

Counterfeiting Stock 2.0

Illegal naked shorting and stock manipulation are two of Wall Street's deep, dark secrets. These practices have been around for decades and have resulted in trillions of dollars being fleeced from the American public by Wall Street. In the process, many emerging companies have been put out of business. This report will explain the magnitude of this problem, how it happens, why it has been covered up and how short sellers attack a company. It will also show how all of the participants; the short hedge funds, the prime brokers and the Depository Trust Clearing Corp. (DTCC) - make unconscionable profits while the fleecing of the small American investor continues unabated.

Why is This Important? This problem affects the investing public. Whether invested directly in the stock market or in mutual funds, IRAs, retirement or pension plans that hold stock – it touches the majority of Americans.

The participants in this fraud, which, when fully exposed, will make Enron look like child's play, have been very successful in maintaining a veil of secrecy and impenetrability. Congress and the SEC have unknowingly (?) helped keep the closet door closed. The public rarely knows when its pocket is being picked as unexplained drops in stock price get chalked up to "market forces" when they are often market manipulations.

The stocks most frequently targeted are those of emerging companies who went to the stock market to raise start-up capital. Small business brings the vast majority of innovative new ideas and products to market and creates the majority of new jobs in the United States. It is estimated that over 1000 of these emerging companies have been put into bankruptcy or had their stock driven to pennies by predatory short sellers.

It is important to understand that selling a stock short is not an investment in American enterprise. A short seller makes money when the stock price goes down and that money comes solely from investors who have purchased the company's stock. A successful short manipulation takes money from investment in American enterprise and diverts it to feed Wall Street's insatiable greed - the company that was attacked is worse off and the investing public has lost money. Frequently this profit is diverted to off-shore tax havens and no taxes are paid. This national disgrace is a parasite on the greatest capital market in the world.

A Glossary of Illogical Terms – The securities industry has its own jargon, laws and practices that may require explaining. Most of these concepts are the creation of the industry, and, while they are promoted as practices that ensure an orderly market, they are also exploited as manipulative tools. This glossary is limited to naked short abuse, or counterfeiting stock as it is more correctly referred to.

1. **Broker Dealer or Prime Broker** – The big stockbrokers who clear their own transactions, which is to say they move transacted shares between their customers directly, or with the DTC. Small brokers will clear through a clearing house – also known as a broker's broker.
2. **Hedge Funds** – Hedge funds are really unregulated investment pools for rich investors. They have grown exponentially in the past decade and now number over 10,000 and manage over one trillion dollars. They don't register with the SEC, are virtually unregulated and frequently foreign domiciled, yet they are allowed to be market makers with access to all of the naked shorting loopholes. Frequently they operate secretly and

collusively. The prime brokers cater to the hedge funds and allegedly receive eight to ten billion dollars annually in fees and charges relating to stock lend to the short hedge funds.

3. **Market Maker** – A broker, broker dealer or hedge fund who makes a market in a stock. In order to be a market maker, they must always have shares available to buy and sell. Market makers get certain sweeping exemptions from SEC rules involving naked shorting.
4. **Short Seller** – An individual, hedge fund, broker or institution who sells stock short. The group of short sellers is referred to as “the shorts.”
5. **The Securities and Exchange Commission** – The SEC is the federal enforcement agency that oversees the securities markets. The top-level management is a five-person Board of Governors who are Presidential appointees. Three of the governors are usually from the securities industry, including the chairman. The SEC adopted Regulation SHO in January 2005 in an attempt to curb naked short abuse.
6. **Depository Trust Clearing Corp** – Usually known as the DTCC, this privately held company is owned by the prime brokers and it clears, transacts and holds most stock in this country. It has four subsidiaries, which include the DTC and the NCSS. The operation of this company is described in detail later.
7. **Short Sale** – Selling a stock short is a way to make a profit while the stock price declines. For example: If investor S wishes to sell short, he borrows a share from the account of investor L. Investor S immediately sells that share on the open market, so investor S now has the cash from the sale in his account, and investor L has an IOU for the share from investor S. When the stock price drops, investor S takes some of the money from his account and buys a share, called “covering”, which he returns to investor L’s account. Investor S books a profit and investor L has his share back.

This relatively simple process is perfectly legal - so far. The investor lending the share most likely doesn’t even know the share left his account, since it is all electronic and occurs at the prime broker or DTC level. If shares are in a margin account, they may be loaned to a short without the consent or knowledge of the account owner. If the shares are in a cash account, IRA account or are restricted shares they are not supposed to be borrowed unless there is express consent by the account owner.

8. **Disclosed Short** – When the share has been borrowed or a suitable share has been located that can be borrowed, it is a disclosed short. Shorts are either naked or disclosed, but, in reality, some disclosed shorts are really naked shorts as a result of fraudulent stock borrowing.
9. **Naked Short** – This is an invention of the securities industry that is a license to create counterfeit shares. In the context of this document, a share created that has the effect of increasing the number of shares that are in the market place beyond the number issued by the company, is considered counterfeit. This is not a legal conclusion, since some shares we consider counterfeit are legal based upon today’s rules. The alleged justification for naked shorting is to insure an orderly and smooth market, but all too often it is used to create a virtually unlimited supply of counterfeit shares, which leads to widespread stock manipulation - the lynchpin of this massive fraud.

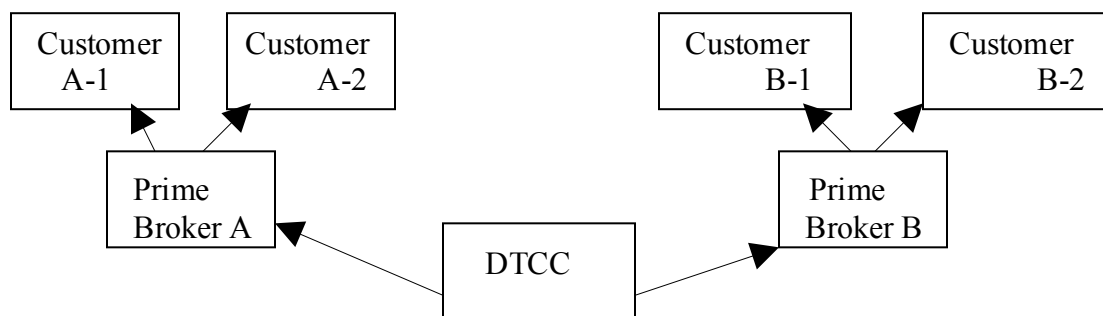
Returning to our example, everything is the same except the part about borrowing the share from someone else’s account: There is no borrowed share – instead a new one is created by either the broker dealer or the DTC. Without a borrowed share behind the short sale, a naked short is really a counterfeit share.

10. **Fails-to-Deliver** – The process of creating shares via naked shorting creates an obvious imbalance in the market as the sell side is artificially increased with naked short shares or more accurately, counterfeit shares. Time limits are imposed that dictate how long the sold share can be naked. For a stock market investor or trader, that time limit is three days. According to SEC rules, if the broker dealer has not located a share to borrow, they are supposed to take cash in the short account and purchase a share in the open market. This is called a “buy-in,” and it is supposed to maintain the total number of shares in the market place equal to the number of shares the company has issued.

Market makers have special exemptions from the rules: they are allowed to carry a naked short for up to twenty-one trading days before they have to borrow a share. When the share is not borrowed in the allotted time and a buy-in does not occur, and they rarely do, the naked short becomes a fail-to-deliver (of the borrowed share).

11. **Options** – The stock market also has separate, but related markets that sell options to purchase shares (a “call”) and options to sell shares (a “put”). Options are an integral part of short manipulations, the result of SEC promulgated loopholes in Reg SHO. A call works as follows: Assume investor L has a share in his account that is worth \$25. He may sell an option to purchase that share to a third party. That option will be at a specific price, say \$30, and expires at a specific future date. Investor L will get some cash from selling this option. If at the expiration date, the market value of the stock is below \$30 (the “strike price”), the option expires as worthless and investor L keeps the option payment. This is called “out of the money.” If the market value of the stock is above the strike price, then the buyer of the option “calls” the stock. Assume the stock has risen to \$40. The option buyer tenders \$30 to investor L and demands delivery of the share, which he may keep or immediately sell for a \$10 profit.
12. **Naked call** – The same as above except that investor L, who sells the call, has no shares in his account. In other words, he is selling an option on something he does not own. The SEC allows this. SEC rules also allow the seller of a naked short to treat the purchase of a naked call as a borrowed share, thereby keeping their naked short off the SEC’s fails-to-deliver list. A share of stock that has a naked call as its borrowed shares is marked as a disclosed short when it is sold, even though nobody in the transaction actually owns a share.

How The System Transacts Stocks – This explanation has been greatly simplified in the interest of brevity.



1. **Customers** – These can be individuals, institutions, hedge funds and prime broker’s house accounts.

2. Prime Brokers – They both transact and clear stocks for their customers. Examples of prime brokers include Goldman Sachs; Merrill Lynch; Citigroup; Morgan Stanley; Bear Stearns, etc.
3. The DTCC – This is the holding company that owns four companies that clear and keep track of most stock transactions. This is where brokerage accounts are actually lodged. The DTC division clears over a billion shares daily. The DTCC is owned by the prime brokers, and, as a closely held private enterprise, it is impenetrable. It actively and aggressively fights all efforts to obtain information regarding naked shorting, with or without a subpoena. When the prime brokers sell directly to one another, circumventing the DTC, it is called ex-clearing.

Stocks clear as follows:

If Customer A-1 purchases ten shares of XYZ Corp and Customer A-2 sells ten shares, then the shares are transferred electronically, all within prime broker A. Record of the transaction is sent to the DTC. Likewise, if Investor A-1 shorts ten shares of XYZ Corp and Investor A-2 has ten shares in a margin account, prime broker A borrows the shares from account A-2 and for a fee lends them to A-1.

If Customer A-1 sells shares to Customer B-2, in order to get the shares to B-2 and the money to A-1, the transaction gets completed in the DTC. The same occurs for shares that are borrowed on a short sale between prime brokers.

As a practical matter, what happens is prime broker A, at the end of the day, totals all of his shares of XYZ owned and all of the XYZ shares bought and sold, and clears the difference through the DTC. In theory, at the end of each day when all of the prime brokers have put their net positions in XYZ stock through the system, they should all cancel out and the number of shares in the DTC should equal the number of shares that XYZ has sold into the market. This almost never happens, because of the DTC stock borrow program which is discussed later.

Who are the Participants in the Fraud? The participants subscribe to the theory that it is much easier to make money tearing companies down than making money building them up, and they fall into two general categories: 1) They participate in the process of producing the counterfeit shares that are the currency of the fraud and/or 2) they actively short and tear companies down.

The counterfeiting of shares is done by participating prime brokers or the DTC, which is owned by the prime brokers. A number of lawsuits that involve naked shorting have named about ten of the prime brokers as defendants, including Goldman Sachs, Bear Stearns, Citigroup, Merrill Lynch; UBS; Morgan Stanley and others. The DTCC has also been named in a number of lawsuits that allege stock counterfeiting.

The identity of the shorts is somewhat elusive as the shorts obscure their true identity by hiding behind the prime brokers and/or hiding behind layers of offshore domiciled shell corporations. Frequently the money is laundered through banks in a number of tax haven countries before it finally reaches its ultimate beneficiary in New York, New Jersey, San Francisco, etc. Some of the hedge fund managers who are notorious shorters, such as David Rocker and Marc Cohodes, are very public about their shorting, although they frequently utilize offshore holding companies to avoid taxes and scrutiny.

Most of the prime brokers have multiple offshore subsidiaries or captive companies that actively participate in shorting. The prime brokers also front the shorting of some pretty notorious investors. According to court documents or sworn testimony, if one followed some of the short money trails at Solomon, Smith Barney, they led to accounts owned by the Gambino crime family in New York. A similar exercise with other prime brokers, who cannot be named at this time, leads to the Russian mafia, the Cali drug cartel, other New York crime families and the Hell's Angels.

One short hedge fund that was particularly destructive was a shell company domiciled in Bermuda. Subpoenas revealed the Bermuda company was wholly owned by another shell company that was domiciled in another tax haven country. This process was five layers deep, and at the end of the subterfuge was a very well known American insurance company that cannot be disclosed because of court-ordered sealing of testimony.

Most of the large securities firms, insurance companies and multi-national companies have layers of offshore captives that avoid taxes, engage in activities that the company would not want to be publicly associated with, like stock manipulation; avoid U.S. regulatory and legal scrutiny; and become the closet for deals gone sour, like Enron.

The Creation of Counterfeit Shares – There are a variety of names that the securities industry has dreamed up that are euphemisms for counterfeit shares. Don't be fooled: Unless the short seller has actually borrowed a real share from the account of a long investor, the short sale is counterfeit. It doesn't matter what you call it and it may become non-counterfeit if a share is later borrowed, but until then, there are more shares in the system than the company has sold.

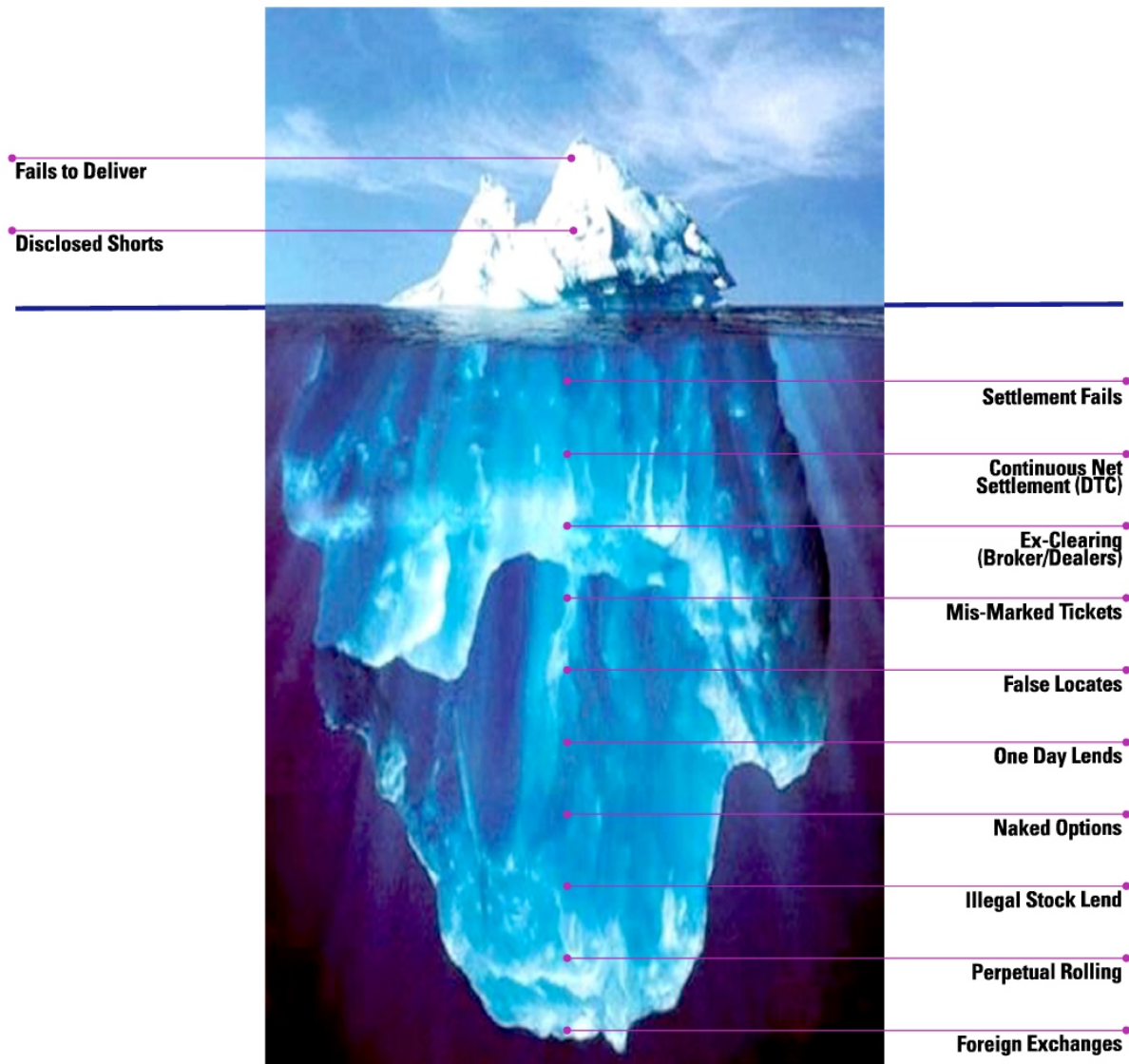
The magnitude of the counterfeiting is hundreds of millions of shares every day, and it may be in the billions. The real answer is locked within the prime brokers and the DTC. Incidentally, counterfeiting of securities is as illegal as counterfeiting currency, but because it is all done electronically, has other identifiers and industry rules and practices, i.e. naked shorts, fails-to-deliver, SHO exempt, etc. the industry and the regulators pretend it isn't counterfeiting. Also, because of the regulations that govern the securities, certain counterfeiting falls within the letter of the rules. The rules, by design, are fraught with loopholes and decidedly short on allowing companies and investors access to information about manipulations of their stock.

The creation of counterfeit shares falls into three general categories. Each category has a plethora of devices that are used to create counterfeit shares.

1. Fails-to-Deliver – If a short seller cannot borrow a share and deliver that share to the person who purchased the (short) share within the three days allowed for settlement of the trade, it becomes a fail-to-deliver and hence a counterfeit share; however the share is transacted by the exchanges and the DTC as if it were real. Regulation SHO, implemented in January 2005 by the SEC, was supposed to end wholesale fails-to-deliver, but all it really did was cause the industry to exploit other loopholes, of which there are plenty (see 2 and 3 below).

Since forced buy-ins rarely occur, the other consequences of having a fail-to-deliver are inconsequential, so it is frequently ignored. Enough fails-to-deliver in a given stock will get that stock on the SHO list, (the SEC's list of stocks that have excessive fails-to-deliver) - which should (but rarely does) see increased enforcement. Penalties amount to a slap on the wrist, so large fails-to-deliver positions for victim companies have remained for months and years.

Short Iceberg



A major loophole that was intentionally left in Reg SHO was the grandfathering in of all pre-SHO naked shorting. This rule is akin to telling bank robbers, “If you make it to the front door of the bank before the cops arrive, the theft is okay.”

Only the DTC knows for certain how many short shares are perpetual fails-to-deliver, but it is most likely in the billions. In 1998, REFCO, a large short hedge fund, filed bankruptcy and was unable to meet margin calls on their naked short shares. Under this scenario, the broker dealers are the next line of financial responsibility. The number of shares that allegedly should have been bought in was 400,000,000, but that probably never happened. The DTC – owned by the broker dealers – just buried 400,000,000

counterfeit shares in their system, where they allegedly remain – grandfathered into “legitimacy” by the SEC. Because they are grandfathered into “legitimacy”, the SEC, DTC and prime brokers pretend they are no longer fails-to-deliver, even though the victim companies have permanently suffered a 400 million share dilution in their stock. (See Appendix A for more on **The Grandfather Clause**).

A significant amount of counterfeiting is the result of the options market exemptions. The rule allows certain options contracts to serve as borrowed shares for short sales even though there is no company issued share behind the options contract. The loophole is easily abused, helped in part by SEC’s apparent inability to globally monitor compliance. There has been considerable pressure on the SEC to close the Options Maker Exemption, but through January 2008, they have refused to act. (See Appendix B for more on **The Options Maker Exemption**).

Three months prior to SHO, the aggregate fails-to-deliver on the NASDAQ and the NYSE averaged about 150 million shares a day. Three months after SHO it dropped by about 20 million, as counterfeit shares found new hiding places (see 2 and 3 below). It is noteworthy that aggregate fails-to-deliver are the only indices of counterfeit shares that the DTC and the prime brokers report to the SEC. The bulk of the counterfeiting remains undisclosed, so don’t be deceived when the SEC and the industry minimize the fails-to-deliver information. It is akin to the lookout on the *Titanic* reporting an ice cube ahead.

2. Ex-clearing counterfeiting – The second tier of counterfeiting occurs at the broker dealer level. This is called ex-clearing. These are trades that occur dealer to dealer and don’t clear through the DTC. Multiple tricks are utilized for the purpose of disguising naked shorts that are fails-to-deliver as disclosed shorts, which means that a share has been borrowed. They also make naked shorts “invisible” to the system so they don’t become fails-to-deliver, which is the only thing the SEC tracks. The SEC does not examine ex-clearing transactions as they don’t believe that Reg SHO applies to short shares held in ex-clearing.

Some of the tricks are as follows:

- Stock sales are either a long sale or a short sale. When a stock is transacted the broker checks the appropriate box. By mismarking the trading ticket -checking the long box when it is actually a short sale the short never shows up, unless they get caught, which doesn’t happen often. The position usually gets reconciled when the short covers.
- Settlement of stock transactions is supposed to occur within three days, at which time a naked short should become a fail-to-deliver, however the SEC routinely and automatically grants a number of extensions before the naked short gets reported as a fail-to-deliver. Most of the short hedge funds and broker dealers have multiple entities, many offshore, so they sell large naked short positions from entity to entity. Position rolls, as they are called, are frequently done broker to broker, or hedge fund to hedge fund, in block trades that never appear on an exchange. Each movement resets the time clock for the naked position becoming a fail-to-deliver and is a means of quickly getting a company off of the SHO threshold list. (See Appendix C for more on **Short Squeezes**).
- The prime brokers or others may do a buy-in of a naked short position. If they tell the short hedge fund that we are going to buy-in at 3:59 EST on Friday, the hedge

fund naked shorts into their own buy-in (or has a co-conspirator do it) and rolls their position, hence circumventing Reg SHO.

- Most of the large broker dealers operate internationally, so when regulators come in (they almost always “call ahead”) or compliance people come in (ditto), large naked positions are moved out of the country and returned at a later date.
- The stock lend is enormously profitable for the broker dealers who charge the short sellers large fees for the “borrowed” shares, whether they are real or counterfeit. When shares are loaned to a short, they are supposed to remain with the short until he covers his position by purchasing real shares. The broker dealers do one-day lends, which enables the short to identify to the SEC the account that shares were borrowed from. As soon as the report is sent in, the shares are returned to the broker dealer to be loaned to the next short. This allows eight to ten shorts to borrow the same shares, resetting the SHO-fail-to-deliver clock each time, which makes all of the counterfeit shares look like legitimate shares. The broker dealers charge each short for the stock lend.
- Margin account buyers, because of loopholes in the rules, inadvertently aid the shorts. If short A sells a naked short he has three days to deliver a borrowed share. If the counterfeit share is purchased in a margin account, it is *immediately* put into the stock lend and, for a fee, is available as a borrowed share to the short who counterfeited it in the first place. This process is perpetually fluid with multiple parties, but it serves to create more counterfeit shares and is an example of how a counterfeit share gets “laundered” into a legitimate borrowed share.
- Margin account agreements give the broker dealers the right to lend those shares without notifying the account owner. Shares held in cash accounts, IRA accounts and any restricted shares are not supposed to be loaned without express consent from the account owner. Broker dealers have been known to change cash accounts to margin accounts without telling the owner, take shares from IRA accounts, take shares from cash accounts and lend restricted shares. One of the prime brokers recently took a million shares from cash accounts of the company’s founding investors without telling the owners or the stockbroker who represented ownership. The shares were put into the stock lend, which got the company off the SHO threshold list, and opened the door for more manipulative shorting.

This is a sample of tactics used. For a company that is under attack, the counterfeit shares that exist at this ex-clearing tier can be ten or twenty times the number of fails-to-deliver, which is the *only* category tracked and policed by the SEC.

3. Continuous Net Settlement – The third tier of counterfeiting occurs at the DTC level. The Depository Trust and Clearing Corporation (DTCC) is a holding company owned by the major broker dealers, and has four subsidiaries. The subsidiaries that are of interest are the Depository Trust Company (DTC) and the National Securities Clearing Corporation (NSCC). The DTC has an account for each broker dealer, which is further broken down to each customer of that broker dealer. These accounts are electronic entries. Ninety seven percent of the actual stock certificates are in the vault at the DTC with the DTC nominee’s name on them. The NSCC processes transactions, provides the broker dealers with a central clearing source, and operates the stock borrow program.

When a broker dealer processes the sale of a short share, the broker dealer has three days to deliver a borrowed share to the purchaser and the purchaser has three days to

deliver the money. In the old days, if the buyer did not receive his shares by settlement day, three days after the trade, he took his money back and undid the transaction. When the stock borrow program and electronic transfers were put in place in 1981, this all changed. At that point the NSCC guaranteed the performance of the buyers and sellers and would settle the transaction even though the seller was now a fail-to-deliver on the shares he sold. The buyer has a counterfeit share in his account, but the NSCC transacts it as if it were real.

At the end of each day, if a broker dealer has sold more shares of a given stock than he has in his account with the DTC, he borrows shares from the NSCC, who borrows them from the broker dealers who have a surplus of shares. So far it sounds like the whole system is in balance, and for any given stock the net number of shares in the DTC is equal to the number of shares issued by the company.

The short seller who has sold naked - he had no borrowed shares - can cure his fail-to-deliver position and avoid the required forced buy-in by borrowing the share through the NSCC stock borrow program.

Here is the hocus pocus that creates millions of counterfeit shares.

When a broker dealer has a net surplus of shares of any given company in his account with the DTC, only the *net amount* is deducted from his surplus position and put in the stock borrow program. However the broker dealer does *not* take a like number of shares from his customer's individual accounts. The net surplus position is loaned to a second broker dealer to cover his *net* deficit position.

Let's say a customer at the second broker dealer purchased shares from a naked short seller - counterfeit shares. His broker dealer "delivers" those shares to his account from the shares borrowed from the DTC. The lending broker dealer did not take the shares from any specific customers' account, but the borrowing broker dealer put the borrowed shares in specific customer's accounts. Now the customer at the second prime broker has "real" shares in his account. The problem is it's the same "real" shares that are in the customer's account at the first prime broker.

The customer account at the second prime broker now has a "real" share, which the prime broker can lend to a short who makes a short sale and delivers that share to a third party. *Now there are three investors with the same counterfeit shares in their accounts.*

Because the DTC stock borrow program, and the debits and credits that go back and forth between the broker dealers, only deals with the net difference, it never gets reconciled to the actual number of shares issued by the company. As long as the broker dealers don't repay the total stock borrowed and only settle their net differences, they can "grow" a company's issued stock.

This process is called Continuous Net Settlement (CNS) and it hides billions of counterfeit shares that never make it to the Reg. SHO radar screen, as the shares "borrowed" from the DTC are treated as a legitimate borrowed shares.

For companies that are under attack, the counterfeit shares that are created by the CNS program are thought to be ten or twenty times the disclosed fails-to-deliver, and the true CNS totals are only obtained by successfully serving the DTC with a subpoena. The SEC doesn't even get this information. The actual process is more complex and arcane than this, but the end result is accurately depicted.

Ex-clearing and CNS counterfeiting are used to create an enormous reserve of counterfeit shares. The industry refers to these as "strategic fails-to-deliver." Most people

would refer to these as a stockpile of counterfeit shares that can be used for market manipulation. One emerging company for which we have been able to get or make reasonable estimates of the total short interest, the disclosed short interest, the available stock lend and the fails-to-deliver, has fifty “buried” counterfeit shares for every fail-to-deliver share, which is the only thing that the SEC tracks, consequently the SEC has not acted on shareholder complaints that the stock is being manipulated.

The Anatomy of a Short Attack – Abusive shorting are not random acts of a renegade hedge funds, but rather a coordinated business plan that is carried out by a collusive consortium of hedge funds and prime brokers, with help from their friends at the DTC and major clearinghouses. Potential target companies are identified, analyzed and prioritized. The attack is planned to its most minute detail.

The plan consists of taking a large short position, then crushing the stock price, and, if possible, putting the company into bankruptcy. Bankrupting the company is a short homerun because they never have to buy real shares to cover and they don’t pay taxes on the ill-gotten gain. (See Appendix D for more on **Bankrupting The Victim Company**).

When it is time to drive the stock price down, a blitzkrieg is unleashed against the company by a cabal of short hedge funds and prime brokers. The playbook is very similar from attack to attack, and the participating prime brokers and lead shorts are fairly consistent as well.

Typical tactics include the following:

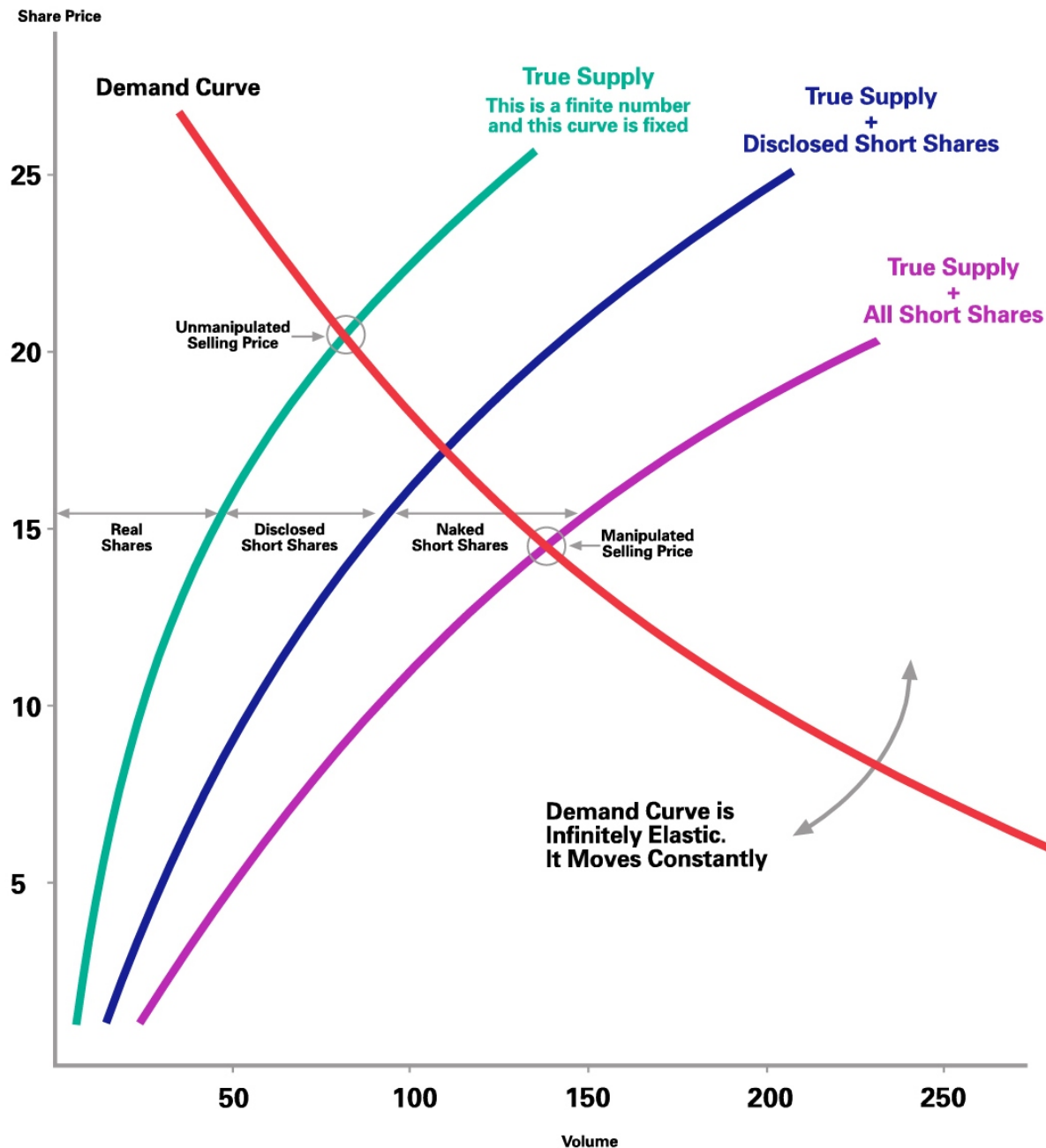
1. Flooding the offer side of the board – Ultimately the price of a stock is found at the balance point where supply (offer) and demand (bid) for the shares find equilibrium. This equation happens every day for every stock traded. On days when more people want to buy than want to sell, the price goes up, and, conversely, when shares offered for sale exceed the demand, the price goes down.

The shorts manipulate the laws of supply and demand by flooding the offer side with counterfeit shares. They will do what has been called a short down ladder. It works as follows: Short A will sell a counterfeit share at \$10. Short B will purchase that counterfeit share covering a previously open position. Short B will then offer a short (counterfeit) share at \$9. Short A will hit that offer, or short B will come down and hit Short A’s \$9 bid. Short A buys the share for \$9, covering his open \$10 short and booking a \$1 profit.

By repeating this process the shorts can put the stock price in a downward spiral. If there happens to be significant long buying, then the shorts draw from their reserve of “strategic fails-to-deliver” and flood the market with an avalanche of counterfeit shares that overwhelm the buy side demand. Attack days routinely see eighty percent or more of the shares offered for sale as counterfeit. Company news days are frequently attack days since the news will “mask” the extraordinary high volume. It doesn’t matter whether it is good news or bad news.

Flooding the market with shares requires foot soldiers to swamp the market with counterfeit shares. An off-shore hedge fund devised a remarkably effective incentive program to motivate the traders at certain broker dealers. Each trader was given a debit card to a bank account that only he could access. The trader’s performance was tallied, and, based upon the number of shares moved and the other “success” parameters; the hedge fund would wire money into the bank account daily. At the end of each day, the traders went to an ATM and drew out their bribe. Instant gratification.

Impact of Counterfeit Shares On Stock Price



Global Links Corporation is an example of how wholesale counterfeiting of shares will decimate a company's stock price. Global Links is a company that provides computer services to the real estate industry. By early 2005, their stock price had dropped to a fraction of a cent. At that point, an investor, Robert Simpson, purchased 100%+ of Global Links' 1,158,064 issued and outstanding shares. He immediately took delivery of

his shares and filed the appropriate forms with the SEC, disclosing he owned all of the company's stock. His total investment was \$5205. The share price was \$.00434. The day after he acquired all of the company's shares, the volume on the over-the-counter market was 37 million shares. The following day saw 22 million shares change hands – all without Simpson trading a single share. It is possible that the SEC has been conducting a secret investigation, but that would be difficult without the company's involvement. It is more likely the SEC has not done anything about this fraud.

Massive counterfeiting can drive the stock price down in a matter of hours on extremely high volume. This is called “crashing” the stock and a successful “crash” is a one-day drop of twenty-percent or a thirty-five percent drop in a week. In order to make the crash “stick” or make it more effective, it is done concurrently with all or most of the following: (see Appendix E for more on **Crashing The Stock**).

2. Media assault – The shorts, in order to realize their profit, must ultimately put the victim into bankruptcy or obtain shares at a price much cheaper than what they shorted at. These shares come from the investing public who panics and sells into the manipulation. Panic is induced with assistance from the financial media.

The shorts have “friendly” reporters with the Dow Jones News Agency, the *Wall Street Journal*, *Barrons*, the *New York Times*, Gannett Publications (*USA Today* and the *Arizona Republic*), CNBC and others. The common thread: A number of the “friendly” reporters worked for The Street.com, an Internet advisory service that short hedge-fund managers David Rucker and Jim Cramer owned. This alumni association supported the short attack by producing slanted, libelous, innuendo laden stories that disparaged the company, as it was being crashed.

One of the more outrageous stories was a front-page story in *USA Today* during a short crash of TASER's stock price in June 2005. The story was almost a full page and the reporter concluded that TASER's electrical jolt was the same as an electric chair – proof positive that TASERs did indeed kill innocent people. To reach that conclusion the reporter over estimated the TASER's amperage by a factor of one million times. This “mistake” was made despite a detailed technical briefing by TASER to seven *USA Today* editors two weeks prior to the story. The explanation “Due to a mathematical error” appeared three days later – after the damage was done to the stock price.

Jim Cramer, in a video-taped interview with The Street.com, best described the media function:

“When (shorting) ... The hedge fund mode is to not do anything remotely truthful, because the truth is so against your view, (so the hedge funds) create a new 'truth' that is development of the fiction... you hit the brokerage houses with a series of orders (a short down ladder that pushes the price down), then we go to the press. You have a vicious cycle down – it's a pretty good game.”

This interview, which is more like a confession, was never supposed to get on the air; however, it somehow ended up on YouTube. Cramer and The Street.com have made repeated efforts, with some success, to get it taken off of YouTube.

3. Analyst Reports – Some alleged independent analysts were actually paid by the shorts to write slanted negative ratings reports. The reports, which were represented as being independent, were ghost written by the shorts and disseminated to coincide with a short attack. There is congressional testimony in the matter of Gradient Analytic and Rucker

Partners that expands upon this. These libelous reports would then become a story in the aforementioned “friendly” media. All were designed to panic small investors into selling their stock into the manipulation.

4. Planting moles in target companies – The shorts plant “moles” inside target companies. The moles can be as high as directors or as low as janitors. They steal confidential information, which is fed to the shorts who may feed it to the friendly media. The information may not be true, may be out of context, or the stolen documents may be altered. Things that are supposed to be confidential, like SEC preliminary inquiries, end up as front-page news with the short-friendly media.
5. Frivolous SEC investigations – The shorts “leak” tips to the SEC about “corporate malfeasance” by the target company. The SEC, which can take months processing Freedom of Information Act requests, swoops in as the supposed “confidential inquiry” is leaked to the short media. (See Appendix F for more on **Frivolous Investigations**).
The plethora of corporate rules means the SEC may ultimately find minor transgressions or there may be no findings. Occasionally they do uncover an Enron, but the initial leak can be counted on to drive the stock price down by twenty-five percent. The announcement of no or little findings comes months later, but by then the damage that has been done to the stock price is irreversible. The San Francisco office of the SEC appears to be particularly close to the short community.
6. Class Action lawsuits – Based upon leaked stories of SEC investigations or other media exposes, a handful of law firms immediately file class-action shareholder suits. Milberg Weiss, before they were disbanded as a result of a Justice Department investigation, could be counted on to file a class-action suit against a company that was under short attack. Allegations of accounting improprieties that were made in the complaint would be reported as being the truth by the short friendly media, again causing panic among small investors. (See Appendix G for more on **Class Action Lawsuits**).
7. Interfering with target company’s customers, financings, etc. – If the shorts became aware of clients, customers or financings that the target company was working on, they would call and tell lies or otherwise attempt to persuade the customer to abandon the transaction. Allegedly the shorts have gone so far as to bribe public officials to dissuade them from using a company’s product.
8. Pulling margin from long customers – The clearinghouses and broker dealers who finance margin accounts will suddenly pull all long margin availability, citing very transparent reasons for the abrupt change in lending policy. This causes a flood of margin selling, which further drives the stock price down and gets the shorts the cheap long shares that they need to cover. (See Appendix H for more on **Pulling Margin**).
9. Paid bashers – The shorts will hire paid bashers who “invade” the message boards of the company. The bashers disguise themselves as legitimate investors and try to persuade or panic small investors into selling into the manipulation. (See Appendix P for **Confessions Of A Paid Stock Basher**).

This is not every dirty trick that the shorts use when they are crashing the stock. Almost every victim company experiences most or all of these tactics.

How Pervasive Is This? – At any given point in time more than 100 emerging companies are under attack as described above. This is not to be confused with the day-to-day shorting that occurs in virtually every stock, which is purportedly about thirty percent of the daily volume.

The success rate for short attacks is over ninety percent - a success being defined as putting the company into bankruptcy or driving the stock price to pennies. It is estimated that 1000 small companies have been put out of business by the shorts. Admittedly, not every small company deserves to succeed, but they do deserve a level playing field.

The secrecy that surrounds the shorts, the prime brokers, the DTC and the regulatory agencies makes it impossible to accurately estimate how much money has been stolen from the investing public by these predators, but the total is measured in billions of dollars. The problem is also international in scope.

Who Profits from this Illicit Activity? – The short answer is everyone who participates. Specifically:

1. The shorts – They win over ninety percent of the time. Their return on investment is enormous because they don't put any capital up when they sell short – they get cash from the sale delivered to their account. As long as the stock price remains under their short sale price, it is all profit on little investment.
2. The prime brokers – The shorts need the prime brokers to aid in counterfeiting shares, which is the cornerstone of the fraud. Not only do the prime brokers get sales commissions and interest on margin accounts, they charge the shorts “interest” on borrowed shares. This can be as high as five percent per week. *The prime brokers allegedly make eight to ten billion dollars a year from their short stock lend program.* The prime brokers also actively short the victim companies, making large trading profits.
3. The DTC – A significant amount of the counterfeiting occurs at the DTC level. They charge the shorts “interest” on borrowed shares, whether it is a legitimate stock borrow or counterfeit shares, as is the case in a vast majority of shares of a company under attack. The amount of profit that the DTC receives is unknown because it is a private company owned by the prime brokers

The Cover Up – The securities industry, certain “respected” members of corporate America who like the profits from illegal shorting, certain criminal elements and our federal government do not want the public to become aware of this problem.

The reason for the cover up is money.

Everyone, including our elected officials, gets lots of money. Consequently there is an active campaign to keep a lid on information. The denial about these illegal practices comes from the industry, the DTC, the SEC and certain members of Congress. They are always delivered in blanket generalities. If indeed there is no problem, as they claim, then why don't they show us the evidence instead of actively and aggressively fighting or deflecting every attempt at obtaining information that is easily accessible for them and impossible for companies and investors? Accusers are counter attacked as being sour-grapes losers, lunatics or opportunistic lawyers trying to unjustly enrich themselves. Death threats are not an unheard of occurrence.

The securities industry counters with a campaign of misinformation. For example, they proudly pointed out that only one percent of the *dollar* volume of *listed* securities are fails-to-deliver. What they don't mention:

- that the fails-to-deliver are concentrated in companies being attacked

- for companies under attack, for every disclosed fail-to-deliver there maybe ten to forty times that number of undisclosed counterfeit shares
- companies under attack have seen their stock price depressed to a small fraction of the price of an average share, therefore the fails-to-deliver as a percentage of number of shares is considerably higher than as a percentage of dollar volume
- the examples cited are limited to listed companies, but much of the abuse occurs in the over the counter market, regional exchanges and on unregulated foreign exchanges that allow naked shorting of American companies, who are not even aware they are traded on the foreign exchanges.

Why does this continue to happen? It is no accident that the most pervasive financial fraud in the history of this country continues unabated. The securities industry advances its agenda on multiple fronts:

1. The truth about counterfeiting remains locked away with the perpetrators of the fraud. The prime brokers, hedge funds, the SEC and the DTC are shrouded in secrecy. They actively and aggressively resist requests for the truth, be it with a subpoena or otherwise. Congressional subpoenas are treated with almost as much disdain as civil subpoenas. (See Appendix I for more on **A Lack of Transparency**).
2. The body of securities law at the *federal* level is so stacked in favor of the industry that it is almost impossible to successfully sue for securities fraud in federal court.

For example, in a normal fraud case, a complaint can be filed based upon “information and belief” that a fraud has been committed. The court then allows the plaintiff to subpoena evidence and depose witnesses, including the defendants. From this discovery, the plaintiff then attempts to prove his case.

Federal securities fraud cases can’t be filed based upon “information and belief”; you must have evidence first in order to not have the complaint immediately dismissed for failure to state a cause of action. This information is not available from the defendants (see above) without subpoenas, but you can’t issue a subpoena because the case gets dismissed before discovery is opened. (See Appendix J for more on **Federal Securities Law**).

This is only one example of the terrible inequities that exist in federal securities law.

3. The SEC is supposed to protect the investing public from Wall Street predators. While some SEC staffers are underpaid, overworked, honest civil servants, the top echelons of the SEC frequently end up in high-paying Wall Street jobs. (See Appendix K for more on former SEC administrator **Richard Sauer**). The five-person Board of Governors, who oversee the SEC, is dominated by the industry. The governors are presidential appointees and the industry usually fills three slots, frequently including the chairmanship. (See Appendix L for more on **The Enforcement Apparatus**).
4. For those rare occasions when the SEC prosecutes an industry insider, the cases almost never go to a judgment or a criminal conviction. The securities company settles for a fine and no finding of guilt. The fine, which may seem like a large sum, is insignificant in the context of an industry that earned 35 billion dollars in 2006. Fines, settlements and legal expenses are just a cost of doing business for Wall Street.
5. The root cause of the impossibly skewed federal laws and the ineffectiveness of the SEC and other regulatory bodies rests squarely with our elected officials. The securities industry contributes heavily to both parties at the presidential and congressional levels.

As long as the public is passive about securities reform, our elected officials are happy to take the money, which at the federal level was 65 million dollars in 2006.

The Democrats swept into power with a promise of ethics reform. Their majority in congress allowed Christopher Dodd (D-CT) to ascend to the chairmanship of the Senate Banking Committee, which regulates the securities industry. His largest single contributor (\$175,400) in the first quarter of 2007 was (employees of) SAC Capital, a very aggressive short hedge fund. Are we surprised that Dodd has opposed additional regulation of hedge funds. They are virtually unregulated. (See Appendix M for more on **Buying Political Influence**).

6. Some states have their own securities laws and their own enforcement arm. Certain states including Connecticut, Illinois, Utah, Louisiana and others, have begun active enforcement of their own laws. The state laws are not nearly as pro industry as federal laws and plaintiffs are having success.

To thwart this, the industry with the support of the SEC, is attempting to have the federal court system and federal agencies, be the sole venue for securities matters. The SEC is working hand in hand with the industry to advance this theory of federal preemption, which would put all securities matters under federal law, all litigation in federal courts, and all enforcement with the SEC. (See Appendix N for more of how **The SEC Shelters The Securities Industry**).

The following are recent examples of how the SEC is advancing the industry agenda:

- The San Francisco office of the SEC issued subpoenas to various short friendly media outlets after congressional hearings about David Rocker and Gradient Analytic. This investigation into the media involvement with the shorts was ended by the chairman of the SEC, Christopher Cox, who withdrew the subpoenas, apparently concluding that the First Amendment right to free speech protected participants in an alleged stock manipulation. Jim Cramer ripped up his subpoena on his television show, thumbing his nose at the SEC. (See Appendix O for more on **Gradient Analytic**).
- In early 2007, the SEC completely exonerated Gradient, citing Gradient's First Amendment rights.
- The Nevada Supreme court heard a case captioned Nanopierce vs. DTCC. Nanopierce is an emerging company that was attacked by the shorts and subjected to massive counterfeiting of their stock by the DTCC. This state court case is close to opening discovery against the DTCC, so the industry is attempting to kill the lawsuit by arguing it should be in federal court - where it will be DOA. The SEC showed up as a friend of the defendant DTCC, and filed a brief in support of the DTCC efforts to remove the case to the federal court system.
- Both houses of the Utah legislature passed a bill that required daily disclosure of fails-to-deliver, including identifying specific companies and the specific broker dealer positions in that company. The bill also outlawed naked shorting of companies domiciled in Utah. The industry threatened litigation based upon federal preemption and backed the state down. The bill was not signed into law.
- A bill was introduced to the Arizona legislature that required disclosure similar to the Utah bill, but without the illegal naked shorting provision. This is the same information that the DTC confidentially provides to the SEC. Certain prime broker's lobbying effort allegedly managed to get the bill killed in committee. The

industries efforts to curtail state authority, is an effort to draw all securities matters under the federal umbrella, where small investors don't have a chance of obtaining justice.

- In February 2007 the SEC determined that the hedge fund industry did not require any additional regulation – they are virtually unregulated. This may be the height of arrogance.
- In an effort to thwart political efforts to regulate hedge funds and clean up Wall Street, the industry is advancing politically the theory of counterparty discipline. Essentially what they are arguing is akin to Al Capone calling the chief of police and telling him we don't need the police, because we have rival gangs and they will make sure everyone follows the rules. This argument is apparently at least partially subscribed to by the SEC and Christopher Dodd, Chairman of the Senate Banking Committee and Richard Shelby former Chairman and ranking member. Both Senators are the beneficiaries of large amounts of Wall Street generosity.

Sources – Information used was obtained from public records; the SEC; the Leslie Boni Report to the SEC on shorting; evidence and testimony in court proceedings; conversations with attorneys who are involved in securities litigation; former SEC employees; conversations with management of victim companies; and first hand experience as investors in companies that have suffered short attacks. This web site is sponsored by Citizens for Securities Reform.

What to Do? – Many of our elected officials at the federal and state level do not understand most of what is contained in this paper. They *must* come to understand this fraud, and, more importantly, understand that their constituents are angry.

Pass this information to everyone you know – put it in the public conscience. Then the citizenry needs to engage in a massive letter-writing campaign. Feel free to attach this report. Make sure your elected officials, at the federal level and state level know how you feel. Ultimately, votes in the home district will trump money from the outside.

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Appendix A

The Grandfather Clause was one of many loopholes in the initial SHO regulations enacted in January 2005. This exemption essentially granted amnesty to counterfeit shares sold prior to 2005. The reason given by the SEC for this provision was they (the SEC) “were concerned about creating volatility through short squeezes.” The SEC offered no empirical or analytic data in support of the grandfather exemption, and did not offer any explanation of why they were essentially granting a safe haven for those who had engaged in the practice of selling unregistered securities (counterfeiting). The number of shares that were grandfathered in is unknown, except to the DTC and the prime brokers, but it was likely in the billions and possibly trillions. The DTC and the securities industry deny that a meaningful number of counterfeit shares were protected by the grandfather clause; investor advocates believe otherwise.

After much public and political pressure, the SEC relented and closed the grandfather clause loophole in mid - 2007. This should have resulted in a tremendous increase in short shares being borrowed or covered triggering increased buying with a resultant increase in prices. Yet the abolition of the grandfather clause barely created a ripple.

The reason for the imperceptible level of buy-ins was because the DTC and broker dealers moved huge numbers of counterfeit shares from the DTC to ex-clearing. This strategy is successful, because the SEC does not enforce the requirements of Reg SHO for ex-clearing shares. Another safe haven for counterfeit shares.

Another loophole that is the repository for millions or billions of counterfeit shares is the DTC - sponsored and SEC - condoned RECATS program. The DTC, as a service to its prime broker - member/owners, notifies the broker when a position is about to become a fail-to-deliver. The broker may send the position out of DTC by transferring it overseas or doing a match trade with another party. The position may be returned to the DTC where the account is marked to market (value) and all of the time requirements of naked shorting are reset. The cycle can be repeated as often as is necessary to keep the positions naked.

With loopholes like these, it is delusional to think that SHO or anything else done to date is going to have a meaningful impact on counterfeiting. It is also denial to think that the promulgation of illogical rules and the non-existent enforcement by the SEC is not aiding and abetting the counterfeiting of massive amounts of stock in U.S. companies.

Appendix B

The Options Maker Exemption is a loophole that is often abused and is a readily available source of a large number of counterfeit shares. Options trading and abuse thereof, is incredibly complex with many layers of instruments and trading strategies, i.e. straddles, married trades, derivatives, etc. It is far more complex than the simple puts and calls that most investors are familiar with. The fundamental tenant of this loophole is that an options trader may utilize equities (stock) to hedge a trading position. Options traders rarely own any shares in companies they are trading options in. Consequently, the regulators allow the trader to keep his position neutral by offsetting it with an equity transaction.

For example, let's say an options trader writes a put contract for a stock that is near or in the money. The trader, by writing this contract, is agreeing to purchase the shares from a third party at a specific price – let's say \$10 for the sake of this example. If the stock price plummets to \$5, the contract will be put to the trader, forcing him to buy the stock for \$10 – at a loss of \$5. The trader protects himself by selling a naked short at the time he writes the put contract. By doing that, under our example, he has made a \$5 profit on the naked short that offsets the \$5 loss on the option contract. This is considered a legitimate hedge, and the naked short sale is allowed per the options maker exemption.

This exemption is fraught with opportunities for abuse. Once the underlying put contract expires, little effort is made to collect the naked short shares that were sold initially: They tend to remain permanently in circulation. The shorts may purchase huge put contracts for long positions they don't own. For the cost of the put, they have caused the stock of a victim company to be flooded with counterfeit shares from the options trader, thereby driving the price down even more.

It is important to understand that virtually all of the broker dealers are also options traders, so it is all in house. Also important is that in 2000, the enforcement responsibility for these transactions was split between the SEC and the Commodities Futures Trading Commission. Each agency seemingly relies on the other, and, as a consequence, there is virtually no enforcement in this area. Rampant abuse is the predictable result.

The SEC and the broker dealers believe that if the transaction can be made to look like a legitimate hedge, even though it is generating millions of counterfeit shares that are being used to manipulate a stock, then it is okay. The system is easy to game.

Let's say there is a play on, involving a consortium of shorts which includes a number of broker dealers, to crush a stock by flooding the market with counterfeit shares. The play works as follows:

Broker dealer A, who is also an options trader, writes an options contract for 5 million shares to broker dealer B that expires in (say) two years. Based upon writing this contract, broker dealer A is allowed to short 5 million counterfeit shares. Broker dealer B writes the same contract to broker dealer A, except it expires in two years and one day. The extra day fools the regulators and the broker dealers' compliance department into believing this is not a match trade. Now broker dealer B can naked short 5 million counterfeit shares – a 10 million share stock pile of counterfeit shares is now available to use to crush the victim company's stock with. Aside from the Ponzi - scheme nature

of the offsetting puts, the common expectation is that the short cabal will be able to put the company out of business prior to the options contract expiration. At expiration the offsetting contracts “wash out” leaving behind the counterfeit shares. These contracts are almost never put through an options exchange, and, therefore, are invisible to all except the perpetrators.

Not covered under the Options Maker Exemption, but a source of counterfeit shares that flow from the options traders, is the rule that a short may use a current maturity call as his “borrowed” share, enabling him to “legally” sell a counterfeit share. The call has no real share behind it in most cases. If the contract is not a current maturity call, that requirement is circumvented by the short notifying the options trader that he wants delivery of the shares. This causes the SEC to view the sale of the counterfeit share as a legitimate short share being sold.

In most of these abusive transactions, the option contracts only purpose is to facilitate the counterfeiting of large numbers of shares – the option contract is really trading residue. Once the contract has served its purpose of “legitimizing” the counterfeiting and fooling the regulators, it has no value to the short. Frequently these contracts, by agreement between the options trader(s) and/or the short, are unwound before they settle. Within the industry, these are referred to as “walk away” contracts. The counterfeit shares are almost always left behind, perpetually in circulation.

Should the SEC attempt to examine any of these transactions, the broker dealer can move the shares out by doing a match trade with another broker dealer. Essentially this is: You buy 100 of mine and I’ll buy 100 of yours. In an examination, the SEC sees broker A’s naked short position being sold, and, hence, off the books of broker A. They also see that broker A purchased a short position from broker B which resets the fail-to-deliver clock. Broker A is found to be in compliance because the time requirements of his position becoming a failed position have been reset, putting broker A in compliance, hence the investigation is ended. The execution of this simplistic scheme is far more elaborate, with lot sizes changed and multiple stops along the way, frequently outside of the U.S. Figuring this out is laborious but possible, but is rarely undertaken by the SEC.

Appendix C

Short Squeezes only exist in the minds of naïve long share holders. As long as the shorts have the ability to make a virtually unlimited supply of counterfeit shares, they can usually meet the buy-side demand and keep a lid on the stock price - or, better yet, drop it.

It is myth to think the shorts have to cover in order to realize a profit. While this may apply to small investors, it does not apply to the broker dealers. Each day their short position is “marked to market.” For example, if a broker dealer shorts 100 shares at \$10, the liability in that account is $\$10 \times 100$ or \$1000. So long as the stock price is \$10, the money remains in the account. If the stock price drops to \$9, the account is marked to market, which reduces the required funds in the account to \$900. The \$100 that is freed up can be drawn out by the broker on a daily basis. Conversely, if the stock price goes to \$11, he must add \$100 to the account. The equation for the broker becomes: Do I counterfeit more shares, drive the price down and take out more profit or do I stop counterfeiting, watch the price rise and add more money to my account? Morality rarely enters into the decision-making process.

Situations where the broker dealers join with large hedge funds to attack a small to mid-size company are less likely to see covering, even if the stock price gets away from them on a short term basis. Good company news or earnings are shorted into keeping a lid on the stock while driving down the multiple. They are very patient, well financed and have the ability to wait until the company stumbles, then they attack. They can also attempt to hurt the company’s business and earnings utilizing the devices explained in this text. For these reasons short squeezes in emerging companies almost never occur.

When attacks involve very large victim companies that are extremely solid and profitable, the shorts may cover these positions because the stock of these companies is too widely traded to manipulate for a long period of time. The short attack on Apple that occurred in early 2008 is likely a case in point.

The practice of wholesale counterfeiting of stock, that has made short squeezes obsolete, began in earnest in the mid-nineties. Initially attacks were done in the fringe markets, i.e. over the counter or companies that appeared to be easy victims. It was so easy, and so much money was flowing into hedge funds /broker dealers, that the game was expanded and moved up to the fringe exchanges, particularly those whose rules and enforcement apparatus allowed the manipulations to be done from the shadows. The regional exchanges became a haven for shorts that continues to this day. Up to this point the overwhelming majorities of companies were too weak to fight back and frequently went out of business.

The attacks moved up the exchange “food chain” and became increasingly large and vicious, targeting good companies that happened to stumble following a favorable run up in stock price. By 2008, targets included companies such as Bear Stearns, Lehman Brothers and Apple.

This degradation of our capital markets could only exist because of the seriously flawed and compromised enforcement apparatus that starts with the Congress and ends with the broker dealers who are violating, on a large scale basis, the rules they are supposed to be enforcing. Even if the SEC wanted to aggressively investigate large-

scale manipulative trading, they are seriously hampered because they are still a paper-based organization. Requested trading records are delivered in the form of truckloads of paper tickets, with the promise of more truckloads if need be. The electronic capabilities of the SEC to receive, process and analyze data is decades behind Wall Street's.

Appendix D

Bankrupting The Victim Company is not necessarily the end of the play. This case is an illustration of how Wall Street can effectuate the takeover of a victim company for nothing. Pending or contemplated litigation prohibits identifying the victim company or the broker dealers, but this occurred earlier this decade.

According to Jim Cramer, the perception of unfavorable industry conditions gave license to the shorts to attack the industry. The events, trading patterns and the precipitous drop in our examples stock price is indicative of a massive short attack, however the definitive information is locked within the DTC.

Our example had about 40 million shares issued and outstanding and with a large debt load and good, but declining earnings, they were a prime short target. Naked shorting was rampant and largely invisible then, consequently the environment was conducive for wholesale counterfeiting of the stock. It is not known what the exact extent of the shorting was, but assume it was 50 million shares for the sake of this illustration. The stock price dropped from over \$25 to under \$2 just prior to the bankruptcy filing. Assuming it was shorted all the way down at an average price of \$15, the potential profit by the shorts would be \$.75 billion.

According to court documents, concurrent with the decline in the stock price a group of investment bankers who had shorted the stock began buying participations in the victim's senior credit debt. Typically the investment bankers were purchasing portions of the original bank debt at a deep discount. Large credit facilities are typically spread among a consortium of participating lenders. The investment bankers, by controlling the senior debt were in a position to monitor and facilitate, if necessary, the filing of bankruptcy. A high degree of confidence by the investment bankers that bankruptcy was likely, would give their prop desks a high degree of comfort that the counterfeited shares would never have to be covered or be taxed. The potential profit from the short sales would be enough to purchase the discounted senior debt and still have a sizeable sum left over.

The investment bankers controlled the financial fate of the company by virtue of being the senior creditors. They forced a Chapter 11 filing, then manipulated the asset valuation by the bankruptcy court, insuring that they would own virtually all of the stock in the reorganized, debt free company. The shorting and the bankruptcy manipulation wiped out the original shareholders, the junior creditors and caused substantial losses for the banks who originally made the loans.

The reorganized company was split up by the new owners - the vast majority of whom were the investment bankers who purchased the discounted senior debt participations - and one division was sold to a competitor and one to a private equity firm, for about \$4 billion. The investment bankers made billions of profits on little or no net investment, as a result of allegedly manipulating, the stock price and the valuation of the bankrupt estate. Manipulative naked shorting and bankruptcy fraud are alleged and both are illegal.

Appendix E

Crashing the Stock occurs when the price is getting away from the shorts, or when it is time to knock the price down so short positions can be covered at a profit.

The short mindset relative to trades that are going bad is entirely different from a long investor. A long investor typically will cut his losses by reducing his position in a stock that is moving away from him. The short reacts differently. It is important to remember that so long as the stock price is remaining flat or dropping, the short has little net investment. Further he has access to a virtually unlimited supply of shares that are “free” as long as he can keep the price from going up.

A recent case involves an emerging technology company that was allegedly being shorted by a group of B tier shorts that included a west coast brokerage firm. The broker had a million share short position with an estimated short price of \$11. Despite 60-90% of the daily sells being short, the stock price had increases to \$18, putting the broker upside down by \$7 million. A “crash” of the stock was implemented, and, in a matter of days, drove the price down to \$13. The regional broker contributed an estimated additional 250,000 short shares to help drive the price down. At the end of the crash, he was short 1.25 million shares, but was only upside down \$2 per share, or \$2.5 million on his position. By throwing more shares at a position going bad, he was able to improve his position. Eventually, continued massive shorting in the face of very good company news, saw the price drop to \$9/share, putting the shorts in the money.

The shorts do this repeatedly and eventually drive the long buyers out, then they may cover some of their open positions or take profit out by marking to market. Rarely do they get caught out with this strategy.

One of the more flagrant crashes involved CROX in December, 2007. The company manufactures a line of quirky casual footwear that caught on with the American public and small investors, who bought the stock in droves. The stock split and climbed almost exponentially during the summer and fall of 2007, despite being shorted heavily the whole time. By December, the stock price was \$75 and the shorts were seriously upside down. At that point CROX had 80 million shares issued and a typical daily trading volume of 3 – 4 million shares, which included significant short selling.

On Dec.1, 2007, CROX released quarterly earnings that were in line with guidance but were 2¢ short of “Street expectations”. The shorts crashed the stock on this supposed bad news. In a single trading day sixty million shares traded – almost all counterfeit. The shorts, by the sheer volume of their selling and buying, took complete control of trading, aided by the abolition of the up tick rule (The SEC recently dropped the rule that short shares could only be sold on up ticks, thereby allowing shorts to pile on massive quantities of shares very quickly). They dropped the stock price from \$74 to \$47 in a matter of hours.

This huge volume was probably the result of short down laddering. At the end of the day, the shorts sold (say) fifty million short shares, but if they were buying from themselves and covering open short positions, they ended up with a relatively small net increase in the number of short shares in their portfolio. They profited on all trades that day as they dropped the price \$27 and they may have improved the value of their remaining portfolio by \$27/share. Because they covered many short shares before the trades settled, there were few fails-to-deliver created.

So long as the short shares sold fit into one of many loophole exemptions and fails-to-deliver are not created, the enforcement agencies don't seem to view this overt manipulation as illegal, or chose not to prosecute them.

Appendix F

Frivolous Investigations of victim companies by the SEC is a surefire way to drop the stock price. In 2004 the shorts allegedly compiled a list of approximately ten target companies they actively and aggressively attacked. This list included Overstock, Krispy Kreme, NovaStar, Pre-Paid Legal and others. After the shorts had taken large positions in these ten companies, eight of them were investigated by the SEC. Preliminary inquiries are supposed to remain secret because the unproven allegations could have a devastating effect on the stock price. Yet, within a matter of days, the news of the investigation would appear in short-friendly media outlets, to be followed almost instantly by a class-action shareholder suit(s).

The case of Universal Express is even more disturbing. Packaging Plus Services was a logistics and transportation firm that emerged from a Chapter 11 reorganization in May 1994 as Universal Express. In 1998, Universal needed financing for an acquisition, so they approached an investment banking firm, who they believed to be legitimate, to arrange PIPE (private investment, public exit) financing.

The lenders, who received bonds that could be converted into stock, got their loan repaid from the conversion and sale of their stock. A “toxic” PIPE continuously resets the conversion price at a fractional percentage of the market value share price. As the share price drops, the company issues more shares to the lender. Because the newly-issued additional shares are less than the market value, the lender immediately dumps them at a profit while further depressing the stock price with the flood of new shares.

Concurrently, the lenders short heavily with a flood of counterfeit shares, resulting in additional profit to them and putting more downward pressure on the stock price. This is called a “death spiral”, and this type of financing is called a toxic PIPE. It almost always succeeds in putting the company out of business. One of the most nefarious PIPE lenders, Steve Hicks, put virtually all of his borrowers out of business before the Department of Justice put him out of business.

Toxic PIPE lenders prey upon emerging or weak credit companies who do not have access to more traditional capital markets. Universal fell into this category, although, by their own admission, they were completely unaware of what they were dealing with.

The investment banker arranged the PIPE financing with about ten off-shore hedge funds. In a matter of thirty days, they drove Universal’s share price from \$2 to 2¢. Volume was the equivalent of the whole company changing hands every three days. Universal’s General Counsel suspended conversion of the bonds into stock by the hedge funds and complained to the SEC, who twice declined to do anything.

The company filed suit against the hedge funds in 1998, and obtained a jury verdict in July 2001 for \$389 million. In April 2003, a second verdict was obtained, this against the agent for the hedge funds in the amount of \$137 million. Due to the off-shore domicile and layers of shell corporations, collection of these judgments proved to be difficult. A subsequent company press release raised the obvious question: If a Florida jury can figure this out, why can’t the SEC?

According to Chris Gunderson, general counsel for Universal, the SEC reacted to these embarrassing revelations by harassing Universal with thirteen subpoenas for documents, including one to “prove the existence of naked shorting.” The SEC also allegedly contacted Universal’s prospective acquisition and some of the transaction lenders, “scaring” them from doing business with Universal.

On March 2, 2004, Universal countered by suing the SEC, for harassment and failing to regulate naked shorting. Three weeks later, the SEC sued Universal, (falsely) alleging that they sold unregistered (counterfeit) securities as part of a bankruptcy-court- approved employee stock incentive program. Universal alleges that the SEC has intentionally withheld information from the court and has unjustly attempted to deny the company's right to a jury trial.

As of the last writing available, the cases are still pending, but it is reported that some SEC officials have been relieved of duty as a result of their participation in this.

Appendix G

Class-Action Lawsuits are an integral part of a short attack on a victim company. The most notorious of the class-action firms was Milberg, Weiss and their off-shoot law firms, which included Lerach, Geller and Coughlin. Milberg Weiss was forced to disband by the Justice Department; Lerach was just sentenced to prison time.

During the first half of this decade, about a dozen public companies were under attack by a short cabal that allegedly involved David Rocker and others. The victim companies included Krispy Kreme, Capital One Financial, Pre-Paid Legal, Netflix, Novastar Financial and others. The tactics described in this paper were almost universally applied to these companies. 75% of them were subject to an SEC investigation and about 80% were subject to a class action lawsuit filed by Milberg Weiss or associated firms.

The class-action litigation was closely tied to the SEC investigations. Given that SEC preliminary investigations are supposed to be confidential, the timing of the investigations and the litigation is remarkable. The litigation filing was invariably accompanied with much media coverage. This contributed to the onslaught of negative media coverage that accompanied the heavy volume down laddering of the stock price, making the manipulation look like a sell-off.

Milberg used paid professional plaintiffs as the lead plaintiff in their class action suits. They also used contingent fee expert witnesses. Both of these practices are illegal and have been successfully prosecuted by the Justice Department. Recently, Milberg, individually entered into a plea-bargain agreement that resulted in incarceration.

Appendix H

Pulling Margin from long customers during a short attack serves two purposes.

Obviously the flood of shares that are “forced” sales help drive the price down, which aids the short cause in general. More important, for the broker dealers who clear for their retail customers at the same time they short against them, it creates a built-in source of cheap shares from which they can cover their open short positions.

Some of the broker dealers short against their retail customers from their proprietary trading desks, or “prop” desks. These are trades owned by the broker dealer, and, while they are not illegal, ethical questions certainly exist. The retail customers, who may be purchasing long investments that are being pushed by the broker dealer’s retail network, have no inkling that the broker is taking a large short position contrary to the retail investor’s position. With the encouragement of easy margin credit, i.e. 30% equity, the retail customers load up on stock and margin debt.

The broker dealer, in concert with other shorts, may crash the stock by flooding the board with counterfeit shares, dropping the stock price. The broker dealers know the amount of margin debt and the price at which their retail customers get into margin trouble. They can accelerate the squeeze on their retail customers by arbitrarily increasing the equity (percentage) requirement as the price is dropping, frequently citing “volatility”; which is really the shorts flooding the board with counterfeit shares.

The compounding effect of a dropping price and increasing equity requirement flushes out more shares. The broker dealers sometimes will take over the account during a margin sell-off. By engaging in poor trading practices, such as heavy selling over lunch hour; concentrated “dumps” of shares; hitting the bid with market orders; and conspiring with other trading desks, they can further plummet the value of the stock and maximize the shares they have stripped from their retail customers.

Most of the broker dealers who have both retail customers and prop-desk trading appear to engage in these practices. Goldman, Morgan Stanley and Merrill Lynch have been named in suits alleging these practices. Goldman made billions shorting against the subprime mortgage industry at the same time they were selling subprime investments to their customers.

Appendix I

A Lack of Transparency is an important component of the short infrastructure. This serves a number of purposes: 1) The inability of victim companies, investors and the media to get information about manipulative trading and massive counterfeiting keeps the illegal practices out of the spotlight, thus avoiding a public uproar and resultant political and regulatory backlash. 2) Civil litigation in virtually every other area of fraud can be filed based upon information and belief. In an information and belief lawsuit, the allegations are assumed to be true and discovery is granted, which then results in evidence that proves or disproves the allegations. In a federal securities suit, the evidence must be in hand before the suit is filed. The lack of transparency by the SEC, DTC, the exchanges and the broker dealers insures that the plaintiff does not have access to the evidence necessary to sustain a complaint, or know the identity of the manipulators who would be the defendants. Thus the veil of secrecy continues and the illegal activities continue under a grant of de facto immunity as lawsuits are quashed before they get off the ground.

The SEC, DTC, the broker dealers and the courts have adopted a policy that proprietary trading strategy is a protected secret. This posture by the enforcement agencies essentially ensures that manipulative trading activity and the disclosure of the identity of those doing it never sees the light of day. The contention that trades done in years past are akin to the secret formula for Coke is absurd. It really is an excuse for engaging in a cover-up of sometimes illegal and manipulative activity that is facilitated by a veil of secrecy that is tolerated by the SEC, and frequently advanced by the courts.

The DTC and SEC categorically obfuscate the real magnitude of the counterfeiting; the lack of progress from Reg SHO, and by design, misleads Congress and the public. Some believe that the number of counterfeit shares in circulation exceeds a trillion. The SEC, which only reports aggregate fails-to-deliver, would like the public to believe the fails are about 300 million shares. Information, when it is finally pried from the DTC, never enables the reader to make a concise, accurate appraisal of the amount of shares that have been counterfeited.

Larry Thomson, general counsel of the DTC, is the master of obstruction and misinformation. Typical of the DTC's misleading or non-responsive statements are: the invention of different classifications of "fails" to make it appear that Reg SHO is working; the statistics cited frequently are the NYSE; the victims are most frequently listed on regional exchanges or over-the-counter, the magnitude of counterfeit shares is always expressed as a dollar volume, never the number of shares (many of the victim companies have greatly reduced share values as a result of the shorting), or as a percentage of the dollar value of all instruments, including debt, traded on the NYSE.

Pages could be filled with examples of misleading and partial disclosures by the DTC, which is done with the tacit approval of the SEC, who is charged with regulating the DTC. The true hypocrisy is that the requested information is readily available to the DTC; They are required by law to have it on record and readily available. They chose, however, to keep it secret, for obvious reasons and because they can.

The following is a list of information that a victim company can obtain from the SEC or DTC without a subpoena:

1. Aggregate fails-to-deliver. The SEC compiles, on a daily basis, a list of the number of fails-to-deliver that exist for a given company. Getting this from the

SEC usually requires that a Freedom of Information Act (FOIA) request be submitted. The SEC has been dilatory, at best, when processing this information. They have, however, recently started making this more available, but in reality it is a relatively valueless indicator of the total magnitude of the counterfeiting.

2. The DTC publishes a weekly report that is company specific. It shows the number of long shares that each broker dealer has in his account with the DTC. The ending daily balance and the weekly change are tabulated. This is available to the company, but not investors who are not in the securities industry.

The following is a partial list of the information that is not available to the company or its investors without a subpoena:

1. The DTC and the SEC invented another classification for the failure to deliver real shares by the settlement date. It is called an “open position,” and by inventing this new, unreported and not “illegal” classification, they have reduced the number of reported fail-to-deliver shares. An open position is a trade that has gone beyond T+3 and not had a share delivered. Positions may remain “open” until the other broker demands delivery. If the brokers are operating collusively, the demand is not made.
This would be similar to law enforcement declaring that murders with knives and clubs no longer fall in the reported category of homicides, hence the reported homicide rate dropped significantly. Opens are not tracked and reported as an indicator of short sales that have no real shares behind them.
2. The aggregate amount of naked short shares is not reported anywhere, by anybody.
3. The aggregate counterfeit shares that are ex-clearing (in accounts of the broker dealers, but not in the DTC) are not investigated or tabulated by the SEC, hence there is no disclosure.
4. Investors are not able to obtain evidence that shares have not been pulled from their accounts and put into the stock lend or if locate(s) have been sold by the broker against shares in their account.
5. The identity of those who are counterfeiting shares is not disclosed anywhere.
6. The identity of who is short in a company is not disclosed, which is the opposite of the disclosure requirement for long investors who hold large positions in companies.
7. The percentage of sells that were disclosed short on a daily basis may be reported, but it is not always available. What isn’t reported is the daily naked short, the daily mismarked tickets, the amount of the disclosed short that is backed up with naked options, and the options that have served as borrowed shares and have expired and not been replaced or bought in.

This obstruction of disclosure is not accidental. The DTC does it because they are protecting its owners (the broker dealers) from public criticism, regulatory action, and, most importantly, civil litigation. The DTC’s zealotry and arrogance in fighting any and all attempts to obtain disclosure, be it with subpoena, public disclosure or regulatory requirement, is well documented. To date they have been quite successful.

The obstructionist posture of the SEC is less explainable than the DTC, and is every bit as effective. The Securities Act of 1933, which remains the cornerstone body of securities law in the United States, is clear. The Act uses the phrase “protecting investors” 186 times. It is also clear that selling unregistered (counterfeit) securities is illegal, as is stock manipulation and that the SEC is the federal agency charged with enforcement.

What the SEC has done is cast a blind eye to transgressions within the securities industry; promulgated rules (sometimes illegally) that create an infrastructure of loop holes and secrecy that the securities industry can navigate with little difficulty and little fear of prosecution; perpetuate and actively fight efforts for additional disclosure that would open the door for civil litigation; and, with the lobbying assistance and political contributions of the securities industry, attempted to consolidate jurisdiction at the federal level and consolidate enforcement power with the SEC.

The exchanges make virtually no disclosures regarding the activities of their member brokers. Listed companies do not get any information about the identity and amounts of counterfeiting that is going on. Complaints by investors or companies are investigated by the self-regulating exchanges in secrecy. The most flagrant manipulations are frequently whitewashed, and the participants are almost never prosecuted or reprimanded.

The reward for complaining companies is to have the exchange reduce the already sketchy level of disclosure. The reward for complaining investors is a scathing how-dare-you personal attack, followed by stonewalling and non-acknowledgement of follow-up complaints.

Appendix J

Federal Securities Law is stacked in favor of the securities industry, making meaningful civil litigation almost impossible. When coupled with the decided lack of federal criminal action, it means the industry has little fear of recrimination for transgressions.

The industry is very influential with Congress, and, as a result, legislation is very pro-industry and legislation that is originally written to curb industry abuses becomes so watered down that the intended purpose isn't served.

Virtually every other kind of civil litigation can be filed based upon the plaintiffs' "information and belief" that a fraud has been committed. There must be reliable information that supports the allegations being made, but it does not have to be evidence on a level that would support a judgment. Assuming the information-and-belief complaint is properly crafted, the court initially assumes the allegations to be truthfully made and allows the plaintiff to move forward with discovery; the necessary evidence can be then uncovered with subpoenas and depositions. Based upon the evidence uncovered and presented, the court makes a ruling. Securities law is virtually the only area of the law that does not follow this practice. The fact that the SEC, DTC, the exchanges and the broker dealers operate in secrecy means the victim companies cannot get any information regarding the identity and magnitude of the counterfeiting or manipulation of their stock. Hence, federal securities lawsuits are frequently dismissed before discovery begins.

Another feature of federal-securities litigation: When the defendants file a motion to dismiss as their answer to the complaint, all discovery is halted. Without the benefit of discovery and the resultant evidence, the motion to dismiss is granted and the suit is over before it starts.

The federal racketeering statute (RICO) is often applied to civil litigation. It involves a "criminal enterprise" committing certain illegal acts (predicate acts) multiple times. The criminal enterprise can be an individual, company or group thereof. It is designed to prosecute groups who engage in repeated patterns of criminal behavior. Civil RICO awards are triple damages plus legal fees. It applies to almost all types of fraud except federal securities fraud. The cabal of shorts who collusively attack multiple victim companies utilizing the same illegal tactics is a text-book example of a RICO "criminal enterprise" engaged in multiple predicate acts. The securities industry managed to exempt themselves from civil RICO litigation during the Clinton administration.

The statute of limitations for federal-securities litigation is relatively short, typically two years from knowledge or five years from the committing of the fraudulent act. Common law fraud typically ranges from five to ten years. The secrecy of the industry and its regulatory apparatus compounds the problem of the relatively short statute of limitations.

States have their own securities laws that generally offer a more level playing field for investors and victim companies. The difficulty for investors suing Wall Street in state court is that the suit is limited to 49 individual plaintiffs. More plaintiffs cause the suit to be a class action, and it is removed to federal court, where it is governed by federal securities law. In the late nineties enterprising lawyers, who wanted to remain in state court, got around this by filing many suits in the same jurisdiction, each with 49 different plaintiffs but otherwise the same.

This abuse was brought to the forefront by certain notorious class action law firms, notably Milberg Weiss, during the Worldcom/Enron era. The Bush administration responded by passing legislation to curb frivolous class-action litigation. The legislation, championed by Christopher Cox when he was in Congress, is loosely written and has not yet been tested in court enough to fully understand its limitations. But, right now, it appears that if the same defendants are named for securities fraud in different state courts by different plaintiffs represented by different lawyers, there is the risk that the court may combine the suits into one class-action suit and kick it up to federal court, where successful prosecution of the case becomes exceedingly difficult. If the courts adopt this most expansive interpretation of this poorly-drafted law, the result will be that the securities industry has effectively blunted any meaningful exposure in state court.

The convergence of seemingly unrelated federal legislation that doesn't necessarily appear to target the securities industry has resulted in a litigation maze that almost always ends up in a blind alley. Hence, litigation at the federal level against the securities industry is very expensive, fraught with pitfalls, and time-consuming, consequently it does not get done nearly enough.

Appendix K

Richard Sauer is a former ranking administrator in the enforcement division of the SEC. Investigation of improper trading by hedge funds would have fallen under Mr. Sauer's division. After putting in his time with the SEC, he entered private practice doing law work for David Rocker and other short hedge funds.

After his SEC career, Mr. Sauer authored an article that appeared in the Oct 6, 2006 *New York Times*. It provides insight into his mindset and presumably that of the division of the SEC he administered. Certainly the tepid prosecution of stock manipulation cases by the SEC would indicate that Mr. Sauer's view of the shorts was widely held by SEC enforcement.

He, not surprisingly, views shorts as the "good guys," who keep the bad corporate guys in check. He further claims that the good work of the shorts has unjustly been hobbled by recent additional regulation, i.e. Reg SHO, designed to stop abusive shorting. He goes on to say "as an enforcement lawyer at the SEC, I received from short sellers early warnings on certain companies that led to the capture and return to investors of hundreds of millions of dollars taken by stock fraud... But if the short sellers are friends to the SEC, the commission has been no friend to the short sellers. The agency has saddled them with trading restrictions and looked the other way when companies have taken potentially illegal actions to silence short seller's criticism." Based upon these comments, it appears that Mr. Sauer either condones or denies the existence of massive counterfeiting of stock that usually accompanies a short attack. Is the trading restriction he alludes to the lawful requirement that a real share be borrowed?

Mr. Sauer rails against "pump and dump" schemes as illegal stock manipulation -which they are. Yet no mention is made of flooding the ask side of the board with short and counterfeit shares to drive the price down. This is particularly destructive now that the SEC removed the up tick rule which prohibited short selling on a down tick.

His view that the stock manipulations that drive down stock prices are not the problem, it is bad companies, has been echoed by other SEC officials. In 2005, SEC commissioner Annette Nazareth said there isn't a problem with naked shorting – there are just bad companies. This attitude would explain why there is little meaningful enforcement against the short hedge funds and the broker dealers for stock manipulations.

The disturbing part is the SEC has the authority and the tools to determine whether shares have been counterfeited and markets manipulated. If the assertion by the SEC that there are only bad companies is correct, then why do they make the evidence completely unobtainable? Every company, whether poorly run or superbly managed, is entitled to not have their stock counterfeited and its price manipulated.

Patrick Byrne of Overstock, when a short suggested he spend less time being concerned about the massive counterfeiting of his company's stock and more time running the company, replied, "Are you telling me if I ran a better liquor store you would stop robbing it?"

Appendix L

The Enforcement Apparatus for the securities industry is the classic foxes guarding the hen house. Regulatory agencies are a closed loop with no transparency and, therefore, very little outside oversight, be it from Congress, the public, lawyers for investors or the media. The lines between the regulators and those being regulated are blurred or nonexistent. The opportunity for conflicts of interest exist at almost all levels, so it is no surprise that enforcement actions rarely happen, and when they do, they are not very meaningful, criminally or economically.

The SEC is the top federal agency charged with enforcing the rules within the industry. They promulgate new rules, hold public hearings, and, in the final analysis, may have the appearance of advancing rules that will stop counterfeiting and other stock manipulations. But, by the time the industry waters the rules down and adds loopholes and exemptions, the reform intended is emasculated. Reg SHO, which was enacted to solve the problem of naked short (counterfeiting) abuse, is so fraught with loopholes, meaningless enforcement and safe havens for counterfeiting, that the law itself is a fraud perpetrated upon the American public, who believe their investments are being protected. The securities industry has little apparent difficulty staying one step ahead of the SEC.

Flooding the offer side of the board with counterfeit shares, thereby altering the price point at which the demand curve intersects the supply curve, is the most fundamental principal of economics, and an obvious and overt manipulation of the price of a stock. Short attack days regularly see over 90% of the sells being short and counterfeit shares, causing the price to plummet or on good news days, soaking up the demand thus keeping the stock price from going up.

The SEC almost never prosecutes shorts for “price manipulation.” Instead, on the rare occasions when they do investigate, they look at trades on a microscopic level. For example: Were short sales tickets mismarked as long sales? Was there short selling on down ticks? etc. If there is a finding it is for a minor infraction and the fine is minor as well. Almost all of the broker dealers have been fined for mismarking tickets, virtually none for manipulation with short sales. One case we know of resulted in a million-dollar fine, which was gladly paid. The broker reportedly made \$50 million on the manipulation. This process of microscopic rules enforcement and loophole compliance while ignoring the larger price manipulation question permeates the securities enforcement apparatus from top to bottom.

It is ironic that microscopic rules enforcement is the guideline when prosecuting short manipulations, yet when the manipulation involves long shares, the enforcement looks at the overall scheme vs. the individual trades. If one examines a classic pump and dump scheme in a mirror, you see a short down ladder. If one replaces long shares with short shares, pump with crash and dump with cover, the manipulations are the same with the same outcome: the fleecing of the public. Per the SEC, pump and dumps are illegal and occasionally prosecuted. Short down ladders are deemed legal so long as the trades fall into a loophole, and are rarely prosecuted.

Investigations of complaints alleging stock manipulation are handled in complete secrecy, so the victim rarely knows what the outcome was or if it was even investigated. After an investigation is closed, in theory, the documents should be available under the Freedom of Information Act. The SEC routinely obfuscates these requests, citing

proprietary trading strategies and other reasons for not providing the requested information. The lack of disclosure regarding investigations of the securities industry keeps the public and media spotlight off them. The industry cites this as evidence that there really isn't a problem with counterfeiting and stock manipulation.

Another way of deflecting the spotlight of public disclosure is for the SEC to investigate companies. Corporate malfeasance is certainly within the scope of responsibility of the SEC, and it is commendable when corporate officers who pillage tens of millions from the shareholders are prosecuted. But what about the short hedge funds and the broker dealers who pillage billions from the shareholders of victim companies? For every Kozlowski or Scrushy prosecuted, there are doubtlessly scores – maybe hundreds – of securities industry frauds involving exponentially larger sums of money that are not even investigated.

An emerging company that we know of was subject to massive counterfeiting and stock manipulation. On a daily basis, 50 to 90% of the sells were short and the stock had been crashed three times in a year. Detailed complaints were filed with the SEC and the SROs by the company and shareholders; they cited DTC share movements, known holdings and identified the suspected shorts. The company's reward for protecting the interest of their shareholders was an inquiry into the company for alleged insider information violations. Eventually, the SEC left with no findings because there never was any insider information. The investigation of the shorts and the stock manipulation was white-washed and the manipulation continues.

The reason for the apparent immunity the securities industry enjoys is that many upper level SEC staffers ultimately sign on with the securities industry in jobs that often have seven-figure compensation packages. In the recent past, every year saw about 1/6 of the lawyers with the SEC jump ship and sign on with Wall Street for considerably more money. The reluctance to prosecute a potential future employer is understandable. For more information see the segment about Frivolous Investigations and Richard Sauer, a former SEC administrator who went to work for David Rocker and other shorts.

The five-person Board of Governors that oversees the staff of the SEC are political appointees. The securities industry is one of the largest political contributors in the country, and they have been successful in insuring that their interests are well represented at the Board of Governors level, where the values and mission of the SEC are set. Christopher Cox, the current head of the SEC, while from the Congress, clearly is a close friend of the industry. As a congressman, he was actively involved in the passage of some of the most anti-small investor legislation. Since his chairmanship, he has grudgingly made rule changes that were allegedly designed to curb stock counterfeiting, but, in fact, the new rules are so fraught with loopholes and blind eye enforcement that little has changed except the hiding places for counterfeit shares.

The next line of enforcement is the Self Regulating Organizations or SRO's. What we are really talking about is the exchanges, i.e. the NYSE, NASDAQ, ARCA, etc. They are supposed to monitor trading to protect against illegal activities. Their enforcement focus is also on the microscopic level. Consequently they don't view trading days where, in the face of good news or no news, 90% of the sells are naked or disclosed short, as a manipulation. Rather they look at whether naked shorts fit into one of the many loop holes, i.e. market maker exemption, specialist exemption, options trader

exemption, etc. They also do little investigation to determine if locates (of borrowed shares) are valid; trading tickets are mismarked; shares are fails-to-deliver; etc. Should infractions be found, they are treated as minor transgressions, and the larger issue of whether the shorts are collusively attempting to manipulate the stock is never meaningfully examined and prosecuted.

The reasons for the SRO's lack of enthusiasm in protecting small investors is the same as the SEC's. Upper management of the SRO's, who are extremely well compensated, are from the industry or friends of the industry. It is the large Wall Street firms who provide the revenue necessary to pay the exorbitant salaries. The ARCA exchange was owned by Goldman and others prior to its acquisition by the NYSE Group. It is probably not an accident that the ARCA is among the most lax in their enforcement and allegedly contributes almost three-quarters of the NYSE Group's bottom line.

The last line of enforcement is the broker dealers, who are supposed to make sure their customers follow the rules. Unfortunately, it is the broker dealers who provide the majority of counterfeit shares for the shorts, be it their hedge fund customers or their own proprietary trading desk. This activity purportedly generates \$8 to 10 billion annually for the broker dealers, so it is probably safe to say that enforcement will be on the underside of zealous.

The enforcement apparatus, top to bottom, operates in secrecy, with little outside oversight; is systemically fraught with conflict; and has insignificant punitive consequences. Consequently, and not surprisingly, there is little meaningful enforcement of the securities industry.

Appendix M

Buying Political Influence is just another line-item expense for Wall Street. Large amounts of money from the securities industry are targeted for key influential politicians who can favorably influence legislation that is good for the industry and frequently bad for the small investor.

The overall political strategy for the industry is to have all securities matters at the federal level. There are several reasons this strategy is effective: 1) The body of securities law at the federal level is so skewed against the small investor, meaningful litigation against Wall Street is virtually impossible. 2) The regulatory apparatus, which in descending order is the SEC, the exchanges and the prime brokers, is seriously compromised. Top to bottom, they regulate in secrecy and the informal financial incentive system tends to reward those who look the other way. 3) The federal courts and the regulatory apparatus have bought into the securities industry's proposition that crooked trading is proprietary trading strategy and should be kept secret. They use this excuse to deny FOIA requests, seal court records, which means it is not available for subsequent cases and generally keep some egregious behavior out of the public spotlight.

This political strategy works because the benefit to politicians (money) is concentrated and specific, and the opposition (small investors) is unaware, unorganized, dispersed, apathetic and unfinanced. Legislation and rules promulgation that is actually flagrantly pro-industry and anti-small investor is spun to make it look like Congress and the regulators are actually doing something constructive when they are really obfuscating. Witness Reg SHO, which hasn't changed much except the hiding places for the counterfeit shares.

Political contributions from Wall Street cross party lines and are rarely done for altruistic reasons. It is to help politicians who are in a position to help the industry. The securities and investment industry – which includes brokers, hedge funds and private equity firms - had the sharpest increase in political giving of any sector since 2004, up 91%. In 2007, at the presidential/congressional level, keeping with their policy of backing the winners, Democrats received 57% and Republicans 43%. Presidential candidates Barack Obama, Rudy Giuliani and Hillary Clinton were the three largest recipients of Wall Street money. Senator Christopher Dodd, while not a real presidential contender, does chair the Senate Banking Committee, was right behind Mitt Romney, himself a former Wall Street investment banker, and ahead of John McCain. As of October 29, 2007, the largest securities industry contributors included Goldman Sachs, Morgan Stanley, UBS, Merrill Lynch and others.

The magnitude of the giving was reflected in 2006, an off-year election, when the industry gave \$65 million. The reported giving is only a portion of the total, as federal election law, like federal securities law, is fraught with loopholes. Examples of unreported giving includes so called "soft money," such as paying for the \$4,000,000 Bush inaugural party.

The collapse of Bear Stearns, which was facilitated by the shorts, brought the short manipulation problem before the Senate Banking Committee. Televised hearings in April 2008 saw Chairman Christopher Dodd and ranking member Richard Shelby mercilessly grill Christopher Cox about the failure of the SEC to regulate the naked short abuse that triggered the collapse of Bear. Dodd and Shelby are among the largest congressional

benefactors of Wall Street generosity, and Bear Stearns is one of Wall Street's most prolific counterfeiters. The hypocrisy was so deep the participants needed snorkels.

Appendix N

The SEC Shelters the Securities Industry in many ways, and perhaps the most graphic example involves the Eagletech case. Eagletech Communications was an emerging public company that developed patented wireless telephone technology. They traded on the over-the-counter market.

In order to raise capital, Eagletech entered into two PIPE (private investment, public exit) financings, not knowing that the loan transactions, one of which was arranged by Solomon Smith Barney, were a front for the Mafia. The company was shorted into a death spiral with a host of illegal activities that included counterfeiting stock, match trades, pump and dump, stock manipulation, money laundering, wire fraud and mail fraud. The scheme came to light as a result of a Department of Justice investigation into organized crime and the securities industry.

The D.O.J. “flipped” one of the mobsters, who told the whole story. An integral part of the scheme involved the active participation of Wall Street firms that included Citigroup, JP Morgan Chase, Solomon Smith Barney, Bank of New York (Pershing), Knight, Goldman, Prudential, Bear Stearns and others. The SEC was brought into the investigation to assist the D.O.J. The government contended the Wall Street firms knowingly and actively participated shoulder-to-shoulder with the mob. Not only did they profit from the death-spiral attack on Eagletech, they facilitated a tax evasion and money laundering scheme for the fraud participants.

At the end of the case, the mobsters went to jail and the Wall Street firms were not prosecuted by the D.O.J. or the SEC. On May 2, 2006, one of the participants, Knight Equities, made a blanket settlement with the SEC, without admitting or denying guilt for any and all stock manipulations from 1999 to 2004.

In addition to not prosecuting the Wall Street firms, the SEC did not notify the victim companies or their shareholders that they had been victimized. Eagletech only found out by happenstance a year later, and was able to file a civil suit against the Wall Street firms before the statute of limitations lapsed.

The fact that the SEC rarely takes a securities industry insider to judgment or criminal conviction means the deterrent value of being investigated by the SEC is that of a toothless tiger. This, coupled with laughable civil fines, actually serves to encourage bad behavior.

With great flair and media attention, the SEC in April 2008 announced the prosecution of a trader, Paul Berliner, for spreading untrue rumors about Alliance Data Systems (ADS). According to the SEC, Berliner was involved with a network of over 30 short traders, to whom he text-messed an unfounded rumor on November 29, 2007. This mass text message apparently triggered an onslaught of shorting of ADS. The volume on November 29, 2007 was eleven times the average daily volume of about three million shares. The attack dropped the price of ADS from \$78 to \$63.65 in 30 minutes.

The SEC and Berliner settled for less than \$150,000, with no admission of guilt. The SEC offered this case as proof positive they were actively prosecuting stock manipulation.

What wasn't in their press release was that ± 30 million shares were shorted, resulting in a (short-lived) paper profit in excess of \$200 million. The stock partially recovered that day, only to be crushed two months later.

Appendix O

Gradient Analytic /Camelback Research is a so-called independent analyst, who provides financial research on companies for client investors. They evaluate companies and make recommendations regarding the stock. Frequently, Gradient would be quoted in the short friendly media and was actively critical of certain companies who were under attack by the shorts, including Overstock and Krispy Kreme. Gradient's so-called "independent analysis" was so factually distorted and openly adversarial that victim companies wondered if Gradient was a mouthpiece for the shorts.

That question was answered when two former employees of Gradient came forward with the truth. In sworn testimony before Congress, they explained how Gradient, for a fee, would write a negative report on a company under attack by the shorts. According to their testimony, David Rocker, manager of several large short hedge funds, would ghost-write or edit allegedly independent reports that maliciously attacked companies he was short in. He would dictate the timing of the release of the report to coordinate with other prongs of the attack, and was instrumental in getting the Gradient report excerpts published in media outlets whose reporters formerly worked for Rocker and Jim Cramer at TheStreet.com.

The San Francisco office of the SEC, which apparently relied on Rocker/Gradient information in their investigations of victim companies, was embarrassed enough in early 2006 to issue subpoenas for Gradient's records that involved David Rocker, Jim Cramer, the media and the shorts. The resulting furor was quickly extinguished when Christopher Cox, Chairman of the SEC, withdrew all subpoenas, pending an internal review of the SEC's policy regarding the First Amendment right to free speech. Jim Cramer ripped up his subpoena with theatrical disdain on his afternoon television show. Several months later, Christopher Cox gave Gradient a complete bye, reasoning that Gradient was protected by the First Amendment. This decision by Cox left most securities lawyers scratching their heads: Criminal activity is not protected by the First Amendment and there was sworn Congressional testimony about potential criminal activity.

Appendix P

Confessions of a Paid Stock Basher

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Today I want to come clean about something I feel very badly about. I cannot undo some of the things I have done, but hopefully this message will prevent other such occurrences in the future.

I am a paid basher.

Yes, it is true. Today is my last day at this company; I'm moving on to a new job. I've realized that there are more dignifying jobs out there that can pay me equally as well. But before I go, I want to explain a few things because this just isn't right and I won't feel good about myself until I expose this sham. It's hurt too many people and I don't want it on my conscience anymore. I can no longer live with a lie.

I work for a company called Global Calumny Funds in Stamford, CT. Basically, it's a Boiler Room much like the one in the movie of the same name. The idea behind my group is to bash the price of a company's stock down low enough to where the group of investors who retained our company's services can buy the stock really cheap and perhaps even take it over all together.

There are approximately 70 people at the company divided into several groups. My group, consisting of 5 people, is responsible for IDWD. While I probably shouldn't give any names of anyone working here now, what the heck, I'm leaving here, so what can they do? sue me? Ha! I can tell you that laptoptrader and janice shell were part of my group until he left last week, as was ninaturtle. Others who have been part of this include early bashers like hard data and Investorman. You may be interested to know that some hypsters, such as MONEYMADE and even Datatech!!, have also been part of the scam (more on that later).

There are several companies engaged in the bashing business, ours is not the only one. However, I can tell you that not every basher in here is a paid basher. Having done this for a year, I can usually tell who is a paid basher and who is merely someone having a little fun. While unpaid bashers have a different motive than someone like me, they can be unwilling accomplices to helping me achieve my ultimate goal and they also spread rumor and confusion throughout a room, which also helps me.

What is that goal? Well, I am merely a cog in a much larger machine, so my bosses never

really explained the big picture to me, but I'd say essentially, Shaddowwatch2003 was right. There are several companies who are quite familiar with Jim Bishop and Janice Shell and who are deathly afraid of them.

There are three types of bashers here at Global Calumny Funds: Advanced, Intermediate and Beginner. An Advanced-level basher (also known as a Silver Tongued Devil) would spread false or misleading information about the company.

They would deal in facts, countering every longs post with articles, news reports and opinion surveys that gave a negative impression about the company.

An Intermediate-level basher (also known as a Serpent) would try to weasel their way into the confidence of longs and create doubt using rumor or innuendo.

Finally, a Beginner-level basher (also known as a Pitchfork) would attempt to create confusion in the room by distracting other posters with satire, name calling and pointless arguments. The idea was to make sure no serious discussion of the stock could take place. A Pitchfork was usually a basher, but not always. Sometimes, we would throw in a hypster Pitchfork such as MONEymADE and laptop and a pumper like Datatech to create the illusion of an argument going on. What was really funny (in a perverse way, I guess) was that Datatech and I sat next to each other, laughing the whole time.

I was a Serpent basher, because I am known for effective bashing based on solid facts and truth. I was paid a base wage of \$18 an hour for my services. I was given a \$1.25 bonus for every decent quality post over 100 per day as well as a monthly bonus of \$100 for every penny the stock had dropped from the previous month. I was also paid a bonus for bashing on weekends. While this may not sound like much, I made a decent, though dishonorable, paycheck plus a nice Laptop with free wireless internet connection.

Each of us sat in a small half-cubicle in a cluster with our teammates. Each group (usually five people) was made of three beginners (two who would bash and one who would hype), one intermediate and one advanced level basher. Occasionally for some of the hotter stocks, one of the beginners would be replaced by an intermediate depending on how much the stock was rising. IDWD was a low-level stock, meaning it got the 3-1-1 configuration.

Honestly though, somehow, I get the feeling that WV Hillbilly may have worked for a basher company or knows someone who does because the fund websites he occasionally posts is eerily similar to our employer's websites. While not exact, I'd say it is about 90 percent the same. We do have certain rules that we follow.

First, we have to develop a character and stay within that character in order to build a "following." My character, "FogOfWar," was a humorous, sarcastic, obnoxious supporter of free speech and loved to portray himself as a truth-telling superhero, but only when it came to bashers.

Next, we had to follow certain guidelines on what we could say. We were urged to have an "answer" to every long's question, but we were to frame that answer in a way that ridiculed the questioner for asking such a question. However, we were never to use profanity or vulgarity because that would cause people to ignore us. We were to make fun of people, but in a civil way. The idea was to get "play," i.e. reaction from other posters. The more

play we got, the more the room would be disrupted. Ignored posters get no play. One exception would be the hypsters since they were "defending" the stock against our onslaught, they got a little more leeway. People would side with the hypster because they thought he was real since he appeared to be on their side, but was really on ours, setting us up to disrupt the room. MoneyMade was quite good at this and gets paid very well.

I've worked on IDWD, VLO, AGII, QBID, BKMP for a few months now. In addition to the FogOfWar alias, I've used a few others on several other boards as well. I've used so many aliases that I can not remember the monikers or the passwords. I honestly lost track of everything. I stuck with FogOfWar because it was the one that got the most play from other posters.

In closing, I feel absolutely terrible about this. It's just awful how I've been part of a scam designed to cheat honest, hard-working people out of their investments all for the benefit of a few wealthy people who already have enough money to last a lifetime.

These greedy people MUST be stopped. That's why I'm posting this before I leave. I want to make up for some of the damage I've done. I can't live with this lie anymore. You can't imagine how hard it is to look at myself in the mirror each morning knowing my job is to cheat and lie.

I have to go now, I'm too broken up to continue. I hope this confession can make up for my sordid deeds; I would urge everyone who reads this to inform as many people as you can. Only by shining the light of truth can we drive these rats back into the darkness from whence they came. Believe me, they don't want publicity.

Good luck and I hope all of you the best in your investment endeavors.

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Short selling and dark pool volume

Dark pool
volume

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Abstract

Purpose – Prior research posits that traders with short-lived information favor lit exchanges over dark pools due to execution certainty. This paper aims to focus on the relation between informed trading based on firm fundamentals and dark pool volume because the preferred venue for traders with longer-lived information is less certain.

Design/methodology/approach – The authors examine the effect of short interest, a proxy for informed traders with long-lived information, on dark pool volume using fixed effects, first difference and instrumental variable approaches. They examine the effect of dark pools on the profitability of long-lived information using market- and characteristic-adjusted returns.

Findings – The proportion of trading volume executed in dark pools is positively correlated with short interest. This result is stronger for stocks that suffer from greater uncertainty and stocks targeted by transient institutional investors. Short sellers profit substantially from their information as subsequent returns are lower for heavily shorted stocks with greater dark pool volume.

Research limitations/implications – In 2014, the Financial Industry Regulatory Authority began making trading data available for dark pools. Before that, only limited information was publicly available. The authors use that data to shed more light on dark pools activity.

Practical implications – The evidence presented in the paper helps inform the current discussion about the role and regulation of dark pools.

Originality/value – This is the first study to show that informed traders with long-lived information favor dark pools due to their opacity and the possibility of price improvement.

Keywords Dark pools, Informed trading, Liquidity, Short selling, Stock returns

Paper type Research paper

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1. Introduction

The term “dark pool” describes a venue for trading securities that lack transparency. Dark pools were introduced in the late-1980s to provide institutional investors with an outlet away from the traditional exchanges to trade blocks of stock with minimal price impact. In recent years, the fraction of the total trading volume executed in dark pools has increased substantially. For example, the CFA Institute estimates that off-exchange trading, which includes trading in dark pools, increased from 16 to 40% of the total trading volume from 2010 to early 2017 [1]. The increased prevalence of dark pool trading has raised concerns among regulators, academics, and other market participants. For instance, some believe that large amounts of off-exchange trading are associated with a deterioration in the market quality and price efficiency.

Hatheway *et al.* (2017) suggest that dark pools’ negative impact on market quality is due to their ability to segment order flow based on information asymmetry risk, which has led researchers to study the factors that influence investors’ choice of trading venue. Zhu (2014) models the choice of venue by informed and uninformed traders and predicts that traders with

JEL Classification — G10; G12

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short-lived information minimize execution risk by transacting on exchanges, while uninformed traders favor dark pools because of the potential for price improvement. However, [Hendershott and Mendelson \(2000\)](#) predict that the profitability of long-lived information is greater when traders have the option to trade in dark pools. Thus, the preferred trading venue for informed traders with longer-lived information is an open empirical question.

We combine open short interest with dark pool trading volume to study the relation between short selling and the proportion of total trading volume executed in dark pools. We find that the dark pool volume as a percentage of total trading volume is positively correlated with the ratio of short interest to total trading volume, which is commonly referred to as days-to-cover (DTC). The relation between short interest and dark pool activity is evident for subsamples with different market capitalizations and robust to instrumental variable and first difference approaches that address endogeneity between short selling and dark pool activity.

The positive relation between short interest and dark pool activity is consistent with two explanations. One possibility is that informed traders with long-lived information drive the increased use of dark pools. Informed traders might favor dark pools because of their opacity, which helps them sustain their information advantage, and the potential for price improvement. An alternative explanation is that liquidity traders are responsible for the increased fraction of volume executed in dark pools. This could be the case if liquidity traders deliberately avoid informed traders, which may result in a preference for trading in a dark pool when the level of informed trading in the lit markets is high.

We attempt to distinguish between these explanations in several ways. First, we identify stocks that are more likely to pose greater value uncertainty to investors. We find that the relation between short interest and dark pool volume is stronger for firms with higher market-to-book ratios, greater capital expenditures to assets ratios, greater research and development to assets ratios and higher dispersion of investor expectations. Second, we explore the effect of institutional investor type on the relation between informed trading and dark pool volume and find that it is stronger for stocks targeted by transient institutional investors, who invest based on firm fundamentals and mispricing. Third, we examine whether the profits available to short sellers are related to dark pool volume. Consistent with [Hendershott and Mendelson \(2000\)](#), we find that subsequent returns are lower for stocks that experience a large proportion of their trading volume in dark pools. When we sort on both short interest and dark pool volume, we find that returns to short sellers are substantially larger for stocks with more dark pool volume. Thus, although we cannot directly observe short sellers' venue choices, our results are consistent with the notion that fundamentals-based informed traders drive the increase in dark pool volume.

This study contributes to the growing literature on dark pools by providing evidence that short interest and dark pool volume are correlated. The most closely related studies are [Garvey *et al.* \(2016\)](#), which investigates why traders choose dark markets, and [Reed *et al.* \(2018\)](#), which considers the implications of short sellers' trading venue decisions. This study differs from prior studies, in that we focus on the relation between short selling based on firm fundamentals and dark pool volume. In addition, this is the first study to document the strong negative relation between dark pool volume and subsequent returns.

2. Related literature and hypothesis development

2.1 Dark pools

Dark pools provide traders with an opaque venue for executing trades. This allows traders to pursue their objectives with less concern that activities such as imitation, front running and quote stuffing will negatively affect their trading profits. Because dark pools are not required to provide real-time information, traders can transact in dark pools with less fear that other investors will take advantage of their intentions.

Dark pools also offer greater potential for price improvement than the exchanges because they tend to match trades at the mid-point of the exchange-quoted bid–ask spread. [Garvey *et al.* \(2016\)](#) find that most dark pool trades benefit from price improvement, but that price improvement is rare for lit orders. However, they also point out that dark pools contribute to market fragmentation that could negatively affect market quality and price efficiency.

[Zhu \(2014\)](#) considers the tradeoff between execution certainty and price improvement that traders face when deciding whether to trade on an exchange or in a dark pool. Investors with short-lived information seek to exploit their information advantage quickly. Thus, they favor trading venues that provide immediate and certain execution, which leads them to transact on the exchanges. Because liquidity traders do not have time-sensitive information, they may accept greater execution risk in exchange for the potential for price improvement in dark pools. Consistent with [Zhu's \(2014\)](#) predictions, [Garvey and Wu \(2011\)](#) report that informed traders tend to favor trading venues that offer faster execution speed, while liquidity traders sacrifice speed for lower transaction costs.

[Reed *et al.* \(2018\)](#) use short selling as a proxy for informed trading to provide additional evidence consistent with [Zhu \(2014\)](#). They find that, while short sellers are responsible for a substantial fraction of dark pool trading, the proportion of short sales is greater on the exchanges than in dark pools. [Reed *et al.* \(2018\)](#) find that short sales executed on exchanges contribute more to price informativeness than short sales executed in dark pools. They also find that short sales on exchanges and their contribution to price informativeness are even greater around corporate news events, which suggests that event-driven short selling (i.e. time-sensitive information advantages) may explain the difference in short selling between the exchanges and dark pools.

2.2 Short sellers as informed traders

Early support for the notion that short sellers are informed traders is found in [Figlewski \(1981\)](#), who suggests that the amount of unfavorable information excluded from market prices increases with the level of short interest because stocks with higher short interest are more difficult to sell short. According to [Diamond and Verrecchia \(1987\)](#), short sale constraints change the information content of observed transactions by increasing the cost of short selling, which drives less-informed short sellers out of the market. Subsequent studies examine the trading strategies of short sellers and find evidence consistent with the view that short sellers are informed traders. For example, [Boehmer *et al.* \(2020\)](#) report that short sellers target stocks prior to earnings announcements. Because of the time-sensitive nature of firm-specific events, execution certainty is a first-order consideration for short sellers pursuing these strategies. Thus, event-driven short sellers are likely to prefer to trade on the exchanges where execution risk is limited ([Zhu, 2014](#)).

Other studies find evidence that short sellers target stocks based on fundamentals and mispricing. For example, [Dechow *et al.* \(2001\)](#) find that short sellers use fundamental-to-price ratios to identify overpriced stocks and profit from subsequent price declines. [Engelberg *et al.* \(2012\)](#) find that short sellers' information advantage stems from their superior ability to analyze public information. Unlike event-driven short selling, short selling based on fundamental analysis and mispricing is less time-sensitive. Therefore, fundamentals-based short sellers may accept some execution risk in exchange for protection from imitation and front running that might erode their trading profits.

2.3 Hypothesis development

While [Zhu \(2014\)](#) posits that investors with time-sensitive information prefer exchanges to dark pools because of higher execution risk associated with dark pools, the venue where investors with a sustainable information advantage prefer to trade is less certain. As [Hendershott and Mendelson \(2000\)](#) explain, investors with long-lived information do not

incur a delay cost. Therefore, they may take advantage of the opacity and possibility of price improvement offered by dark pools because they can tolerate greater execution risk. We use short interest to identify stocks targeted by traders who have a sustainable information advantage. If these traders favor dark pools because of their opacity, which allows them to sustain their information advantage longer, we predict a positive relation between the level of short interest and the proportion of total trading volume executed in dark pools. We formalize this prediction in the following hypothesis:

Investors with a sustainable information advantage drive a positive relation between short selling and dark pool volume.

Another possibility is that liquidity traders use dark pools to avoid trading with informed traders when they are active in the lit markets. Support for the notion that liquidity traders attempt to avoid informed traders is found in [Admati and Pfleiderer \(1988\)](#) and [Foster and Viswanathan \(1990\)](#), who posit that trading patterns in stock markets are influenced by strategic decisions made by discretionary liquidity traders faced with the prospect of trading with informed traders, and [Chowdhry and Nanda \(1991\)](#) who suggest that liquidity traders may gravitate to markets that discourage informed trading. We would also expect to find a positive relation between short interest and dark pool volume if liquidity traders exhibit a preference for trading in dark pools when the level of informed trading in the lit markets is high.

Because we cannot directly observe short sellers' venue choices, we perform several tests designed to distinguish our hypothesis from a liquidity trader-based explanation. Our first set of tests examines whether the correlation between short selling and dark pool volume is sensitive to firm-level uncertainty. If informed traders drive the relation, we expect it to be stronger for stocks likely to suffer from greater uncertainty. Next, we study the effect of institutional investor type on the relation between short selling and dark pool volume. After identifying institutions' investment strategies ([Bushee et al., 2000](#)), we explore whether the relation between short selling and dark pool volume is stronger for stocks targeted by institutions that trade on firm-fundamentals and mispricing. Finally, [Hendershott and Mendelson \(2000\)](#) predict that the profitability of long-lived information is greater when traders have the option to trade in dark pools. If informed traders drive the relation between short selling and dark pool volume, we expect to find that subsequent returns are lower for stocks with high levels of short interest and dark pool volume.

3. Data and methodology

The Financial Industry Regulatory Authority (FINRA) began making trading information available for all alternative trading systems (ATSs) on June 2, 2014 [\[2\]](#). According to the Securities and Exchange Commission (SEC), all current ATSs are dark pools [\[3\]](#). Each ATS is required to report trading information for a given week to FINRA within seven business days following the end of that week. FINRA releases that information after a two-week delay for actively traded stocks that are mandatorily added to the National Market System (NMS Tier 1 stocks). Information for less actively traded stocks that are added voluntarily (NMS Tier 2 stocks) or traded over the counter is released after a four-week delay. Therefore, we obtain weekly ATS volume for the period May 12, 2014, through December 29, 2017 [\[4\]](#).

We retrieve short interest, which corresponds to the number of uncovered shares sold short for transactions settled on or before the last business day of the month, from Compustat. [Comerton-Forde et al. \(2016\)](#) find that short interest reflects short sellers' beliefs about mispricing due to firm fundamentals that are likely to correct over longer time horizons. From the center for research in security prices (CRSP), we gather monthly data on returns, prices, shares outstanding and trading volume for NYSE- and Nasdaq-listed US common stocks (i.e. CRSP share codes 10 and 11). We exclude stocks with a closing price below US\$1 on April 30, 2014, current and lagged monthly closing prices below US\$5 and zero monthly trading

volume. We also exclude months for which the cumulative price adjustment factor changes more than 20% (i.e. stock splits) or a stock's listing exchange changes.

We aggregate weekly ATS trading volume and calculate dark pool volume as the cumulative ATS monthly trading volume divided by the total number of shares traded in the month. We set dark pool volume equal to zero for stocks with no reported ATS volume but positive total trading volume. For consistency, we also divide short interest by monthly trading volume. As constructed, this measure, commonly referred to as the DTC ratio, equals the fraction of a month that it would take for short sellers to cover their open short positions given recent trading volume.

The choice of DTC as the response variable is inspired by [Hong *et al.* \(2016\)](#), who report that DTC is not strongly related to turnover measures or to the market-to-book effect. They also find that the effect of DTC on subsequent stock returns is stronger than the effect of shares shorted as a percentage of the shares outstanding and remains significant after controlling for lending fees, dispersion of opinions and binding short-sales constraints. High DTC levels indicate that informed traders expect a stock to underperform due to poor fundamentals or mispricing. Prior research suggests that high DTC stocks should underperform low DTC stocks to reward informed traders for their superior ability to process public information ([Engelberg *et al.*, 2012](#)) or to compensate them for initiating short positions that are hard to cover ([Hong *et al.*, 2016](#)). In untabulated tests, we confirm that the results are similar when we use the ratio of shares shorted to shares outstanding instead of DTC.

We follow [Buti *et al.* \(2011\)](#) and control for the following variables in models used to explain the variation in dark pool activity: trading volume, market capitalization, absolute return, closing price and a binary variable that identifies Nasdaq-listed stocks. We use the standard deviation of the error terms from the market model estimated within the calendar month to control for differences of investor opinions and the Amihud illiquidity measure, which is the monthly average of the daily ratio of absolute return to dollar trading volume, to control for stock illiquidity. Because the Amihud illiquidity measure has a skewed distribution, we use a log transformation. For the same reason, we also log trading volume and market capitalization.

[Table 1](#) reports the descriptive statistics for our sample. We winsorize all continuous variables at the 1 and 99% levels to mitigate the impact of outliers. The average (median) dark pool volume is 16.19% (15.88%) of the total trading volume. This is in line with [Tuttle \(2013\)](#), who reports that dark pools executed 12.1% (11.3%) of the total (dollar) volume traded between May 7 and 12, 2012. The average (median) Lag(DTC) is 30.56% (23.44%) of the total trading volume. This value indicates that it would take 0.3056 months, or 6.42 trading days over a 21-trading-day month, to cover the outstanding short interest given recent trading volume. [Hong *et al.* \(2016\)](#) report that DTC averages 5.45 days for their 1988–2012 sample. They also find that the DTC ratio increases over their sample period, which may explain the difference between our non-overlapping samples.

We calculate the predicted value of Lag(DTC) and its residual as alternatives to the actual lagged value. To predict DTC, we regress DTC on dark pool activity, price to 52-week high ratio, monthly stock return, stock turnover, standard deviation of the error term from the market model, log of the Amihud illiquidity measure, log of market value of equity, book-to-market ratio and a binary variable that identifies stocks listed on Nasdaq. Residual DTC is equal to the actual value minus the predicted value. The average (median) predicted Lag(DTC) is 30.50% (30.54%) or 6.41 (6.41) trading days, and the average (median) residual lag is 0.00% (−5.51%). Average (median) values for lagged monthly trading volume and market value of equity are 23.04 (6.69) million shares and US\$6.94bn (US\$1.20), respectively. Average (median) values for lagged monthly absolute return and closing price are 7.48% (5.25%) and US\$40.10 (US\$26.83), respectively.

4. Empirical results

4.1 Determinants of dark pool volume

In our multivariate analysis, we use lagged explanatory variables and fixed effects to mitigate potential biases because of simultaneous causality, reverse causality and spurious correlation. Because truly exogenous instruments are difficult to find, lagged values are commonly used in response to endogeneity concerns when it is expected that past levels of the explanatory variables determine the current level of the response variable. Fixed effects control for the possibility that the explanatory variable and the response variable are spuriously connected through variables that are not included in the model. Except for the two-stage least squares and first-difference estimations, we include stock and month fixed effects in all reported regression specifications [5].

Table 2, Models 1 and 2, reports that the relation between dark pool volume and both first- and second-order Lag(DTC) is positive and significant at the 1% level. Recall that the standard deviation of Lag(DTC) is 24.36% and the average dark pool volume is 16.19%. Therefore, the coefficient on Lag(DTC) in Model 1 implies that a one standard deviation change in Lag(DTC) is associated with a 2.33% change in dark pool volume as a fraction of total trading volume. When we include both lags in the same model (Model 3), the first-order lag remains highly significant, while the second-order lag is no longer statistically significant. A one standard deviation change in Lag(DTC) is associated with a 2.24% change in dark pool volume as a percentage of the total trading volume in that case.

In Table 2, Models 4–6, we replace Lag(DTC) with the predicted value of Lag(DTC) and its residual. The estimated coefficients on the predicted value of Lag(DTC) and its residual are positive and significant when used individually or together. Therefore, the component of Lag(DTC) that is orthogonal to the other control variables has strong explanatory power. The coefficient on the predicted value can be interpreted as the permanent effect of Lag(DTC) on dark pool volume, while the coefficient on its residual is the effect of transitory variations from normal levels. Overall, Table 2 provides support for our hypothesis. The signs and significance of the coefficients on our proxies for trading volume and market capitalization are not always consistent with those reported by Buti *et al.* (2011). We include a more comprehensive set of control variables to help address endogeneity concerns. However, this may create multicollinearity issues, which may explain the inconsistencies when compared to Buti *et al.* (2011).

D'Avolio (2002) reports that the supply of shares available to short is correlated with the market value of equity, and O'Hara and Ye (2011) find that dark pool trading differs based on market capitalization. Motivated by these studies, we split our sample into terciles based on market capitalization, calculated as the number of shares outstanding multiplied by the closing price. We define small capitalization stocks as stocks with a market capitalization below US\$540.3m, medium capitalization stocks as stocks with a market capitalization between US\$540.3m and US\$2,676.4m, and large capitalization stocks as stocks with a market capitalization equal to or above US\$2,676.4m. Table 3 considers whether the relation between DTC and dark pool volume varies based on the market capitalization tercile. The models include the same control variables reported in Table 2, but we omit them to conserve space. We report the results for small, mid and large capitalization stocks in Panels A, B and C, respectively.

We find that the estimated coefficients on the first-order lag of DTC are positive and significant at the 1% level for all three size terciles (Model 1). In addition, the effect is economically significant. Standard deviations for Lag(DTC) are 28.18, 24.44 and 17.34%, while average dark pool volumes are 13.86, 17.62 and 17.06% for small-, mid- and large-cap stocks, respectively. Therefore, a one standard deviation change in Lag(DTC) is associated with a 2.66, 1.89 and 1.66% change in dark pool activity for small-, mid- and large-cap stocks, respectively. The coefficient on the second-order lag of DTC is significant in the absence of the first-order lag (Model 2), but loses

Table 2.
Dark pool volume
and DTC

	(1)	(2)	(3)	(4)	(5)	(6)
Lag(DTC)	0.0155*** (9.75)		0.0149*** (9.29)			0.0801*** (17.10)
Lag2(DTC)		0.0099*** (7.29)	0.0008 (0.66)	0.0744*** (16.15)	0.0089*** (5.52)	0.0122*** (7.59)
Pred. Lag(DTC)					-0.0003 (-0.46)	0.0026*** (3.46)
Residual					-0.0027* (-1.70)	0.0025 (1.59)
Loglag(vol)]	0.0002 (0.30)	-0.0012* (-1.74)	0.0002 (0.22)	0.0014** (2.01)	0.0016 (0.67)	-0.0022 (-0.94)
Loglag(mvel)]	-0.0007 (-0.41)	-0.0009 (-0.58)	-0.0009 (-0.53)	0.0028* (1.80)	-0.1155*** (-4.47)	-0.1707*** (-6.80)
Lag(abs. return)	0.0017 (0.73)	-0.0010 (-0.45)	0.0014 (0.61)	-0.0037 (-1.54)	0.0034*** (-5.96)	-0.0002 (-0.28)
Lag(inv. price)	-0.1160*** (-4.70)	-0.1116*** (-4.49)	-0.1175*** (-4.77)	-0.1667*** (-6.58)	-0.1952*** (-7.97)	-0.0532*** (-2.07)
Loglag(dliq.)]	-0.0031*** (-5.62)	-0.0034*** (-6.00)	-0.0031*** (-5.69)	0.0000 (0.01)	0.0085 (1.22)	0.0068 (0.99)
Lag(std. error)	-0.1427*** (-5.94)	-0.1817*** (-7.50)	-0.1469*** (-6.04)	-0.0671 *** (-2.61)	0.2285*** (6.51)	0.0742** (2.06)
Nasdaq	0.0050 (0.78)	0.0050 (0.78)	0.0050 (0.78)	0.0069 (1.00)		
Constant	0.1776*** (4.92)	0.2056*** (5.72)	0.1823*** (5.05)	0.0873** (2.42)		
Stock fixed effects	YES	YES	YES	YES	YES	YES
Month fixed effects	YES	YES	YES	YES	YES	YES
R ²	0.232	0.231	0.232	0.234	0.230	0.235
Observations	120,476	120,420	120,420	114,078	114,078	114,078

Note(s): The response variable is the ratio of dark pool volume to total trading volume. DTC is days-to-cover, defined as the ratio of outstanding short interest to total trading volume. The remaining variables are as described in Table 1. *t*-statistics based on standard errors clustered by stock are reported in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel A: small cap</i>						
Lag(DTC)	0.0131*** (5.71)		0.0111*** (4.73)			
Lag2(DTC)		0.0095*** (4.73)	0.0031 (1.57)			
Pred. Lag(DTC)				0.0823*** (9.57)	0.0063** (2.55)	0.0845*** (9.79)
Residual					YES	YES
Stock fixed effects	YES	YES	YES	YES	YES	YES
Month fixed effects	YES	YES	YES	YES	YES	YES
R ²	0.124	0.123	0.124	0.125	0.121	0.125
Observations	39,757	39,725	39,725	36,902	36,902	36,902
<i>Panel B: mid cap</i>						
Lag(DTC)	0.0136*** (5.01)		0.0129*** (4.78)			
Lag2(DTC)		0.0083*** (3.80)	0.0010 (0.50)			
Pred. Lag(DTC)				0.0489*** (6.64)	0.0107*** (3.91)	0.0580*** (7.55)
Residual					YES	YES
Stock fixed effects	YES	YES	YES	YES	YES	YES
Month fixed effects	YES	YES	YES	YES	YES	YES
R ²	0.296	0.295	0.296	0.294	0.293	0.296
Observations	40,961	40,946	40,946	38,787	38,787	38,787
<i>Panel C: large cap</i>						
Lag(DTC)	0.0163*** (5.12)		0.0198*** (6.37)			
Lag2(DTC)		0.0073** (2.48)	-0.0048* (-1.78)			
Pred. Lag(DTC)				0.0512*** (7.16)	0.0110*** (3.62)	0.0656*** (8.50)
Residual					YES	YES
Stock fixed effects	YES	YES	YES	YES	YES	YES
Month fixed effects	YES	YES	YES	YES	YES	YES
R ²	0.414	0.413	0.414	0.414	0.413	0.416
Observations	39,758	39,749	39,749	38,389	38,389	38,389
Note(s): The response variable is the ratio of dark pool volume to total trading volume. DTC is days-to-cover, defined as the ratio of outstanding short interest to total trading volume. Intercepts and control variables are omitted for sake of space. The results for the small-, mid- and large-cap stocks are reported in Panels A, B and C respectively. Stocks are sorted into terciles based on market capitalization. <i>t</i> -statistics based on standard errors clustered by stock are reported in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively						

Table 3.
Dark pool volume and
DTC by size group

Dark pool
volume

significance for small- and mid-cap stocks and is negative for large-cap stocks when we include first and second lags in the same model (Model 3). Collinearity is the usual suspect when the sign of an explanatory variable flips after adding other explanatory variables. However, it is important to note that the coefficient on the first-order lag of DTC remains positive and significant in all models. In Models 4–6, we report that the estimated coefficients on the predicted value of Lag(DTC) and its residual are both positive and statistically significant. Overall, Table 3 indicates that the positive relation between short selling and dark pool volume does not differ substantially based on stock market capitalization.

Lagging short selling relative to dark pool volumes may not address simultaneity and reverse causality biases if those variables are persistent over time. Additionally, the use of fixed effects to control for the omitted variable bias does not fully address concerns about spurious correlation if the omitted variable changes over time. Therefore, we follow Buti *et al.* (2011) and use stocks with the same Fama and French 48-industry classification, listing exchange and market capitalization tercile to construct an instrument for each stock-month combination in our sample. Because dark pool volume has significant industry, exchange and size components, the average monthly dark pool volume within these groups is correlated with dark pool volume for each stock in month t , which fulfills the relevance requirement for a good instrument. To satisfy the exclusion requirement, we exclude stock i from that average when calculating the value of our instrument for stock i to eliminate a source of correlation between the instrument and the error term. We use the same procedure to create an instrument for DTC. The instruments for dark pool volume and DTC for stock i at time t are $\text{Dark pool}_{i,t}$ and $\text{DTC}_{i,t}$, respectively. We estimate the following two-stage simultaneous model:

$$\text{DTC}_{i,t} = a_1 + a_2 \cdot \text{Dark pool}_{i,t} + a_3 \cdot \text{DTC}_{i,t} + \varepsilon_{1,i,t} \quad (1)$$

$$\text{Dark pool}_{i,t} = b_1 + b_2 \text{DTC}_{i,t} + b_3 \cdot \text{Dark pool}_{i,t} + \varepsilon_{2,i,t} \quad (2)$$

In Equation (2), we replace DTC with the fitted value from Equation (1), a regression of DTC on the instruments that we create for dark pool volume and DTC to account for the possibility that short interest and dark pool volume are jointly determined.

In Table 4, we report first- and second-stage estimation results for the full sample first, followed by results for the small, mid and large market capitalization subsamples. Consistent with earlier tables, the coefficients on the fitted values of DTC are positive and statistically significant, further confirming the positive relation between informed trading and dark pool volume.

We also use lagged and concurrent differences to examine how changes in the explanatory variables affect changes in the response variable. Like fixed effects, differences control for spurious correlation because of the variables that are not included in the model. Differences also help us examine the direction of causality between informed trading and dark pool volume. We report the results in Table 5. The estimated coefficients on the prior month's change in DTC are always significant, while the coefficients on changes that are concurrent to changes in dark pool volume are significant only for stocks in the large market capitalization tercile.

Tables 2–5 report consistent evidence of a positive relation between short selling and dark pool volume. Next, we turn our attention to determining whether informed traders with longer-lived information or liquidity traders drive this effect. We approach this by examining firm-level information asymmetry, institutional ownership and subsequent stock returns.

4.2 Firm information asymmetry

We follow prior literature and proxy for firm-level information asymmetry using the market-to-book ratio, capital expenditures to assets ratio, research and development to

	All		Small cap		Mid cap		Large cap	
	First stage DTC	Second stage Dark pool	First stage DTC	Second stage Dark pool	First stage DTC	Second stage Dark pool	First stage DTC	Second stage Dark pool
_Dark pool	0.1565*** (8.53)	0.8148*** (189.33)	0.5180*** (12.81)	0.6672*** (55.18)	0.1302*** (3.65)	0.7730*** (99.42)	0.1670*** (5.89)	0.8260*** (111.06)
_DTC	0.5998*** (88.63)		0.4134*** (27.38)		0.4813*** (38.62)		0.3114*** (21.29)	
DTC		0.0096*** (3.67)		0.0697*** (7.84)		0.0112*** (1.99)		0.0237*** (2.06)
Constant	0.09778*** (28.80)	0.0266*** (28.68)	0.1143*** (18.97)	0.0233*** (11.00)	0.1673*** (22.20)	0.0356*** (15.63)	0.1336*** (23.75)	0.0240*** (9.47)
Observations	118,794	118,794	39,154	39,154	40,411	40,411	39,229	39,229

Note(s): The response variable is the ratio of dark pool volume to total trading volume. _Dark pool is an instrument for the ratio of dark pool activity constructed every month as the average dark pool activity of other stocks listed on the same exchange, in the same market capitalization grouping, and in the same Fama and French 48-industry classification, excluding stock *i*. DTC is replaced with the fitted value from a regression of DTC on _Dark pool and an instrument for DTC constructed in the same way. *t*-statistics based on two-way clustered standard errors (i.e. at both stock and month levels) are reported in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively

Dark pool volume

Table 4.
Two-stage least squares estimation

Table 5.
Change in dark pool
volume and DTC

	All	Small cap	Mid cap	Large cap
Δ IDTC	0.0170 (1.60)	0.0090 (0.90)	0.0096 (0.81)	0.0351*** (2.62)
Δ 2DTC	0.0359*** (3.28)	0.0196** (2.23)	0.0515*** (4.22)	0.0582*** (2.67)
Δ Log(vol)	-0.0191*** (-3.90)	-0.0100*** (-3.41)	-0.0409*** (-4.51)	-0.0339*** (-3.38)
Δ Log(mve)	-0.0326* (-1.70)	-0.0199* (-1.76)	-0.0497** (-2.22)	-0.0627** (-2.12)
Δ (abs. return)	0.0158 (1.30)	0.0121 (1.27)	0.0218 (1.56)	0.0157 (0.71)
Δ (inv. price)	0.0000 (0.10)	-0.0000 (-0.32)	0.0001 (0.83)	-0.0001 (-0.74)
Δ Log(tlilq.)	-0.0170*** (-5.97)	-0.0081*** (-7.36)	-0.0398*** (-6.31)	-0.0372*** (-4.44)
Δ (std. error)	0.5978*** (3.09)	0.1441 (1.24)	1.0600*** (3.96)	1.5273*** (4.34)
Δ Nasdaq	0.0132 (0.60)	-0.0298*** (-4.07)	0.0328 (1.09)	-0.0049 (-0.13)
Constant	0.0005 (0.09)	0.0005 (0.11)	0.0003 (0.04)	0.0004 (0.06)
R^2	0.028	0.012	0.058	0.067
Observations	119,263	38,845	40,731	39,687
Note(s): The response variable is the change in the ratio of dark pool volume to total trading volume. Δ DTC is the change in the ratio of outstanding short interest to total trading volume from month $t-1$ to month t . Δ 2DTC is the previous month's change in the ratio of outstanding short interest to total trading volume. The remaining variables are as described in Table 1. t -statistics based on two-way clustered standard errors (i.e. at both stock and month levels) are reported in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively				

	(1)	(2)	(3)	(4)
Lag(DTC)	0.0123*** (6.71)	0.0148*** (9.12)	0.0139*** (7.99)	0.0129*** (6.29)
Lag(DTC) × Lag(market/book)	0.0010*** (3.99)			
Lag(market/book)	-0.0003** (-2.21)			
Lag(DTC) × Lag(capex/assets)		0.0430* (1.80)		
Lag(capex/assets)		-0.0236** (-2.56)	0.0836* (1.89)	
Lag(DTC) × Lag(R&D/assets)			-0.0470 (-1.37)	
Lag(R&D/assets)				
Lag(DTC) × Lag(std. error)				
Log[lag(vol)]	0.0005 (0.68)	0.0004 (0.48)	0.0004 (0.50)	0.1512* (1.91)
Log[lag(mve)], CRSP	-0.0020 (-1.30)	-0.0025 (-1.60)	-0.0025 (-1.61)	0.0003 (0.36)
Log(abs. return)	0.0019 (0.81)	0.0013 (0.55)	0.0015 (0.64)	-0.0007 (-0.45)
Lag(inv. price)	-0.1237*** (-4.96)	-0.1305*** (-5.20)	-0.1311*** (-5.21)	0.0020 (0.88)
Log[lag(illiq.)]	-0.0031*** (-5.65)	-0.0032*** (-5.72)	-0.0032*** (-5.75)	-0.1185*** (-4.77)
Lag(std. error)	-0.1555*** (-6.44)	-0.1557*** (-6.44)	-0.1528*** (-6.30)	-0.0031*** (-5.64)
Nasdaq	0.0079 (1.12)	0.0082 (1.18)	0.0082 (1.19)	-0.1785*** (-6.03)
Constant	0.2007*** (5.72)	0.2116*** (6.01)	0.2122*** (6.02)	0.0051 (0.79)
Stock fixed effects	YES	YES	YES	0.1791*** (4.95)
Month fixed effects	YES	YES	YES	YES
Observations	115,155	115,699	115,699	120,476
R ²	0.232	0.231	0.231	0.232

Note(s): The response variable is the ratio of dark pool volume to total trading volume. DTC is days-to-cover, defined as the ratio of outstanding short interest to total trading volume. Variables *market/book*, *capex/assets*, *R&D/assets* and *std. error* proxy for firm-level information asymmetry. The remaining variables are as described in Table 1. *t*-statistics based on standard errors clustered by stock are reported in parentheses. ***, **, * and * indicate statistical significance at the 1, 5 and 10% levels, respectively

Table 6.
Firm-level information
asymmetry and dark
pool volume

Dark pool
volume

assets ratio and dispersion of investor expectations* (e.g. Pástor and Veronesi, 2003; Kothari *et al.*, 2002; Danielsen; Sorescu, 2001). In Table 6, we add the firm-level information asymmetry measures and their interaction with DTC to our base regression model. If firms with more information asymmetry offer greater opportunity to investors who trade on firm fundamentals and mispricing, the coefficients on the interaction terms should be positive. Such a finding would provide support for our hypothesis, which predicts that traders with sustainable information advantages drive the positive relation between short selling and dark pool volume.

We continue to report a positive relation between DTC and dark pool volume after controlling for measures of firm-level information asymmetry. Interestingly, the coefficients on the four firm-level information asymmetry measures are negative and significant, which indicates that dark pools capture less of the total trading volume in stocks that pose greater information asymmetry risk. However, the positive coefficients on the interaction terms are consistent with fundamentals-based informed traders targeting stocks with greater uncertainty in dark pools to take advantage of their opacity and the potential for price improvement.

4.3 Institutional ownership type

To examine the impact of institutional investor type on the relation between short selling and dark pool volume, we follow Bushee and Noe (2000), who use principal factor analysis to generate factors that explain shared variance among variables that describe institutional trading behavior and portfolio characteristics. The authors then use k-means cluster analysis on the factor scores to classify institutional investors as one of the three types. First, quasi-indexers are institutions that hold large diversified portfolios and trade infrequently. Second, dedicated institutions hold concentrated portfolios with large and stable holdings. Finally, transient institutions pursue trading strategies informed by firm fundamentals that result in substantial portfolio turnover.

We obtain quarterly data on institutional holdings from Thomson Reuters as reported in Form 13-F and calculate the aggregate percentage of each firm's outstanding shares held by each of the three types of institutions at the end of each quarter. The variables *pct_ded*, *pct_qix* and *pct_tra* correspond to the cumulative percentage of total shares outstanding held by dedicated, quasi-indexer and transient institutions, respectively. If informed traders are responsible for the positive relation between short selling and dark pool volume, the coefficient on the interaction between short selling and transient institutional ownership should be positive. This would provide support for our hypothesis, because transient institutions are more likely to invest based on fundamentals and mispricing than other types of institutions. If liquidity traders drive the positive relation between DTC and dark pool volume, we would expect to observe a positive coefficient on the interaction of DTC and quasi-indexers and, to a lesser extent, dedicated institutions.

We report the results in Table 7. The relation between DTC and dark pool volume remains positive and significant when we control for institutional ownership. The positive and significant coefficient on the interaction of transient institutional holdings (*pct_tra*) and DTC is consistent with the notion that transient institutional investors help drive the positive relation between informed trading and dark pool volume [6]. Neither quasi-indexers nor dedicated institutional investors have a significant effect on the relation between DTC and dark pool volume.

4.4 Dark pool volume and subsequent stock returns

Hendershott and Mendelson (2000) predict that dark pools, which provide a lower-cost venue for trading than exchanges, have a positive effect on the profitability of long-lived information. In

	(1)	(2)	(3)	Dark pool volume
Lag(DTC)	0.0145*** (8.62)	0.0111*** (4.05)	0.0056*** (2.42)	
Lag(DTC) \times Lag(pct_ded)	0.0132 (1.03)			
Lag(pct_ded)	-0.0007 (-0.08)			
Lag(DTC) \times Lag(pct_qix)		0.0098 (1.63)		
Lag(pct_qix)		-0.0024 (-0.48)		
Lag(DTC) \times Lag(pct_tra)			0.0598*** (5.23)	
Lag(pct_tra)			-0.0075 (-1.09)	
Log[lag(vol)]	0.0000 (0.07)	-0.0001 (-0.07)	-0.0002 (-0.28)	
Log[lag(mve)], CRSP	-0.0008 (-0.54)	-0.0007 (-0.47)	-0.0006 (-0.36)	
Lag(abs. return)	0.0019 (0.81)	0.0019 (0.85)	0.0025 (1.08)	
Lag(inv. price)	-0.1220*** (-5.04)	-0.1196*** (-4.92)	-0.1172*** (-4.83)	
Log[lag(illiq.)]	-0.0027*** (-4.98)	-0.0027*** (-5.03)	-0.0027*** (-5.02)	
Lag(std. error)	-0.1519*** (-6.42)	-0.1499*** (-6.33)	-0.1411*** (-5.94)	
Nasdaq	0.0060 (0.92)	0.0060 (0.94)	0.0065 (1.01)	
Constant	0.1866*** (5.34)	0.1863*** (5.31)	0.1850*** (5.27)	
Stock fixed effects	YES	YES	YES	
Month fixed effects	YES	YES	YES	
Observations	117,559	117,512	117,559	
R ²	0.234	0.234	0.235	

Note(s): The response variable is the ratio of dark pool volume to total trading volume. DTC is days-to-cover, defined as the ratio of outstanding short interest to total trading volume. Variables pct_ded, pct_qix and pct_tra measure the cumulative percentage of total shares outstanding held by dedicated, quasi-indexer and transient institutions, respectively (Bushee and Noe, 2000). The remaining variables are as described in Table 1. *t*-statistics based on standard errors clustered by stock are reported in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively

Table 7.
Institutional ownership
type and dark pool
volume

our final tests, we examine the relation between short interest, dark pool volume and subsequent stock returns. We consider both market- and characteristic-adjusted returns. For the later, we follow Daniel *et al.* (1997), who compute characteristic-adjusted returns by subtracting the return of a benchmark group from the raw return of a stock. The benchmark groups are based on size, book-to-market ratio and 12-month momentum quintiles calculated at the end of June of each year.

In the untabulated results, we confirm that short interest and subsequent returns are negatively correlated for our sample. We find that market-adjusted (characteristic-adjusted) returns for stocks in the highest DTC quartile are 0.30% (0.34) lower than those for stocks in the lowest DTC quartile in the subsequent month of trading. Cumulative underperformance increases with time, reaching 5.21% (4.91) after 12 months. This pattern of returns is consistent with the notion that DTC captures informed traders with long-lived information.

If informed short sellers exhibit a preference for dark pools when they have a sustainable information advantage, Hendershott and Mendelson (2000) predict that we should find a negative correlation between dark pool volume and stock returns. To examine the relation between dark pool volume and stock returns, we sort stocks into quartiles-based dark pool volume and calculate returns for each quartile over the subsequent 12 months. We then compare the returns for stocks with high dark pool volume to stocks with low dark pool volume to determine the relation between dark pool volume and returns.

Table 8, Panel A reports that a long-short strategy that buys stocks in the lowest dark pool volume quartile and short sells stocks in the highest dark pool volume quartile generates market-adjusted returns of 1.14%, on average, over two months. The same strategy returns

	Quartile	[0]	[0,1]	[0,2]	[0,5]	[0,8]	[0,11]
<i>Panel A</i>							
MM AR	4	0.0000 (0.99)	-0.0009 (0.86)	-0.0006 (0.91)	0.0005 (0.95)	-0.0017 (0.87)	-0.0058 (0.57)
	3	0.0039 (0.30)	0.0067 (0.13)	0.0104 (0.04)	0.0206 (0.00)	0.0288 (0.00)	0.0355 (0.00)
	2	0.0040 (0.26)	0.0072 (0.09)	0.0112 (0.02)	0.0232 (0.00)	0.0351 (0.00)	0.0472 (0.00)
	1	0.0058 (0.11)	0.0105 (0.01)	0.0163 (0.00)	0.0332 (0.00)	0.0502 (0.00)	0.0690 (0.00)
	1-4	0.0057 (0.04)	0.0114 (0.01)	0.0169 (0.00)	0.0326 (0.00)	0.0519 (0.00)	0.0748 (0.00)
<i>Panel B</i>							
DGTW AR	4	-0.0006 (0.56)	-0.0011 (0.52)	-0.0014 (0.54)	-0.0017 (0.64)	-0.0049 (0.25)	-0.0086 (0.07)
	3	0.0031 (0.00)	0.0061 (0.00)	0.0090 (0.00)	0.0175 (0.00)	0.0241 (0.00)	0.0300 (0.00)
	2	0.0026 (0.00)	0.0053 (0.00)	0.0079 (0.00)	0.0159 (0.00)	0.0236 (0.00)	0.0320 (0.00)
	1	0.0034 (0.09)	0.0070 (0.01)	0.0103 (0.00)	0.0196 (0.00)	0.0289 (0.00)	0.0400 (0.00)
	1-4	0.0041 (0.07)	0.0081 (0.02)	0.0117 (0.01)	0.0213 (0.01)	0.0338 (0.00)	0.0486 (0.00)

Note(s): This table reports cumulative abnormal returns (CAR) within quartiles of dark pool trading volume as a percentage of total trading volume, measured in month t . Quartile 4 is the highest quartile. CAR windows are from the first month [0] to 12 months [0, 11]. Market-adjusted returns based on CRSP value-weighted index in Panel A and characteristic-adjusted returns as described by [Daniel, Grinblatt, Titman and Wermers \(1997\)](#) in Panel B. Returns are winsorized at the 1 and 99% levels. p -values for differences from zero are reported in parentheses

Table 8.
Returns by dark pool
volume quartiles

an average cumulative return of 7.48% over 12 months. In Panel B, we report similar results for characteristic-adjusted returns. A trading position that is long low and short high dark pool volume stocks generates an average characteristic-adjusted return of 0.81% (4.86) over the first two (12) months.

[Table 9](#) examines the joint effect of short interest and dark pool activity on stock returns. We independently sort stocks into quartiles based on short interest and dark pool volume, and then calculate the returns from a strategy that focuses on stocks in the highest quartile of short interest, i.e. long stocks in the lowest quartile of dark pool volume and short stocks in the highest quartile of dark pool volume. We bold the returns to this strategy in the results for emphasis. We report both market-adjusted (Panel A) and characteristic-adjusted (Panel B) returns. For parsimony, we report two- and 12-month cumulative abnormal returns. We find that the long-short strategy previously described generates an average cumulative market-adjusted (characteristic-adjusted) return of 1.19% (0.92%) over the first two months and 8.25% (5.91%) over 12 months. Greater returns over longer horizons support the notion that short sellers prefer to trade in dark pools when they have a sustainable information advantage.

Another potential trading strategy is to buy stocks with low short interest and low dark pool volume while simultaneously shorting stocks with high short interest and high dark pool volume. At the bottom right of each panel and return window, we report the returns from this strategy. We highlight the results in italics for emphasis. We find that this strategy generates substantial market-adjusted (Panel A) and characteristic-adjusted (Panel B) returns. Namely,

MM model	[0,1]	Dark pool volume				[0,11]	Dark pool volume				1-4
		4	2	1	1-4		4	2	1	1-4	
Panel A											
Short interest	4	-0.0043 (0.45)	0.0068 (0.25)	0.0071 (0.26)	0.0075 (0.22)	0.0119 (0.03)	-0.0326 (0.00)	0.0265 (0.03)	0.0452 (0.00)	0.0498 (0.00)	0.0825 (0.00)
	3	-0.0018 (0.74)	0.0070 (0.13)	0.0069 (0.18)	0.0078 (0.13)	0.0097 (0.04)	-0.0078 (0.47)	0.0305 (0.00)	0.0439 (0.00)	0.0539 (0.00)	0.0618 (0.00)
	2	-0.0009 (0.85)	0.0035 (0.44)	0.0093 (0.02)	0.0056 (0.22)	0.0065 (0.18)	-0.0072 (0.52)	0.0235 (0.01)	0.0550 (0.00)	0.0422 (0.00)	0.0494 (0.00)
	1	0.0066 (0.13)	0.0114 (0.01)	0.0054 (0.16)	0.0146 (0.00)	0.0080 (0.10)	0.0456 (0.00)	0.0701 (0.00)	0.0447 (0.00)	0.0924 (0.00)	0.0467 (0.00)
	1-4	0.0109 (0.01)	0.0046 (0.34)	-0.0017 (0.71)	0.0071 (0.21)	1-4 <i>11-44</i>	0.0783 (0.00)	0.0436 (0.00)	-0.0006 (0.93)	0.0426 (0.00)	<i>11-44</i> <i>0.1250</i> (0.00)
Panel B											
Short interest	4	-0.0048 (0.09)	0.0056 (0.02)	0.0063 (0.02)	0.0044 (0.10)	0.0092 (0.03)	-0.0347 (0.00)	0.0169 (0.00)	0.0374 (0.00)	0.0244 (0.00)	0.0591 (0.00)
	3	-0.0019 (0.36)	0.0057 (0.01)	0.0042 (0.03)	0.0044 (0.17)	0.0063 (0.11)	-0.0100 (0.04)	0.0212 (0.00)	0.0235 (0.00)	0.0256 (0.00)	0.0356 (0.00)
	2	-0.0008 (0.71)	0.0032 (0.09)	0.0061 (0.01)	0.0021 (0.41)	0.0029 (0.47)	-0.0110 (0.06)	0.0207 (0.00)	0.0331 (0.00)	0.0153 (0.04)	0.0263 (0.04)
	1	0.0052 (0.04)	0.0116 (0.00)	0.0047 (0.03)	0.0113 (0.02)	0.0061 (0.24)	0.0351 (0.00)	0.0689 (0.00)	0.0343 (0.00)	0.0626 (0.00)	0.0274 (0.03)
	1-4	0.0100 (0.01)	0.0060 (0.12)	-0.0016 (0.65)	0.0069 (0.14)	1-4 <i>11-44</i>	0.0698 (0.00)	0.0520 (0.00)	-0.0031 (0.62)	0.0382 (0.00)	<i>11-44</i> <i>0.0972</i> (0.00)

Note(s): This table reports the CAR independently sorted on both short interest and dark pool activity. Quartile 4 is the highest quartile. Short interest is the outstanding balance of shorted shares divided by total trading volume, measured at the end of month $t-1$. Dark volume is the dark pool volume divided by total trading volume, measured in the month t . CAR windows are for the first two months [0, 1] and for 12 months [0, 11]. Market-adjusted returns based on CRSP value-weighted index in Panel A, and characteristic-adjusted returns as described by [Daniel, Grmlblatt, Titman and Wermers \(1997\)](#) in Panel B. Returns are winsorized at the 1 and 99% levels, p -values for differences from zero are reported in parentheses

Table 9.
Returns by short
interest and dark pool
volume (double sorts)

Dark pool
volume

cumulative market-adjusted (characteristic-adjusted) returns are 1.89% (1.61%) over the first two months and 12.50% (9.72%) over 12 months.

The results reported in Tables 6–9 provide support for our hypothesis, which predicts that informed traders with longer-lived information drive the positive relation between short selling and dark pool volume. Namely, the effect is stronger for stocks with greater firm-level information asymmetry and for stocks targeted by institutional investors that invest based on firm fundamentals. The substantial underperformance among stocks with high levels of dark pool volume is consistent with the notion that traders with a sustainable information advantage prefer to trade in dark pools.

5. Conclusion

We contribute to a growing literature on dark pools by investigating the relation between short interest and the proportion of trading volume executed in dark pools. We use ATS data to measure dark pool activity and short interest to proxy for informed trading based on long-lived information. This allows us to investigate the following questions: Is there a relation between short selling and dark pool volume? If so, do informed traders or liquidity traders drive the change in dark pool volume?

We find that short interest is positively correlated with the fraction of trading volume executed in dark pools. Additional evidence supports the notion that it is informed traders with sustainable information advantages, not event-driven traders, who drive the relation between short selling and dark pool volume. Namely, the positive relation between short selling and dark pool volume is stronger for stocks likely to suffer from greater information asymmetry and stocks targeted by institutions who invest based on firm fundamentals. Finally, we find that subsequent returns are lower for stocks with a greater proportion of their trading volume executed in dark pools, especially among those stocks most targeted by short sellers.

Notes

1. See <https://www.cfainstitute.org/en/advocacy/issues/dark-pools>.
2. SEC release No. 34–71341 (January 17, 2014) and No. 34–76931 (January 19, 2016) provide details on the rule requiring ATSs to report transaction data to FINRA.
3. See <https://www.investor.gov/additional-resources/general-resources/glossary/alternative-trading-systems-atss>.
4. Over-the-counter transparency data are available at <http://www.finra.org/industry/OTC-Transparency>. ATS trading volume data can be accessed by clicking “OTC Data” and agreeing with the terms of use.
5. The demeaning process of time-invariant variables in fixed-effects models makes their values equal to zero. However, eight stocks change their listing exchanges between months during our sample period. Therefore, we include a binary variable that identifies those listing changes.
6. Alternative explanations for the positive relation between transient institutional holdings and dark pool volume include that transient institutions are (1) more likely to short sell stocks and (2) willing to pursue all available markets for liquidity. We thank a reviewer for pointing this out.

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B #:	17852-22
Date:	December 28, 2022
To:	All Participants
Category:	Securities Processing Updates
From:	Asset Services Product Management
Attention:	Officers / Cashiers / Operations Management
Subject:	Reminder: Elimination of Email Notifications of Client Short Positions

This notice serves as a reminder that The Depository Trust Company (“DTC”) will eliminate notifications on client short positions via email, effective January 1, 2023. This was first announced via Important Notice B#17122-22, dated July 19, 2022.

Background

When clients incur short positions, DTC imposes a hold of 130% of the value of the short position until the short position is covered.

Historically, DTC has sent an email to the client informing them of the short position. The email notification contains the security description, CUSIP number and the quantity of the short. This data is classified as Non-Public Information (NPI).

Beginning July 19, 2022 through December 31, 2022, DTC will continue sending clients an email informing them that they have incurred a short position, however, in an effort to reduce cybersecurity risk, the CUSIP / security identifier and quantity will no longer be included. Clients can self-serve this information by utilizing the steps detailed on the following page.

Questions regarding this notice may be directed to your Relationship Manager.

DTCC offers enhanced access to all important notices via a Web-based subscription service. The notification system leverages RSS Newsfeeds, providing significant benefits including real-time updates and customizable delivery. To learn more and to set up your own DTCC RSS alerts, visit http://www.dtcc.com/subscription_form.php.

Instructions For Identifying and Monitoring Short Positions

For additional details about any of the following processes, log in to the [Learning Center](#) and refer to the Settlement Web Overview.

Intra-Day Monitoring:

1. Sign up for email/dashboard alerts in Settlement Web (SW)

- Log into your SW account:
 - o the landing page will be your Settlement Dashboard
- Under the “Alerts” section, select “Customize”
- Select “Short Positions” from the menu and then “Add Subscription”
- Check off the “Email Notifications” box, select the Participant ID (if you have access to multiple Participant accounts) in the “Participant ID” field, then press “Add”

2. Intra-Day Short Position Inquiry in Settlement Web:

- Log into your SW account
 - o the landing page will be your Settlement Dashboard
- From the Navigation Bar, Select “Short Position Inquiry (EOD)” under the “Position” tab
- Press “Search”

Settlement Date + 1 Monitoring:

3. Previous Day COB Short Position inquiry in PBS

- Log into your SW account
 - o the landing page will be your Settlement Dashboard
- From the Navigation Bar, select “PBS Settlement Main Menu” under the “Home” tab
- Under the “Settlement Statement/Reconciliation” section, select “Short Position Inquiry”
- Press “Search”

4. Short Penalty/Cash Collateral Monitoring:

- Log into your SW account
 - o the landing page will be your Settlement Dashboard
- From the Navigation Bar, Select “Participant Account Statement” under the “Cash and Balances” tab
- Short Penalty is listed as Settlement Activity Code 89.0

If you encounter problems navigating DTCC’s Settlement Web, call the hotline at (212) 855-5800.