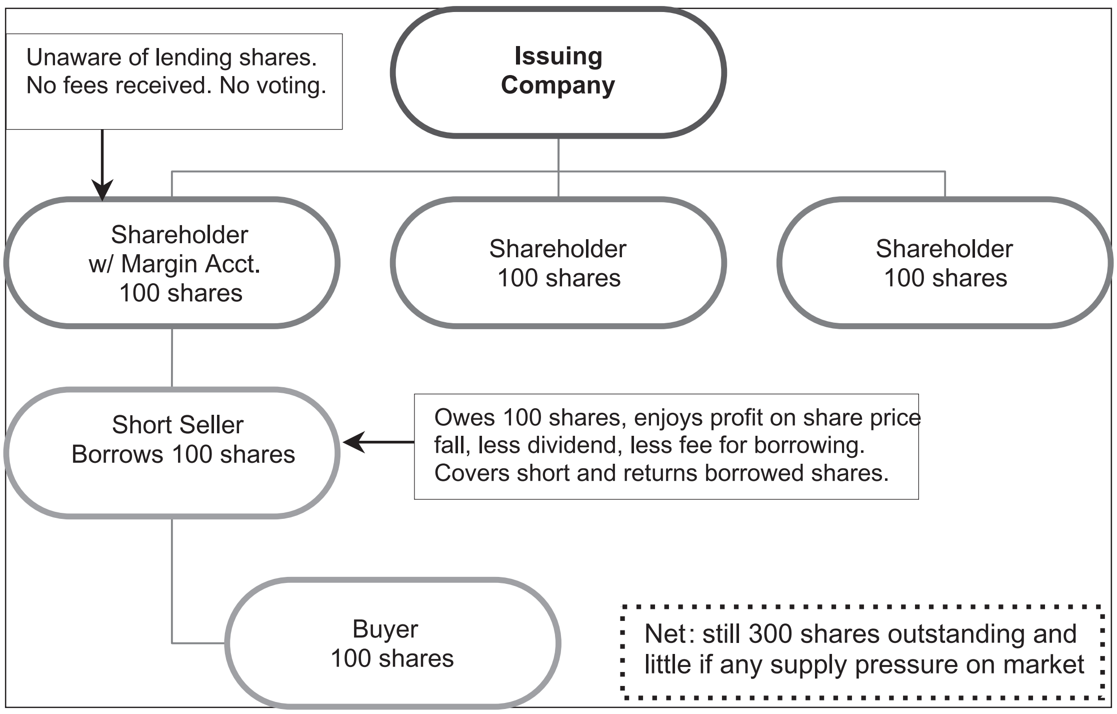
A. No short sales outstanding.

All shares can be certificated and enjoy full voting rights.



B. Short sales outstanding.

While the shares are borrowed, before settlement, the short seller is the beneficial owner, entitled to all rights of share ownership. He owes the lender any distributions (cash or shares) received during this time. After settlement, at some future time the borrower closes the position by buying shares and returning them to the lender (shareholder with margin account). The broker keeps all lending fees.



requests from the DTC a list of the participants (brokers) for whom the DTC is holding the shares of record. There is nothing in this exchange of information that identifies individual owners or identifies the shares as having been loaned or shorted.

Since the DTC cannot vote the shares, but is the nominal owner of the shares deposited, it assigns its right to vote to the brokers or investment banks that have on deposit their customer's stock at the DTC. In this process, the broker is assigned a number of voting rights equivalent to the amount of shares deposited with the DTC as of the company's record date. The brokerages, not the issuing company, are responsible for distributing proxy materials to their shareholding customers. Not only do the brokers mail out the proxy statements, they often receive

Exhibit 3 *(Continued)*

C. Naked Short Sale—Market Maker Exemption.

This presents a simple schematic of a typical naked short utilizing the market maker exemption from borrowing shares sold short. All proceeds of the sale are available to the market maker immediately; there is no collateral requirement or transaction costs for the market maker.