

**Stock Exchanges and the
Growth of Securities
Lending**



Study prepared for
WFE Working Committee by
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Executive Summary

Stock exchanges have taken multiple approaches in their relationships, control and oversight towards securities lending. In some countries, exchanges and their central securities depositories operate a formal and regulated marketplace. In others the business of exchanges and lending is nearly entirely separate. Regardless of past history, exchanges worldwide are now taking more interest in the securities lending markets for regulatory purposes and to ensure the protection of their issuing companies.

This paper focuses on the relationship between securities lending and corporate governance, and on price discovery and market surveillance from the stock exchange perspective. Multiple reports on corporate governance have found that securities loans can be used intentionally and unintentionally as a means of distorting corporate votes, at times with serious consequences for the targeted company. We review the major strategies that allow very short-term investors to affect a corporate vote and discuss codes of conduct and the practical actions of institutional investors. While exchanges themselves can not mandate changes to industry-wide securities lending practices, they can make their voices heard with issuers, regulators and asset holders to curtail any possible negative influence.

In price discovery and market surveillance, we have found that while a direct correlation between securities lending rates and underlying cash price movements is impossible to prove, there are evident occasions where securities lending rates have been leading indicators of change in underlying cash equity prices. Whether the effect is benign or signals a market abuse, exchanges may want to consider their access to and incorporation of securities lending rates into their market surveillance activities.

Lastly, we discuss the role of central credit counterparties for data collection and market surveillance. Each regulatory regime must make its own decision about whether to centralize market activity. Benefits include strong controls over lending practices leading to increased market surveillance. Disadvantages include greater regulation and costs for all parties, as well as potentially fewer opportunities for investors to express their sentiments in the market.

Stock Exchanges and the Securities Lending Market

Stock exchanges have taken multiple approaches in their relationships, control and oversight towards securities lending. In some countries, exchanges and their central securities depositories operate a formal and regulated marketplace. In others the business of exchanges and lending is nearly entirely separate. Regardless of the interaction, exchanges worldwide are taking more interest in the securities lending markets for regulatory purposes and to ensure the protection of their issuing companies.

This paper is designed to draw attention to several facets of the securities lending market and its interaction with the stock exchange business. It is meant to stimulate commentary and encourage exchanges, clearing houses, central securities depositories and regulators to discuss how issuers and investors can best be served. The paper utilizes data from Vodia Group as well as data made available by exchanges and other private organizations.

We have focused our research on the impact of securities lending on the stock exchange community from two perspectives: corporate governance, and price discovery and market surveillance. Multiple reports on corporate governance have found that securities loans can be used intentionally and unintentionally as a means of distorting corporate votes, at times with serious consequences for the targeted company. For companies that are concerned that the economic benefit of their shares has been decoupled from the vote, a listing on an exchange may become less attractive than a private equity buyout offer. While exchanges themselves can not mandate changes to securities lending practices, they can make their voices heard with issuers, regulators and asset holders to curtail any possible negative influence.

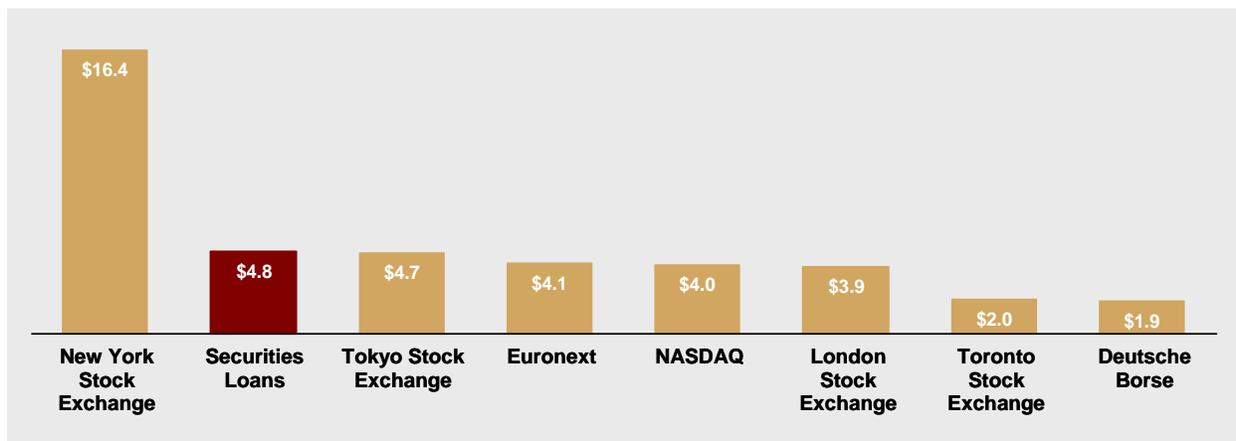
The second impact of securities loans is on price discovery and market surveillance. While a direct correlation is impossible to prove, there are evident occasions where securities lending rates have been leading indicators of change in underlying cash equity prices. This relationship may be purely coincidental or may indicate to regulators that insider trading has occurred. At other times, movements in securities lending rates that become known to trading firms can impact price discovery. Whether the effect is benign or signals a market abuse, exchanges may

want to consider their access and incorporation of securities lending rates into their market surveillance activities.

The securities lending market provides both advantages and drawbacks to the business of stock exchanges. From a positive perspective, securities loans provide liquidity to the marketplace. By shorting stock, investors provide more sell orders and allow buyers to purchase securities at prices that reflect a full range of market opinions. Loans can facilitate derivatives transactions and ensure trade settlement in times of difficulty, and can be a means of foreshadowing or tracking insider trading. From the negative side, securities loans can potentially damage the integrity of the price of a traded security and affect the ways that a company is managed.

Over the last five years, the demand for securities loans has grown along with the explosion of assets managed by hedge funds. Across all products, the dollar value of securities on loan including agencies, government and corporate debt, is now at USD \$4.8 trillion. While the fragmentation of asset classes and geographical distribution of loans makes the market seem much smaller, as a whole it is on par with the Tokyo, Euronext or NASDAQ Stock Exchanges (see Exhibit 1).

Exhibit 1:
Capitalization of Selected Stock Exchanges vs. Global Securities Lending Market (\$ Trillions)



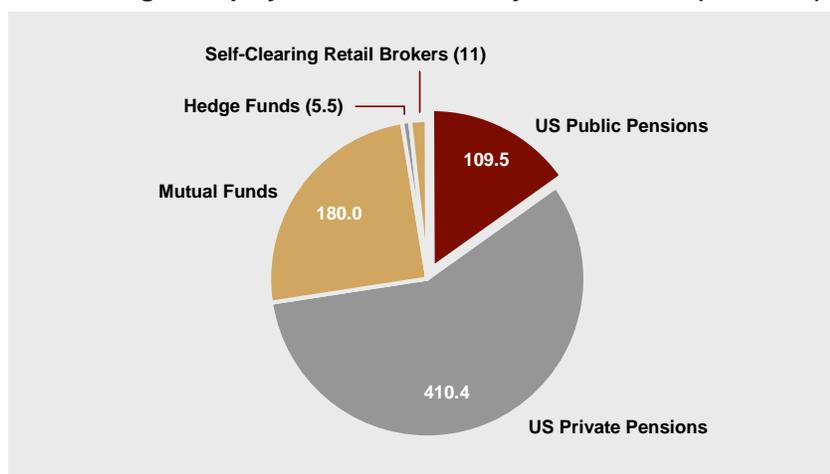
Source: World Federation of Exchanges; Vodia Group

The Business of Securities Lending

Securities lending tends to be considered an operational function; the mechanics of the market are not widely known and pricing tends to be opaque. To further this impression, there are only a few orderly marketplaces for securities loans. Most transactions occur in a series of illiquid, over-the-counter marketplaces each setting their own loan rates with varying degrees of external inputs. Fair parallels for today's securities lending market are the early 1990s in the credit derivatives market or NASDAQ prior to a centralized price quotation system.

Securities loans originate with beneficial asset holders and/or broker-dealers with fully paid or margined securities and are in demand by short sellers such as hedge funds or 130/30 managers. Many loans pass through intermediaries such as custodians and prime brokers who assume the credit risk on both sides of the transaction. While pension plans are the largest lenders, this does not preclude hedge funds, broker-dealers and retail investors from lending as well (see Exhibit 2).

Exhibit 2:
Outstanding US Equity Securities Loans by Asset Holder (\$ Billions)



Source: Vodia Group

Risk is managed in the market through the use of collateral. When a loan is made, cash, government securities or mutual accepted other assets are left with the lender or their agent to

safeguard against default by the borrower. The amount of collateral left ranges from 102% to 105% of the loan.

Pricing in the Lending Market

The revenue on a securities loan is the spread between the risk free rate (for example, the US federal funds rate or LIBOR) less a rebate rate paid to a borrower. For an easy to borrow security the rebate rate may be 10 basis points below federal funds. That means that the borrower will receive interest on their collateral left with the lender at an interest rate of federal funds minus 10 basis points. The lender will invest the collateral at the federal funds rate. Hence, the lender earns a spread of 10 basis points of the value of the collateral.

For a hard to borrow security, the rebate rate can easily turn negative. In this case the borrower leaves collateral and pays the lender interest. If a rebate rate is -3%, the spread earned by the lender is the federal funds rate + 3% (see Exhibit 3).

Exhibit 3:

Basic Revenue Model For a Hard To Borrow Securities Loan

Federal Funds Rate = 5.25%; Rebate Rate = -3%; Total Spread = 8.25%



Source: Vodia Group

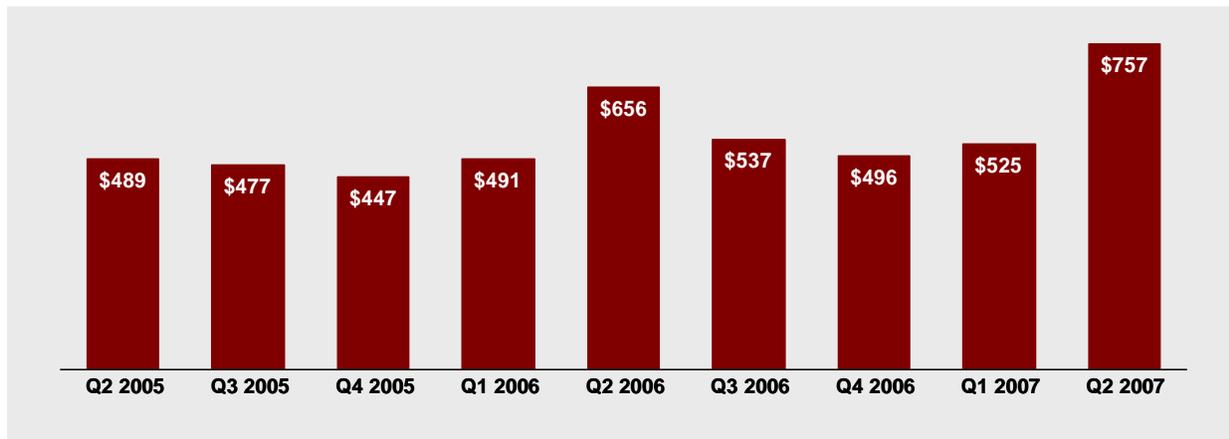
As in any negotiated market environment, there is regular discussion about which market participant gets which slice of revenues. Our research shows that hedge funds are the least concerned about pricing in this market; 73% cite satisfaction with their prime broker's securities

lending rates. Lenders themselves tend to be contended with their lot, as multiple data services exist to show institutional investors comparative pricing amongst asset holders. Between prime brokers, custodians and third party lending agents there is frequent and at times complicated negotiations about rates, exclusivities and availability to facilitate loans.

Securities lending, and its closely related activity margin lending, generates between US\$8 billion to US\$10 billion annually for prime brokers. This revenue is derived from borrowing securities from custodians and lending them to hedge funds, then utilizing their available capital to make loans to hedge funds to purchase securities on margin. Total industry estimates suggest that securities lending for all market participants generates upwards of US\$16 billion annually.

As an example of the size of these revenues for one of the largest prime brokers, Goldman Sachs' Securities Services Division, of which securities loans are a significant part, produced over US\$2.3 billion in revenue over the last four quarters (see Exhibit 4). While Securities Services in Q2 2007 produced only 7.4% of Goldman's firm-wide revenues, the net figure is still a substantial enough sum to take notice.

Exhibit 4:
Goldman Sachs Securities Services Division Revenues – Q2 2005 to Q2 2007 (\$ Millions)



Source: Goldman Sachs

Securities Lending, Corporate Governance and Exchange Listings

The exchange community has a complex issue to confront surrounding securities lending, corporate governance and the value of listing on an exchange. When securities are lent, they have the potential to change the outcome of a corporate vote by allowing a short-term asset holder greater voting power than a long-term holder. This is a very infrequent occurrence but it can happen. This volatility in control of voting rights can reduce the value of being a listed company, and could become a factor in a company's decision to be listed, especially given the current wave of private equity buy-outs. While securities loans are not the only way that the vote of a publicly traded company can be impacted by parties with limited or short-term economic interests, they are an area where exchanges can make a statement in support of corporate governance.

Securities are borrowed around a voting date for many reasons. Most benignly, they can be part of an existing shorting strategy where the lender does not feel that the vote at hand is worth recalling the loan. Second, a vote date may be tied to a dividend payout, and the securities are loaned to enable a payment strategy that arbitrages the tax status of the borrower and the lender. Lastly, securities may be borrowed specifically in order to alter a vote by transferring voting rights in time for the record date.

Borrowing securities as part of a shorting strategy is typical market practice for the majority of hedge funds and other short sellers. By shorting, a market participant expresses their belief that the value of a security will decline. Buyers have the opportunity to purchase at a lower price than if no one else were selling. At the time of a vote, a beneficial asset holder with no interest in voting shares allows buyers to amass a greater amount of stock at lower prices than would ordinarily be possible. This is fair and normal market practice; the only question here is why the asset holder chose not to vote its shares, which depends on the nature of the vote and the importance for the asset holder.

Dividend Stripping/Recapture

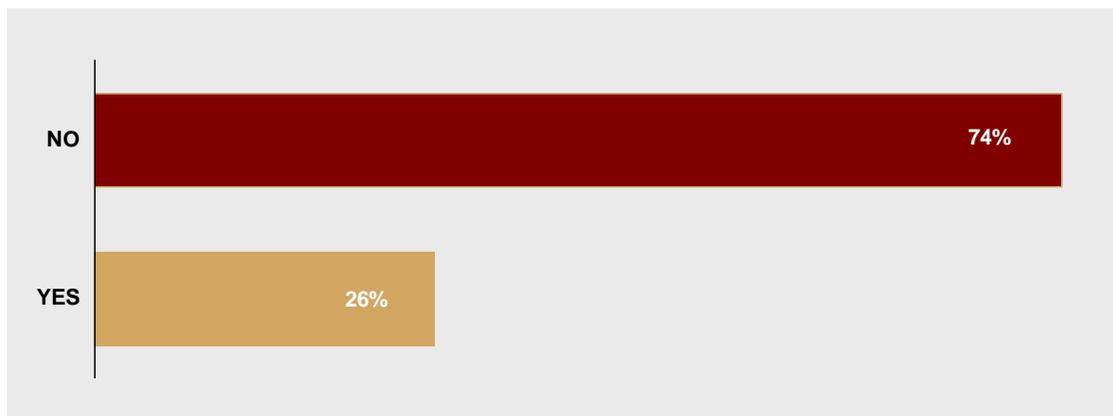
In a strategy known as dividend stripping or dividend recapture, shares may be loaned around a voting date in order for long-term asset holders to capitalize on differences in tax rates amongst investors. The long-term asset holder makes a loan to an entity that will pay less or reduced taxes on a dividend payment in exchange for a payment that offers both parties extra income. The borrower is often a tax-advantaged corporation or individual in the country where the security is listed. When the dividend is paid, the borrower returns the stock to the lender, plus a payment that is greater than what the taxable entity would have paid on their own, but less than what the borrower actually received. Both parties have arbitrated their respective tax status as regarded the dividends payment to the detriment of the tax collector in the lender’s home country.

In their 2004 survey, the International Corporate Governance Network found that dividend stripping regularly occurred but was not a widespread activity among pension plans (see Exhibit 5).

Exhibit 5:

Institutional Investor Responses to the Question:

“Do You Lend Shares in Order to Recapture Part of a Dividend or the Effect of a Scrip Issue?”



Source: International Corporate Governance Network (ICGN), 2004

Many country regulators are aware of the dividend stripping practice and have taken steps to avoid it. The Netherlands enacted legislation in 2002 to strongly discourage dividend stripping, effectively outlawing its explicit use, and in 2007 went further by modifying their general dividend withholding tax rate to make it equivalent with the general tax treaty rate found with most countries. The UK prohibits payments if a lender owns more than 10% of the voting or non-voting shares of a company. German tax authorities have fought aspects of that country's dividend stripping laws, but have thus far been rebuffed by the Federal Tax Court. In each case, the goal is to reduce or remove the economic benefit of dividend stripping while reducing the complication of tax laws and rates. Internationally however, dividend stripping continues to be a common practice and leads to regular shortages in securities loans around dividend dates.

Dividend stripping becomes a problem for corporate governance when two conditions occur: first, when the dividend date and the corporate vote date coincide; and second, when the size of the dividend stripping operation becomes large enough to impact the vote. When stripping dividends on a vote date, lenders have already chosen to maximize their revenues over voting their shares. If one institution in a home country markets its services as a dividend stripping counterparty to a large international audience, that firm may control an unusually large voting block during a company meeting. Their desires may not be the same as the lenders of securities and the outcome of the vote may be substantially affected.

The impact of dividend stripping on corporate governance can be all but eliminated by mandating that dividend dates not coincide with corporate voting dates. While this seems like a fairly straight-forward solution, cultural practice in some countries has prevented companies to make this change happen. Exchanges can solve this problem by supporting regulation that forces issuing companies to separate these two corporate activities.

Empty Voting and Decoupling

Securities may be lent or borrowed around a voting date in a deliberate effort to affect the outcome of a corporate action. This practice, known as empty voting or “decoupling,” can lead to voting rights being intentionally or unintentionally exercised in a manner contrary to the longer-term benefit of the company and its shareholders.

Examples of empty voting or “decoupling” were cited by Drs. Henry Hu and Bernard Black, both of the University of Texas at Austin, in the 2006 paper, “The New Vote Buying: Empty Voting and Hidden (Morphable) Ownership.”¹ The paper asserts that hedge funds have created the ready mechanics to borrow stock without selling short, which is the normal procedure, and vote those shares at company meetings. The authors cite other mechanisms for decoupling long-term economic interest from voting rights, such as buying shares in the market then fully hedging the economic exposure of the position using equity swaps or derivatives. For our purposes, however, we will look at only the involvement of the securities lending market in empty voting.

Drs. Hu and Black cite two real-world instances where stock loans contributed in a distortion of a corporate vote for malicious purposes. In the first, Laxey Partners appears to have borrowed a large number of shares to affect the vote at British Land in order to cause a breakup of the company. In the second, one or more hedge funds may have caused an affiliate of Henderson Investment to fail in their attempt at a full acquisition, leading to a 17% drop in Henderson Investment’s share price. Our review of the background material used in the Hu Black paper suggest that securities loans appear in fact to have been used in both cases. However, we have publicly disagreed with assertions, such as that made in the Wall Street Journal, that this practice is widespread.

¹ Hu, Henry T.C. and Black, Bernard S., “The New Vote Buying: Empty Voting and Hidden (Morphable) Ownership.” Southern California Law Review, Vol. 79, pp. 811-908, 2006 Available at SSRN: <http://ssrn.com/abstract=904004>

The same economic impacts cited by Hu and Black could have been caused by other “decoupling” strategies, and it is in fact relatively easy to create this synthetic voting-only position. In one example, a fund may buy a large block of stock and hedge with single stock futures, options, an equity swap or a combination thereof. For stock exchanges, it would be impossible to regulate every instance where a fund could artificially capture a right to vote, but it is possible and increasingly important to discourage the use of securities loans to influence voting for short-term benefits.

At issue in empty voting is the health of the company versus the desires of investors.² Though legally entitled to vote as shareholders of record, investors in general often have different views than the company’s management. In empty voting, this situation is exacerbated by marked differences between long-term and short-term investors. The difference in outlook can create a significant perceived cost on behalf of the company to being publicly listed, if its corporate votes are skewed towards the interests of very short-term shareholders.

A securities loan does not inherently mean that the vote must be separated from the economic interest of an asset holder, but this is what happens in current regulation globally. A logical solution to this problem is a two-tiered voting trading and lending market, with A Shares carrying the vote and B Shares carrying no vote.³ An investor interested in borrowing A Shares would clearly gain the right to vote, while investors with B Shares to lend would receive no voting benefit. However, neither of these share classes may meet the need of most large investors, who buy a stock with the intent to perhaps influence the vote in the future and would lend to generate revenue.

² The hedge fund community is often seen as the “culprit” in damaging the credibility of an exchange listing through these practices. In fact, this is not exactly the case. The culprits are activist managers of many sorts who are eager to see their wishes carried out through the result of a corporate vote.

³ While this idea has come up frequently over the years, we give the earliest published credit to Dean LeBaron and John LeClaire, “SMR Forum: The Shareholder Revolution,” *Sloan Management Review*, Winter 1986.

Major Initiatives in Voting and Securities Lending

The impact of securities loans on voting has been an issue of great concern for the corporate governance community. They have identified that activities can occur that breach the spirit, if not the letter, of the benefits of organized markets. In this respect as in many others, corporate governance advocates are allies of the exchange community.

The International Corporate Governance Network (ICGN), a not-for-profit association of interested parties in corporate governance, has produced a code of best practice for stock loans that speaks to all parties in the securities lending transaction: lenders, borrowers, intermediaries and issuers themselves.⁴ This is unusual in that most writings on stock loan focus only on borrowers and intermediaries; rarely is the role of issuers and asset holders seriously evaluated.

The ICGN report drew from a standing Working Committee on Securities Lending, led by Dr. Andrew Clearfield. The committee was tasked with the creation of a code of conduct and in the course of that work conducted a survey of share lending and voting. In 2005, after the publication of the code of best practice, the full Committee was charged with seeing through the implementation of the Code, and Dr. Clearfield, as an ICGN director is tasked with overseeing securities lending and voting issues.

The code of best practice calls for a number of principles to be accepted in corporate governance. While many of these principals seem self-evident, the ICGN's survey indicated that many were not used in practice. The seven principles cited are:

- 1. All share lending activity should be based upon the realization that lending inherently entails transfer of title from the lender to the borrower for the duration of the loan.**
 - When a loan is made the lender loses the right to vote the stock. There is no market mechanism that allows the lender to maintain the voting right of a lent stock.

⁴ ICGN Stock Lending Code of Best Practice, International Corporate Governance Network, October 15, 2005, http://icgn.org/organisation/documents/slc/code_final.pdf

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2. ***During the period of a stock loan, lenders may protect their rights only with the borrower, since they have no rights with the issuer of the shares which have been lent.***
 - Lenders collect collateral from borrowers in the form of cash or in-kind securities. It is the responsibility of lenders to insure that collateral fully protects the value of the loaned securities.
 3. ***Institutional shareholders should have a clear policy with respect to lending, especially insofar as it involves voting.***
 - Lenders without a clearly written policy run the risk of lost opportunities and cause for confusion in voting when stock has been lent or could be lent.
 - The absence of a clear policy may mislead clients or beneficiaries as to the circumstances and frequency with which shares nominally in a portfolio are likely to be voted.
 4. ***Lending policy should be mandated by the ultimate beneficial owners of an institution's shares, whether they are another institution or corporate body or an assemblage of individuals.***
 - Intermediaries including asset managers, custodians and third party lenders should not provide beneficial asset holders with policy.
 - Intermediaries including asset managers, custodians, and third party lenders should not be responsible for interpreting vague or ambiguous guidelines; the client's lending policy should be clear enough that third parties can implement it with ease.
 5. ***Where lending activity may alter the risk characteristics of a portfolio, the policy should state the extent to which this is permitted.***
 - This includes how much stock can be lent, what types of collateral may be accepted, and any other risks that the portfolio is willing to accept or explicitly reject.

6. The returns from lending should be disclosed separately from other investment returns when reporting to clients or beneficiaries.

- While some pension plans separate revenues from securities lending, others, including mutual funds, often bundle these returns along with general portfolio returns and custodial costs.

7. It is bad practice to borrow shares for the purpose of voting.

- Lenders and their agents should make reasonable efforts not to cooperate with or facilitate this practice. It distorts corporate governance and undermines the legitimacy of the joint-stock corporation by giving a short term voting power to a party with no equity at risk or long-term interest in the growth or prosperity of the company.

The ICGN code has yet to be fully adopted by the lender community and there has been resistance in the custodial and brokerage community as well. The major resistance has been the difficulty, real or perceived, in implementing the guidelines. A 2007 survey by proxy voting firm Institutional Shareholder Services (ISS) of 297 institutional investors shows that:⁵

- 72% of institutions that loan securities have some sort of formal lending policy in place.
 - i. However, only 49% of those with policies have any sort of link with their proxy voting activity; and
 - ii. 59% of institutions that participate in securities loans do not have a recall policy in place with their custodians for voting shares.
- 70% of institutions do not provide their clients with any sort of reporting related to voting and shares on loan.

⁵ Share Lending Practices and Share Recall Challenges, Institutional Shareholder Services, March 21, 2007 presentation

Securities Lending, Price Discovery and Market Surveillance

Exchanges recognize the difference between securities lending, which is the loan of a securities at a rate of interest between two parties, and short selling, which is the action of betting against the value of a security. In securities lending, a broker may borrow securities from a beneficial asset holder and lend to those securities to a short seller, or may need to hold the security in-house for one purpose or another. Short selling relies upon a securities loan for its effective functioning but is a separate action.

Exchanges have long kept track of short selling in their listed securities. These data are used to track market sentiment and may help predict future price movements. They are widely disseminated by market data distributors. However, these data are seen by the market as potentially inaccurate, and are only tangentially relied on by institutional short sale investors.

Securities lending rates, as distinct from short sale volumes, offer unique clues for price discovery and market surveillance professionals at exchanges. In price discovery, marked changes in securities lending rates could mean a forthcoming change in underlying cash equity prices. They could also be an indication that insider knowledge of a potential market movement has expressed itself in the securities loan rates, and that a potential impact in a cash equity price is forthcoming.

We reviewed securities lending rates across a variety of exchanges and situations. While we found no clear causal relationship between rates and stock prices, we did find enough indicators to suggest that securities lending rate data should be watched by exchanges. Two case studies, one from the NASDAQ and another from the Istanbul Stock Exchange, show different types of relationships between securities lending rates and underlying cash prices.

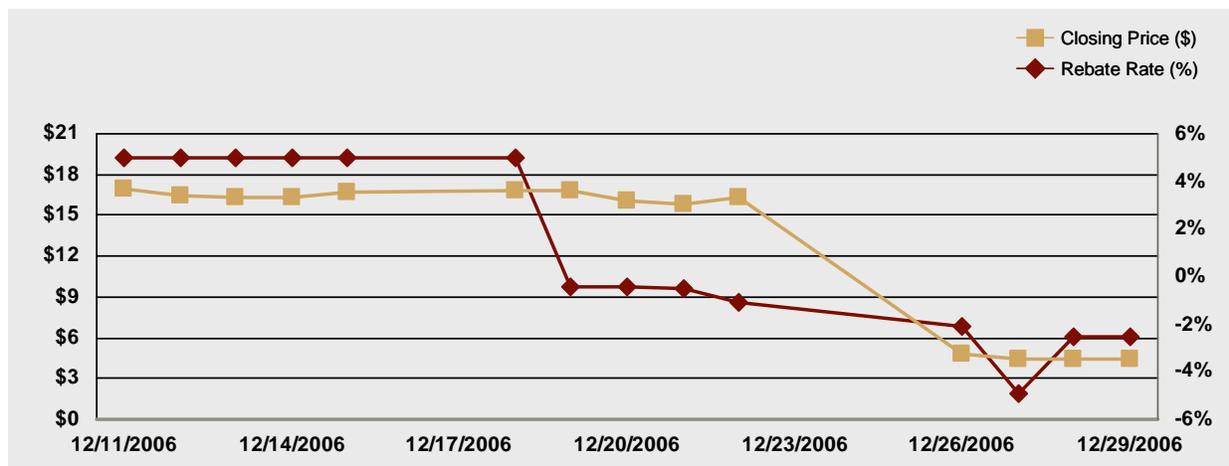
Case Study: NASDAQ and TELK

In the US, securities lending operates as an over-the-counter activity at investment banks who are members of the Depository Trust Company (DTC), the central securities depository. Only counterparties with bilateral credit agreements may lend to one another, and the one central credit counterparty that exists processes a relatively small share of the overall securities lending volume. Vodia Group has collected the securities lending rate information below from brokerage firms with DTC lending accounts.

Telik (Symbol: TELK), a biopharmaceutical company listed on the NASDAQ Stock Exchange, offers an indication that changes in securities lending rates can foreshadow a meaningful change in a stock price. On December 22, 2006, the share price of TELK closed at \$16.26. On December 26, after announcing the failure of a drug trial, TELK's share price closed at \$4.77, a drop of \$11.49.

On December 19, TELK's securities lending rate dropped from General Collateral (the easiest to borrow rate) to -0.44%. A reduction in a rebate rate signals that investors believe that a stock's price is going to fall; the demand for borrowing a stock relative to the available supply pushes the rebate rate down. There would appear to be little doubt that word or suspicion of the failure was available to the marketplace before December 26th.

On December 27th the rest of the world caught up to the TELK story. The loan rate that day fell to negative 4.88% before recovering to negative 2.5% by December 29 (see Exhibit 6). Investors who had shorted prior to December 19 had made their money already and could exit the trade; these investors also received the best securities lending rates. Investors who held the stock would still have made a profit as TELK subsequently fell to a low of \$2.96 later in 2007. Looking simply at the periods before and after the company announcement, differences in investor earnings are apparent (see Table 1).

Exhibit 6:
Telik Inc. (TELK) Closing Price and Rebate Rates (12/11-12/29 2006)


Source: Thomson Financial; Vodia Group

Table 1:
Earnings on TELK, December 19 to December 29, 2006 – Initial Purchase of 1,000,000 Shares

Period	Rebate Rate Range	Initial Investment Value	Closing Investment Value	Return
Bought December 19, Sold December 26	-0.44% to -1.1%	US\$16.83MM	US\$4.77MM	72%
Bought December 26, Sold December 29	-2.1% to -4.88%	US\$4.77MM	US\$4.43MM	7%

Source: Thomson Financial , Vodia Group

Case Study: Istanbul Stock Exchange and ISCTR

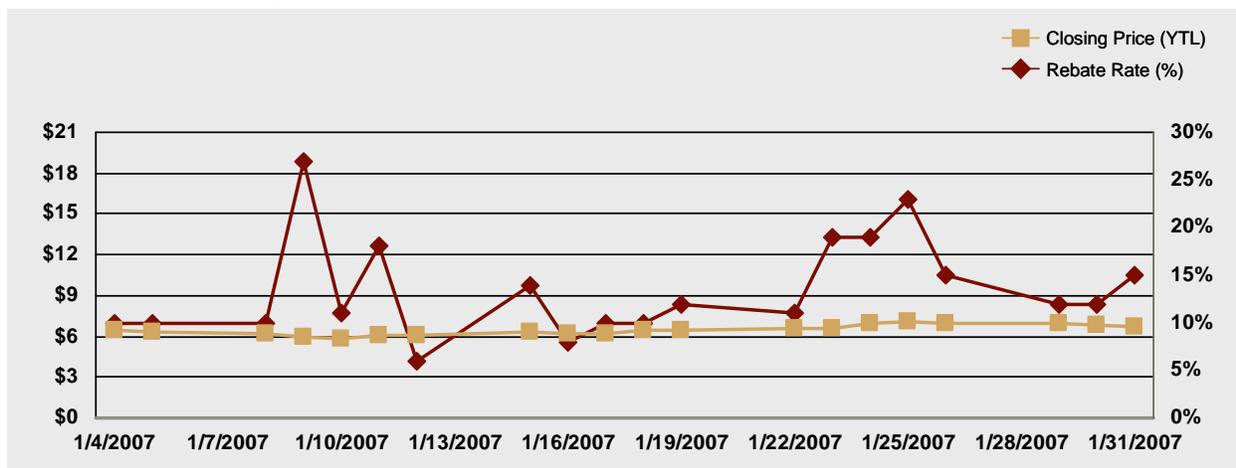
In Turkey, all securities loans are execute through Takasbank, the country's central securities depository. Unlike stock transactions, bilateral credit agreements are necessary for one member to borrow from another; Takasbank is not in this case the central credit counterparty. However, there is a substantial amount of data transparency here due to Takasbank's role as the system operator for securities lending transactions. In countries where the central securities depository acts as the central credit counterparty for all securities loans, our analyses suggests that there is less opportunity for securities lending rates to foreshadow major price movements in

underlying securities. This argument is still cursory based on our review of available data thus far. The data below come from the Istanbul Stock Exchange.

ISCTR, Turkiye Is Bankasi A.S. (Isbank), is an example of typical Takasbank business in the securities lending market. Isbank has a strong business presence in Turkey’s financial market, and according to Standard and Poor’s, has a wide customer deposit base. It is recognized as one of the country’s most stable businesses.

For the month of January, 2007, we reviewed data, press releases, general news and disclosures by Isbank to the Istanbul Stock Exchange. Aside from the announcement that an IPO of a subsidiary was going according to plan, there was nothing to indicate why the shares on loan of ISCTR should spike on one particular day, or why this spike should or should not have an impact on the stock price. Looking at rates for the largest loan of each day, the interest rate paid varied between 6% and 27%, which appears to be the normal band. Even one day spikes in the securities loan rate had no impact on the underlying stock price (see Exhibit 7).

Exhibit 7:
Isbank (ISCTR) Closing Price and Rebate Rates (1/4 to 1/31 2007)



Source: Istanbul Stock Exchange

In countries with central credit counterparties that take an active role in managing the market for securities loans, regulators have the ability to monitor investor activity as the data are all at hand. For markets where regulators have no central data collection, our analysis suggests that at times these data can be an important contributor to understanding major price movements.

By tracking back securities loan rates, and at times the identity of the borrowers, regulators have much greater control in market surveillance. The downside is that not all market actors are comfortable with this degree of disclosure and may decide to not conduct activity on a market.

Short interest data is sometimes seen as a proxy for securities lending data; if volumes are high, that is an indication that a stock price may fall shortly. We note that short interest data may be a useful indicator but exchanges could benefit from securities lending rate information as well, as we maintain a concern about the reliability of the short interest data. In our research, several hedge funds have cited concerns with the validity of exchange short sale data. As the main short sellers, hedge funds, especially those with large assets, can check their portfolios against the volume of short interest reported by exchanges. They have found at times that their own short positions are greater than the short interest reported by exchanges. Whether the issue lies with exchanges, brokers or some level of data processing, the end result is that exchanges could benefit from an additional data layer in this market.

For exchanges without centralized securities lending markets, data collection must come from broker-dealers. Data may be purchased from willing brokers and can be found for most countries. Data collection may also be mandated from a regulatory perspective. In either case, exchanges will require additional technology development and human resources to manage both the process and the information.

Exchange Participation in the Market

Stock exchanges have two distinct challenges in the securities lending market. The first, and potentially greatest, is managing the interests of investors and the needs of issuers in the corporate governance process. The second is the use of securities lending rates, as distinct from short sale data, to conduct market surveillance. In both areas exchanges have a series of practical and philosophical choices to make.

At first glance, stock exchanges seem to have little in common with securities lending. Exchanges operate regulated marketplaces for the benefit of issuers and investors; the securities lending markets are unregulated in most countries. Stock exchanges provide the primary listing of a security and a meeting place for corporations and investors; securities loans are over-the-counter derivatives typically used by hedge funds to facilitate bets against the price of a security. Where stock exchange prices are transparent, competitive securities lending rates tend to be opaque. As securities loans have grown in importance, the time has come for exchanges to pay attention to this equity derivative activity.

When securities loans become a way to influence a shareholder vote, issuers may call into question the value of being a listed company. While this is not a major threat today to the franchise of an exchange, it will become a greater concern as hedge funds, 130/30 and other shorting strategies create more and varied demand for securities loans. For listed companies, the issue may already be sufficient enough to influence the decision to go private.

Stock exchanges have an opportunity in corporate governance to encourage asset holders and intermediaries to exercise sound judgment when lending securities around corporate voting dates. By getting involved in this issue, exchanges exercise their role as advocates for their listed companies and may enjoy greater issuer confidence. As a practical matter, it will be difficult for exchanges to determine what constitutes a deliberate attempt to sway a vote versus a legitimate securities loan or sufficiently benign dividend stripping strategy. However, discussing the concern is the first step forward.

Exchanges can also elect to deepen their market surveillance efforts by incorporating securities lending data. While we have found no clear correlation between securities lending rates and underlying cash prices, our examples indicate that securities lending rates can be a useful tool in analyzing market sentiment toward a security and possible movements of that security. Data collection may be voluntary or mandated; in either case it will require exchanges to dedicate resources for management and utilization.

To Central Credit Counterparty or Not to Central Credit Counterparty

In countries where securities loans are facilitated by central securities depositories there are strong controls over lending practices, for better or worse, which benefit those markets by aiding market surveillance. These countries show that securities lending can coexist within regulated market frameworks while allowing some degree of market sentiments to be expressed. In countries where securities loans are managed as over-the-counter trades, exchanges have relatively few means to gauge their impact on price discovery or market surveillance.

Each country has come to their own conclusions, whether through regulation or market dynamics, on whether to have a central credit counterparty be the clearinghouse for all securities loans and rates. We do not have an opinion about which system is better, except to say that a central securities loans clearinghouse is the surest way to collect data for price discovery and market surveillance purposes. The three countries below represent the range of how different regulatory regimes manage the securities lending process:

BRAZIL: The Brazilian Clearing and Depository Corporation (CBLC), is the sole central counterparty in Brazil able to clear and settle securities lending transactions. The market is transparent, and CBLC discloses open short positions on its website. The CBLC accepts requests for loans from both lenders and borrowers, and requires borrowers, including bank intermediaries, to disclose the name of the final borrowing counterparty. No one final borrower may access more than 3% of the total inventory of any security. The size of Brazil's securities lending market has doubled annually since 2002, with currently over US\$90B in equities

outstanding. The securities lending program is directly linked to the CBLC's clearing and settlement system to reduce fails. Securities Turkey utilizes a similar model using Takasbank, the central securities depository.

JAPAN: The Tokyo Stock Exchange supports a dual market system, with some securities borrowed from the Japan Securities Finance Co. (JSF) and others borrowed on a bilateral credit basis. The JSF is a publicly traded firm that specializes in securities finance; participants in the JSF system can borrow securities as needed with the JSF acting as the central credit counterparty. The bilateral system is akin to the US model, where banks and brokers may borrow from one another if a specific credit counterparty agreement is in place.

UK/US: The UK permits banks and brokers to have bilateral lending agreements that may include or exclude participants at their discretion. While some central credit counterparty systems exist, such as the US Options Clearing Corporation's (OCC) program, these systems do not act as centralized markets nor do they monitor lending activity. The OCC system primarily assures both borrowers and lenders that their loans are fully guaranteed. While no such central program exists currently in the UK, several entities have been reviewing the market opportunities.

Whether a country's regulators elect to have central credit counterparties is an individual decision; there is no inherent right or wrong. The benefits of the Brazil/Turkey model are to keep all activity within the full purview of regulators as well as to enforce other regulations such as limiting the percentage of shares any one market participant can short. Market data can also be centralized and, if desired, disseminated. On the downside, central credit counterparties and the legalities they bring may limit investor activities and the behavior of an open market. As a parallel philosophical decision, the Hong Kong Stock Exchange's lack of trading curbs at times of extreme volatility allows the market to fully express itself while giving limited protection to investors, while markets with curbs prevent participants from fully expressing themselves in times of major market movements. Stock exchanges worldwide should make the decision of what system works best for their national market structures.

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