



## Is Short Selling the Tail that Wags the Dog?

Niall H. O'Malley, MBA

*Portfolio Manager, Blue Point Investment Management*

Sometimes a simple question does not have a simple answer. To understand the role of short selling, one has to step back and try to understand how short selling impacts price discovery in equity markets. We are familiar with the terminology short squeeze, prime brokers, and short interest, but what does it all mean?

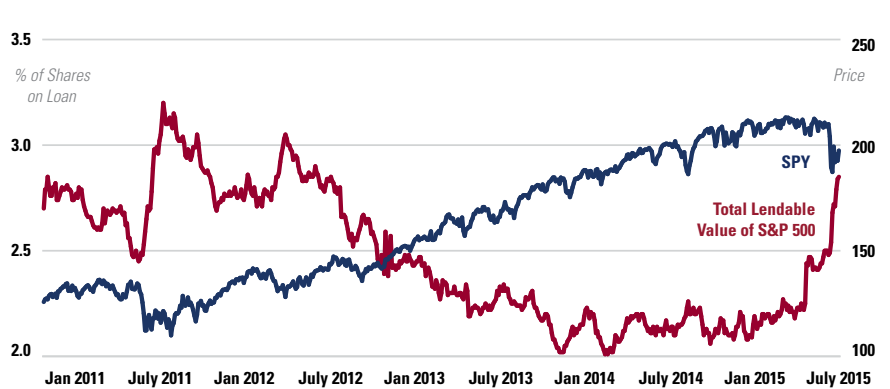
The history of short selling is almost as long as the history of equity markets. While the equity markets came first, written accounts of short selling date back to 1609 on the Amsterdam Stock Exchange. The impact of short selling is undeniable in today's equity markets. One information provider, Markit, provides data on \$15 trillion of loanable securities and \$2 trillion securities on loan. Looking at Chart 1, there is an inverse correlation between short selling and the 2011 European debt market crisis. In September 2012, the Federal Reserve announced the third round of Quantitative Easing, QE3, which was bullish for equities, and saw short interest fall for an extended period as printed money became a contributing factor to a rising S&P 500. The latest spike in short selling since the summer has been even more dramatic, coinciding with a correction in the Chinese equity market.

### What Exactly is Short Selling?

If an investor disagrees with the valuation of a security, they can short sell the security, which is the opposite of buying a security. To profit, the investor needs to sell the security short, have the security fall in value, as expected and then buy the security back in the future at a lower price. How do you sell what you do not own? Short selling is the other side of the coin. The long side of the market is heads and the short side of the market is tails. Price discovery represents the balance of those who approve and those who disapprove of a security's valuation. Daily price corrections reflect the balance between supply and demand and incorporate the impact of news flow on the future earnings associated with a security.

But how can the disapproving investor sell what they do not own? The mechanics of a short sale require the disapproving investor to borrow the security from an investor that holds the security. The borrowed security is then sold, and 100% of the cash generated is deposited in a margin account. The Federal Reserve Board requires all short sale margin accounts to maintain collateral equal to 150% of the value of the security sold short, so an additional 50% worth of collateral is required to initiate a short sale. The lender of the

**Figure 1. Average S&P 500 Short Interest %**



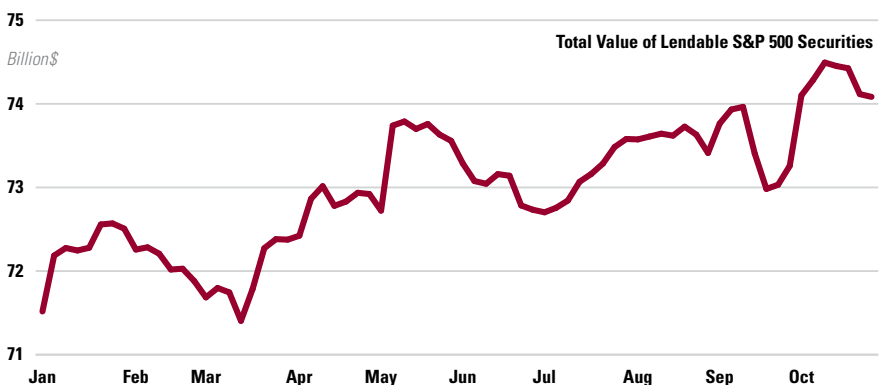
Source: Markit Group Limited

security, typically a broker-dealer, also charges interest on the borrowed security and dividends received by the short seller, which must be passed through to the security lender. The lender of the security also retains the right to recall the security if a special event occurs. Equity securities are freely exchangeable since a share represents a standardized right of ownership. Let us assume the short seller is right and can buy back the security in the future at a lower price, profiting after paying fees, dividends and interest. The shares bought at a lower price are delivered to the security's lender who returns them to their original owner and the short sale is closed out. The brokers that facilitate securities lending are called prime brokers, which is often a division within an investment bank's broker-dealer arm. The security holder is called the beneficial owner, which in financial markets is often called the custodial bank.

### Who Lends Securities?

Securities lending is a long-standing practice that allows broker-dealers to avoid delivery failures associated with trade settlement. Prior to the adoption of electronic settlement in the 1970s through the Depository Trust & Clearing Corporation, broker-dealers had to physically deliver securities for trade settlement. Weather and logistical issues led to a practice of lending securities to reduce settlement risk. It is now common practice among institutional investors, such as closed-end investment companies, insurance companies, pension funds, exchange-traded products (e.g. ETFs), college endowments and unregistered investment funds. When retail investors borrow on margin, typically the custodian can lend the securities posted as collateral. In 1981, the Department of Labor amended its Prohibited Trans-

**Figure 2. Total Value of Lendable S&P 500 Securities**



Source: Markit Group Limited

actions Exemptions to allow pension funds to lend securities more freely, which dramatically increased the number of securities available for lending.

The evolving complexity of the financial markets means there is counterparty risk. When Lehman Brothers went bankrupt, it sent shock waves through the financial markets. One reason for the turmoil was that Lehman Brothers acted as prime broker on billions of dollars of borrowed and lent securities, and overnight the counterparties were denied access to their collateral.

This article focuses on equity securities lending, but to understand the securities lending market, one has to look at the interaction of the financial intermediaries involved. Securities can be borrowed from a custodian, who acts as an agent. Another option is to use a third-party agent. There are two banks in the U.S.: J.P. Morgan and BNY Mellon, which act as third-party agents. Looking at Charts 2 and 3, below, which show fixed income obligations, it is important to note that central banks, investment banks, and money market funds are important players in the securities lending market.

### What Is the Motivation for Lending Securities?

The motivation for lending securities is additional income. Securities lenders charge interest on the borrowed shares, which varies widely as it is driven by supply and demand. The highest interest rates occur when there is “special” activity associated with the security, such as recent initial public offerings (IPOs), mergers, spinoffs, acquisitions, or deteriorating credit situations where bankruptcy is a legitimate concern.

IPOs create unusual demand for a security while at the same time imposing share sale restrictions on insiders, which typically includes management, founders, venture capitalists and/or private equity investors. The lock-up provisions negotiated by investment banks create limited free float typically for four to six months, which means there are fewer shares available to borrow for a short sale.

For example, short sellers paid an interest rate of up to 30% annually to short Twitter securities prior to the company’s lock-up expiration on May 6, 2014. The expiration of an IPO lock-up does not guarantee profits for short sellers since share price for recently listed companies can still surge. In June 2015, short sellers were willing to pay an annual interest rate over 100% to lenders for the right to short Shake Shack shares before the lock-up provision expired as Shake Shack shares rallied. Fitbit’s lock-up expires on December 15, 2015. On October 30, short interest in Fitbit represented 41% of the company’s share float. Lucrative returns entice beneficial owners of securities to lend more securities, as seen in Chart 2, which details the number of securities available to for S&P 500 securities.

The interest rate on securities lent is inversely related to a company’s market capitalization. The average collateral lending interest rate for Russell 2000 securities, a popular small cap index, is 20 basis points, whereas the average collateral lending interest rate for S&P 500 equity securities is 2.5 basis points. The lower interest rate on S&P 500 securities is driven by huge share floats where, on average, 25% of shares outstanding for S&P 500 companies are available to borrow. Supply and demand determine the interest rate on borrowed securities. Typically the lending agent gets 15% of the securities lending proceeds and 85% goes to the custodial bank or beneficial owner.

The Value of Securities on Loan, Chart 3, shows how securities on loan have fallen by half since 2008. There are three primary factors to this trend. First, the dramatic equity market sell-off during the financial market crisis lowered the value of securities on loan. Second, the SEC instituted a ban on short selling shares of financial institutions during the financial crisis. Third, short sales were closed out as short sellers locked in profits made when the equity markets corrected. Financially, the Federal Reserve’s ultra-accommodative zero interest rate policy has meant the interest realized on cash collateral pledged over the life of a short sale has become negligible.

While the value of securities on loan appears relatively flat between 2009 and 2015, the S&P 500 doubled in value during this period, so the percentage of equity securities borrowed and sold short has actually fallen. Looking at Chart 4, The Composition of Securities Lending by Security Type, it is apparent that equity securities account for a little less than half of the total value of securities on loan in the securities lending market. The primary users of the fixed income securities on loan are central banks and money market funds.

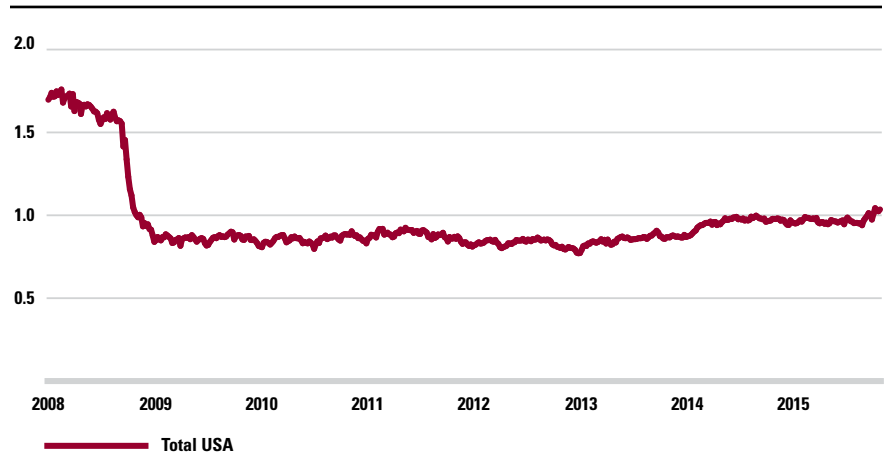
### How Do Short Sellers Impact Price Discovery?

Short sellers have been repeatedly identified as a potential source of what ails the market, and so there have been numerous bans, restrictions and curtailments placed on short selling by regulators. A central question is what role do short sellers play in price discovery? If markets are efficient, should not regulators and investors be indifferent to short sellers? For the purposes of this article, short sellers are going to be grouped into three buckets. The first bucket represents Volatility Reducing Short Sellers, or short sellers who use fundamental research to identify overvalued companies or companies that appear to be frauds. From a profitability perspective, short sellers stand to profit the most from securities that could go to a value of zero due to fraud or bankruptcy. By shorting such companies, short sellers serve a public good by exposing potentially fraudulent corporate behavior.

The second group of short sellers is Hedgers. This bucket has grown considerably as “risk parity” and “hedged” investment strategies have grown in popularity. Following the risk imbalances exposed during the 2008 financial crisis, a number of investors have sought to reduce volatility by managing portfolio risks. Risk parity seeks to offset growth/contraction risks and inflation/deflation risks. The strategy requires risk rebalancing, which uses short selling amongst other techniques to rebalance risk. Hedged investment strategies are very diverse and range from banks hedging loan exposures to investors hedging risk exposures with options.

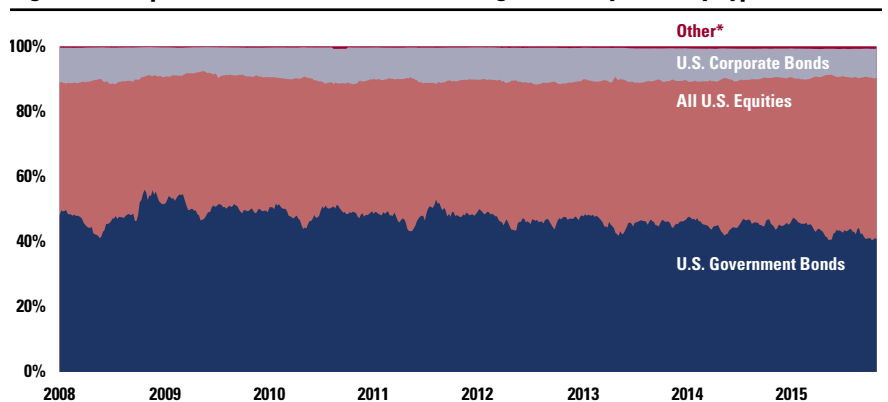
The third bucket of short sellers includes Volatility Creating Short Sellers. They seek to profit by aggressively shorting an equity security. Their sale of borrowed shares increases the supply of shares. This group of speculative traders is frequently blamed for introducing unwarranted volatility into specific equity securities. The short selling activities of these three types of investors receive

**Figure 3. Value of Securities on Loan in Trillions**



Source: Markit Group Limited. Note: Data is based on a survey of agent-based lenders

**Figure 4. Composition of U.S. Securities Lending Market by Security Type in %**



Source: Markit Group Limited. Note: Data is based on a survey of agent-based lenders. Other includes U.S. ETFs and American Depository Receipts

significant media attention. It is important to note that the for-profit media have a natural incentive to build up the management teams behind equity securities since they are often primary source of advertising revenue.

### What Does All This Mean?

Perhaps the best way to summarize the importance of short interest in equity securities is to underscore that there are different drivers that motivate market participants to take short interest positions. Using an analogy, short interest can be compared to clouds. Clouds are an indicator that it may rain but their presence does not mean it will rain. Short interest is an indicator that there may be a price correction but the presence of short interest does not mean there will be a price correction. The circumstances of each equity security



## Resources:

<http://www.investopedia.com/terms/m/margin.asp>

<https://www.khanacademy.org/economics-finance-domain/core-finance/stock-and-bonds/shorting-stock>

<http://www.markit.com/Commentary/Get/15092015-Equities-US-short-interest-shoots-up-to-three-year-high>

Include SEC letter from Irving Klubeck BNY Mellon

<https://www.sec.gov/divisions/investment/securities-lending-open-closed-end-investment-companies.htm>

[https://www.ici.org/viewpoints/view\\_11\\_securities\\_lending](https://www.ici.org/viewpoints/view_11_securities_lending)

<https://blog.wealthfront.com/hedging-stock/>

<http://www.treasury.gov/initiatives/fsoc/studies-reports/Documents/2015%20FSOC%20Annual%20Report.pdf>

[https://en.wikipedia.org/wiki/Risk\\_parity](https://en.wikipedia.org/wiki/Risk_parity)

<http://www.bwater.com/Uploads/FileManager/research/All-Weather-All-Weather-Story.pdf>

[http://www.convergex.com/uploads/Pickard\\_Report\\_2014\\_Q2.pdf](http://www.convergex.com/uploads/Pickard_Report_2014_Q2.pdf)

<http://www.markit.com/Commentary/Get/05082015-Equities-Shorting-IPO-lockup-expiration>

<http://www.haas.berkeley.edu/groups/finance/mustopaper2.pdf>

<http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471660205.html>

must be individually examined. Short selling is often focused on companies with inconsistent earnings.

When looking at the short interest of an equity security, it is important to measure the short interest relative to the days to cover, which is a ratio that measures how many days it takes to close out the short position based on the average daily trading volume of the security. There is no one-size-fits-all benchmark but when the days to cover exceed a week of trading volume, it is fair to say “the clouds” of short interest may be providing an indicator worth considering if an investor is considering going long a security.

Is it completely negative when the short interest exceeds 30% of shares outstanding? Yes and no. A 30% short interest is clearly a negative investor sentiment indicator, but do not forget short interest is an incomplete transaction. The short seller is contractually obligated to cover the borrowed shares sold short, i.e. they are a guaranteed buyer in order to close out their short sale.

A positive valuation surprise for an equity security with a large short interest position often results in a “short squeeze”. Short sellers are quickly squeezed by the rising security value and margin requirements to close out their short positions. It is important to note that short selling does not have limited losses. Investors that go long, or buy equity securities, know their losses are limited to the invested principal. A short seller is exposed to huge losses that are larger than the invested capital if a “short squeeze” occurs. On October 16, 2015, Weight Watchers International closed at \$6.79 a share. The last bimonthly stock exchange disclosure of short interest in Weight Watchers International indicated 27.5% of the share float (15.7 million shares) were short. On October 19, 2015, it was announced that Oprah Winfrey had agreed to buy 10% of the company (6.4 million shares). Her purchase created a powerful short squeeze that rocketed the share price to \$18.27 on October 20, 2015. For each \$10,000 an investor had sold short on October 16, 2015, they were looking at a (\$26,907) loss on October 20, 2015.

## How Does Short Selling Impact Public Companies in Maryland?

In varying levels, short selling impacts all publicly traded companies that operate in Maryland. A specific challenge with short interest is the limited disclosure. Currently, the investing public only receives bi-monthly short interest data from U.S. stock exchanges. It is also important to note that the data reported by U.S.

exchanges is 10 to 13 days after the trade date, making the information quite stale. From a fair disclosure perspective, more transparency is needed from stock exchanges so investors can understand the sentiments of those who disapprove of an equity securities valuation. There are alternate data sources available. Markit, a leading gatherer of data in the securities lending market, reports short interest data based on securities lending four days after the trade date. Gathering the data is quite involved, since data comes from over 100 custodian banks and over 40 prime brokers on a daily basis. However, gaining access to the aggregated data requires a significant subscription expense.

## Concluding Thoughts

In certain instances, those who disapprove of the valuation of a security are the tail that wags the dog – the market price. In other instances, it is the approval of investors buying the security that wags the dog. Price discovery is a dynamic process that represents both optimism and pessimism. Short selling is not as familiar as the traditional buy and hold and the mechanics are more complex. Another contributing factor is the lack of transparency, complicated by data gaps in the securities lending market, which makes the process unfamiliar to the investing public. The Flash Crash on May 2, 2010, and the more recent pricing irregularities on August 24, 2015, clearly indicates that price discovery is challenged by market fragmentation, high frequency trading and fewer market makers. The U.S. Treasury’s Office of Financial Research is working with the Financial Stability Oversight Council and the Securities and Exchange Commission’s Equity Market Structure Advisory Committee to identify the threats to financial stability. Short selling has been banned or restricted on a number of occasions because it is poorly understood. During the 2008 financial crisis, it was believed that short selling was causing financials to fall after Lehman Brothers’ bankruptcy. Short selling is a valuable component of a healthy market since it provides insight into investors that disapprove of the current valuation, which enables more complete and accurate price discovery. Equally importantly, short selling keeps bubbles and fraud in check. The role of short selling in price discovery has often been misunderstood, but at the same time investors cannot trust what they do not know. U.S. stock exchanges need to move to weekly disclosures of short interest to address the transparency issue.