# The Role of Institutional Investors in Voting: Evidence from the Securities Lending Market<sup>\*</sup>

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#### Abstract

We examine the role of institutional investors in the voting process by analyzing the changes in the equity lending market around the time of a vote. Using a comprehensive proprietary data set, we find a marked reduction in the supply of lendable shares around the time of a vote because institutions restrict or call back their loaned shares prior to a vote. The reduction in the supply of lendable shares is most pronounced in cases for which ISS recommends voting against the proposal. Examining the subsequent vote outcome, we find that a recall in lending supply is associated with greater votes cast against both management and material proposals. There are also fewer favorable votes cast if ISS opposes management, and for firms with larger institutional ownership. Our results imply that institutions are willing to give up revenue from lending securities in order to exercise voting rights. To address concerns related to empty voting, we also examine changes in borrowing demand around the time of a vote. There is some evidence of increased demand around the time of the record date. However, we find no relation between voting outcome and borrowing demand at the record date. Our results indicate both that corporate governance is important to institutional investors and that the proxy process is an important channel for corporate governance.

JEL: G32; G34; G38 Keywords: Proxy Voting, Empty Voting, Securities Lending, Institutional Investors

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### The Role of Institutional Investors in Voting: Evidence from the Securities Lending Market

#### I. Introduction

Understanding the preferences of institutional investors regarding governance is important for firms trying to attract new investors as well as policy makers considering the regulation of different governance mechanisms. One important way by which institutional investors can impose their preferences is via proxy voting. Recognizing the role of institutional investors in proxy voting, the Securities and Exchange Commission (SEC) recently proposed new rules on proxy access.<sup>1</sup> These rules grant investors greater powers of control by allowing certain types of shareholders the right to nominate directors, and to have their nominees included in the proxy statement and on ballots distributed by the company. In this paper, we examine the role of institutional investors in the voting process by analyzing the changes in the equity lending market around the time of a vote.

Prior research has attempted to examine the preferences of institutional investors based on inferences of corporate attributes deemed important to institutional investors. However, institutional investors' preferences related to governance tend to be private and are often conducted behind the scenes and hence become difficult to study. To overcome this, we use the securities lending market to examine the role of institutions in the voting process. Most large institutions have a securities lending program and consider it to be an important source of revenue, with estimates of \$800 million in annual revenue for pension funds alone (Grene 2010). At the same time, institutions have a fiduciary responsibility to vote their shares. Since institutions cannot exercise their vote if the shares are on loan on the voting record date, they must decide when to restrict lending and may even opt to recall shares already on loan. The

<sup>&</sup>lt;sup>1</sup> Concept Release on the U.S. Proxy System, Securities and Exchange Commission Release No. 34-62495.

activities of institutional investors in the securities lending market provide one of the few opportunities to directly examine the behavior of institutional investors in influencing firm-level governance.

We use a comprehensive proprietary data set that comprises shares available to lend, shares that have actually been borrowed and are on loan, and the associated loan fee for the period 2007-2009. The supply of lendable shares is lower for firms with weak performance and higher for firms with strong corporate governance and higher institutional ownership. We find a marked reduction in the supply of lendable shares around the time of a vote because institutions restrict and/or recall their loaned shares prior to a vote so that they can exercise their voting rights. We find that immediately after the record date, supply returns to normal levels. Institutions are most interested in exercising their voting rights when ISS recommends voting against the proposal. Our results imply that institutions take their responsibility to vote seriously, and are even willing to give up revenue from lending securities in order to exercise voting rights.

We investigate if the recall in lending supply is economically significant by examining if a recall around the record date plays a role in the votes cast on the meeting date. We find that both votes cast against the management recommendation and votes cast against a proposal are positively related to a recall in lending supply. More generally, there are fewer favorable votes cast if ISS opposes the management recommendation. Further, we show that the outcome of the result is more likely to be close when lending supply is recalled and ISS opposes the proposal. Finally, we show that the recall in lending supply is important in explaining the vote outcome for proposals relating to directors and compensation. The results show that beneficial owners of securities responsibly recall lending supply ahead of the proxy record date in order to vote. In

doing so, institutional investors reveal both that corporate governance matters and that the proxy process is an important channel through which governance is exerted.

The issues we examine are particularly relevant for a period that has seen increased emphasis on both shareholder activism and securities lending. The increased focus on corporate governance during the last decade, and most recently during the financial crisis, has intensified the attention given to the fiduciary responsibility of institutions. Regulators have given more urgency to allowing shareholders access to proxies. In a speech given by SEC Chairman Schapiro in 2010, the chairman stated that there are more than 600 billion shares voted annually at more than 13,000 shareholder meetings every year. Voting provides an important mechanism for shareholders to affect firm-level corporate governance and policies. Since equity lending transfers voting rights, it has important ramifications for corporate governance. The increased interest in proxy voting and securities lending has resulted in fund boards now paying attention not only to the fee received from a securities lending program, but also to whether the securities are being loaned to "responsible" borrowers. Funds are screening companies' upcoming shareholder meetings where a vote may be important. According to a survey of funds by RiskMetrics/ISS, 37.9% of the respondents stated that a formal policy on securities lending is part of their proxy voting policy.<sup>2</sup>

We also address concerns related to "empty voting", described as voting by shareholders in excess of their economic interest (see Hu and Black, 2006 and 2007). Empty voting is alleged to involve strategies that investors can use to decouple votes from shares, such as borrowing securities and using derivatives. It might be that some activist investors, such as hedge funds, borrow securities primarily to obtain proxy voting rights decoupling voting rights from cash-flow rights. Hu and Black (2008) propose that regulation and additional disclosure is necessary to

<sup>&</sup>lt;sup>2</sup> See <u>http://www.riskmetrics.com/press/articles/040307boardiq.html</u>

curb such activities. But Brav and Mathews (2010) develop a theoretical model that shows that the ability to separate votes from economic ownership can increase overall efficiency.

Concerns over empty voting have continued to grow in the last few years and are clearly apparent in the SEC's concept release of July 2010 on proxy voting.<sup>3</sup> Empty voting has been an even bigger issue in Europe than the United States. Regulators in several countries, including the UK, Hong Kong, Switzerland, Italy, and Australia, have already introduced new regulations and/or disclosure requirements with respect to securities lending. The Hedge Fund Working Group (2008) recommends that "A hedge fund manager should not borrow stock in order to vote."

We examine if borrowing demand increases around the time of a vote, and if so, if it plays a role in the votes cast on the meeting date. There is some evidence of increased demand around the time of the record date. However, the increase in demand is economically small compared to the sharp reduction in supply. Additionally, we find little evidence that an increase in borrowing demand around the record date has an effect on voting outcome. Further, we find that the loan fee begins to increase even when lending supply is not binding, suggesting that lending supply is an important determinant of fees.

In extensions to the main results, we examine the period of the financial crisis, and check for robustness of our findings around dividend record dates. During the financial crisis of 2008, the general pattern of reduced supply and increased fees around the proxy voting date continued to hold. In contrast to the activity around voting record dates, we find that around the time of the ex-dividend record date, there is a statistically and economically significant increase in borrowing demand, with little change in the supply of lendable shares.

<sup>&</sup>lt;sup>3</sup> Concept Release on the U.S. Proxy System, Securities and Exchange Commission Release No. 34-62495.

Our paper adds to the literature on the governance role played by institutional investors. Gillan and Starks (2007) survey the evolution of institutional shareholder activism in the U.S. from the value effect of shareholder proposals to the influence on corporate events. Other studies find that institutional investors affect CEO turnover (Parrino, Sias, and Starks (2003) and Helwege, Intintoli, and Zhang (2011)), antitakeover amendments (Brickley, Lease, and Smith (1988)), executive compensation (Hartzell and Starks (2003)), and mergers (Gaspar, Massa, and Matos (2005) and Chen, Harford, and Li (2007)). In an analysis of 23 countries, Aggarwal, Erel, Ferreira, and Matos (2010) find that changes in institutional ownership over time are positively associated with subsequent changes in firm-level governance, but the opposite is not true. Institutions from countries with strong shareholder protection play a crucial role in promoting governance improvements. In such countries firms are more likely to terminate poorly performing CEOs and thus exhibit improvements in valuation over time. Chung and Zhang (2009) find that the fraction of a firm's shares held by institutions increases with the quality of governance. Bushee, Carter, and Gerakos (2009) find evidence that ownership by governancesensitive institutions in the U.S. is associated with future improvements in shareholder rights.

In a survey of institutional investors, McCahery, Sautner, and Starks (2010) find that corporate governance is important to institutional investors, and that many institutions are willing to engage in shareholder activism. Recent papers such as Brav, Jiang, Partnoy, and Thomas (2008); Clifford (2008); and Klein and Zur (2009) study activism by individual funds, such as pension funds or hedge funds. Gantchev (2010) finds that that the average activist campaign is estimated to cost \$10.5 million, and half of the costs come from proxy fights. Less than 5% of all campaigns reach a proxy fight; proxy fights having a 67% success rate. Cai, Garner and Walkling (2009) find shareholder votes to be related to firm performance,

governance, and director performance, however they conclude that the differences are economically trivial.

While we believe our study is the first to directly examine institutional investor voting behavior by studying changes in equity lending supply, we are not the first to ask if share borrowing plays a role in voting. Christoffersen, Geczy, Musto, Reed (2007) use 1998-1999 data from one large lending agent to examine borrowing demand and fees. These authors find an increase in borrowing demand, but find no mark-up in loan fees over prevailing prices. They conclude that the average vote sells for zero. They explain this surprising result based on information asymmetry where shareholders that do not know how to vote pass their shares to those shareholders that do know how to vote. Kalay, Karakas and Pant (2011) use the options market to determine the value of a vote and find that the value of voting rights is higher around shareholder meetings. Our study is able to examine voting rights more directly using a much larger and representative sample than previous work.

The paper also contributes to the literature on equity lending. Studies such as Jones and Lamont (2002); D'Avolio (2002); Geczy, Musto, and Reed (2002); Ofek and Richardson (2002); Cohen, Diether, and Malloy (2007); and Edwards and Hanley (2010) examine the cost of borrowing stocks. Saffi and Sigurdsson (2011) describe international equity lending markets and how lending supply and loan fees are related to market efficiency and the distribution of stock returns. Kaplan, Moskowitz, and Sensoy (2010) conduct an experiment in which they introduce an exogenous supply shock to the loan supply of one money manager. They find no adverse impact on stock prices. Asquith, Au, Covert, and Pathak (2010) describe borrowing in the bond market by analyzing data from one large lender for the period 2004-2007.

The paper proceeds as follows. Section 2 provides background on the proxy voting process, and the securities lending market. Section 3 describes the data on proxy voting, securities lending, and other firm-level corporate attributes. In Section 4, we present the main results of our empirical findings. Section 5 provides additional analysis on lending and borrowing around dividend record dates, and during the financial crisis. Section 6 concludes.

#### 2. Background on Proxy Voting and Securities Lending

#### 2.1 Proxy Voting

In the United States, state laws control the holding of annual meetings to elect directors and matters of corporate governance, as discussed by Karmel (2010). However, federal securities laws control the solicitation of proxies. In light of changes in shareholder demographics, the structure of share holdings, technology, and the potential economic significance of each proxy vote, the SEC has reviewed the proxy infrastructure and issued a "proxy plumbing" concept release in July 2010. The concept release identified several issues that might require a regulatory response, including proxy voting and securities lending; "empty voting," under which economic ownership is decoupled from voting rights; over-voting and under-voting, both of which can result from a mismatch between the number of shares held compared to the number of shares credited to a broker-dealer; and the need for investors to know proxy items before the record date so that they can decide whether to lend their shares or not. The SEC also raised the issues of whether funds should report the number of shares cast and how the funds voted.

One of the issues raised by the SEC's 2010 Concept Release deals with proxy advisors' influence on voting. Most institutional investors subscribe to one or more proxy advisors and some delegate voting authority to these advisors. Choi, Fisch, and Kahan (2008) examine the

impact of proxy advisors on uncontested director elections during 2005-06. They find that proxy advisors, instead of providing independent information, effectively aggregate information on factors considered important by investors. The authors conclude that their recommendations are less influential than perceived. Sometimes different proxy advisory firms provide opposing recommendations. In the high-profile proxy fight between Terra Industries Inc. and CF Industries Holdings, RiskMetrics supported dissident CF, while Glass Lewis and Co. supported Terra. RiskMetrics supported the dissident slate in 40% of contests, and Glass Lewis favored the dissident slate in only 20% of fights in which the recommendations were publicly available.<sup>4</sup>

There are many rules and regulations that apply to the proxy process. To give shareholders sufficient time to make an informed voting decision, registrants must follow a timeline. SEC proxy Rule 14a-13 requires that a "Broker Search" be distributed to banks, brokers, and nominees who then compile a list of beneficial owners. This broker search must take place 20 business days prior to the record date for an annual meeting and ten days for a special meeting. Most states (for example, California and Delaware) require that the record date be set at a maximum of 60 days and a minimum of ten days prior to the meeting; New York sets the maximum at 50 days. The record date determines the ownership date for voting purposes. As long as shares are not lent out on the voting record date, the owner can vote them. Preliminary proxy material must be filed with the SEC via EDGAR, ten days before distributing definitive copies to shareholders. Proxy material must be mailed out 40 days before the meeting date.

Mutual funds typically have an oversight process, with board involvement, to monitor the funds' proxy voting process. The SEC's Rule 206(4)-6 requires funds to adopt and implement proxy voting policies and procedures, and that they make voting record available to clients.

<sup>&</sup>lt;sup>4</sup><u>https://www.sharkrepellent.net/request?an=dt.getPage&st=1&pg=/pub/rs\_20100722.html&&RiskMetrics\_and\_Glass\_Lewis\_Proxy\_Fight\_Vote\_Recommendations&rnd=701086</u>

According to the SEC, "This disclosure enables fund shareholders to monitor their funds' involvement in the governance activities of portfolio companies." In 2003, the SEC started requiring mutual funds to disclose proxy voting records by filing Form N-PX.

## 2.2 Securities Lending

Securities lending is generally defined as a transaction in which the beneficial owner of the securities, normally a large institutional investor such as a pension fund or mutual fund, agrees to lend its securities to a borrower, such as a hedge fund, in exchange for collateral consisting of cash and/or government securities. The lender earns a spread by investing the collateral in low-risk short-term securities. In a normal U.S. loan, the collateral is 102% on domestic securities and 105% for international securities. The securities lending market has grown tremendously in the last decade. By 2007, the total value of securities on loan was estimated at \$5 trillion (Lambert 2009), with research estimates being that that lending reaps \$8 billion to \$10 billion annually in fees for Wall Street. <sup>5</sup> Most large institutional investors have a securities lending program and consider securities lending as a key source of revenue. Institutional investors suffered large losses in 2008 that led to lawsuits against big custodial banks. The allegation was that custodians did not invest the collateral in safe, plain-vanilla securities, resulting in losses for their clients.

As is evident from the SEC's concept release of July 2010, there are questions about whether securities lending has contributed to proxy abuse. The concern is that market participants can obtain voting rights in a firm by borrowing shares, but without having any real economic ownership. Some researchers assume that activist investors borrow shares for the sole purpose of obtaining voting rights to exert influence or gain control of a company, and do so

<sup>&</sup>lt;sup>5</sup> http://www.forbes.com/2007/09/25/retail-investors-securities-biz-cx\_lm\_0925brokerage.html

without corresponding economic ownership in the company (see Hu and Black, 2006 and 2007). Most securities lending involves shares borrowed from pension funds, mutual funds, and other large institutional investors. These institutions tend to have proxy voting guidelines that often contain policies on securities lending. Although lenders refer to these shares as being "on loan", the lender actually transfers ownership and voting rights. Shares may be borrowed for a variety of reasons, including short selling, covering a short position, or for trading strategies such as convertible bond arbitrage, dividend tax-arbitrage strategies (see Christoffersen et al. (2005) and Thornock (2010)), and merger arbitrage, and possibly for empty voting.

Institutions have started to include policies on securities lending in their proxy guidelines but they vary considerably in scope and detail. Some funds require a total recall of shares, while others weigh the lost revenue against the benefits of voting on a case-by-case basis. Below, we provide some examples from funds' proxy voting guidelines.

## **Putnam Funds**

"The funds' have requested that their securities lending agent recall each domestic issuer's voting securities that are on loan, in advance of the record date for the issuer's shareholder meetings, so that the funds may vote at the meetings."<sup>6</sup>

# TIAA-CREF

"Even after we lend the securities of a portfolio company, we continue to monitor whether income from lending fees is of greater value than the voting rights that have passed to the borrower. Using the factors set forth in our policy, we conduct an analysis of the relative value of lending fees versus voting rights in any given situation. We will recall shares when we believe the exercise of voting rights may be necessary to maximize the long-term value of our investments despite the loss of lending fee revenue."<sup>7</sup>

# **State Board of Administration of Florida (SBA)**

"Circumstances that lead the SBA to recall shares include, but are not limited to, occasions when there are significant voting items on the ballot such as mergers or proxy contests or instances

<sup>&</sup>lt;sup>6</sup> See <u>https://content.putnam.com/shared/pdf/proxy\_voting\_guidelines.pdf</u>

<sup>&</sup>lt;sup>7</sup> See <u>http://www.tiaa-cref.org/ucm/groups/content/@ap\_ucm\_p\_tcp/documents/document/tiaa01007871.pdf</u>

when the SBA has actively pursued coordinated efforts to reform the company's governance practices, such as submission of shareholder proposals or conducting a detailed engagement. In each case, the direct monetary impact of recalled shares will be considered and weighed against the discernable benefits of recalling shares to exercise voting rights. The SBA recognizes that it may not be possible to determine, prior to a record date, whether or not shares warrant recall."<sup>8</sup>

Fund groups such as Vanguard and Fidelity do not have specific discussion of policies on recalling shares in their public proxy guidelines. California Public Employees' Retirement System (CalPERS) has a two-step list. About 30 securities on the "Focus" list are completely restricted from lending because CalPERS takes an active interest in these securities and always wants the shares available to vote. For the second list of 300 securities, which represents the largest market value of CalPERS position, CalPERS wants ensure that the securities are returned prior to a proxy vote.<sup>9</sup> The SEC requires funds to recall shares for "material" events but has not defined materiality. In the ISS survey, 92.3% of the respondents indicated that mergers and acquisitions were the most important reason to recall shares.

As mentioned in SBA's guidelines above, one of the challenges to recalling shares is that shareholders typically do not receive the proxy material until after the record date. However, in order to vote, institutions must recall the shares by the record date. Hedge funds have argued that they do not borrow shares simply for voting purposes because they do not even know about the items on the proxy ballot as of the record date. Listed companies on the New York Stock Exchange are required to provide the NYSE a notice of record and shareholder meeting dates at least ten days prior to the record date. The SEC is considering whether this information should be disseminated to the general public.

<sup>&</sup>lt;sup>8</sup> See <u>http://www.sbafla.com/fsb/LinkClick.aspx?fileticket=mt0icmFCYMk%3d&tabid=378</u>

<sup>&</sup>lt;sup>9</sup> See <u>http://www.securitiestechnologymonitor.com/issues/19\_31/21468-1.html?zkPrintable=true</u>

### 3. Data

#### **3.1** Securities Lending Descriptive Statistics

For the most part, understanding the securities lending market has been limited partly because of the lack of transparency in this fragmented market. We obtain a proprietary data set from Data Explorers that includes equity lending supply, shares actually borrowed and on loan, and the corresponding fees for the period January 2007 to December 2009. Data Explorers collects this information daily from 125 large custodians and 32 prime brokers in the securities lending industry and provides comprehensive coverage of equity lending market. There are 4,333 firms in the equity lending sample, however the proxy voting data is limited to Russell 3000 firms therefore we focus on these firms. As of December 2009, there was \$1.55 trillion in stocks available to lend, out of which \$113 billion was actually lent out and would be considered as being on loan. Saffi and Sigurdsson (2011) provide a detailed description of the data.

The main dependent variables in our study are equity lending supply, borrowing demand, utilization rate, and annualized loan fees. We define these variables as follows: lending supply (*SUPPLY*) is the dollar value of supply relative to a firm's market capitalization, which is equivalent to the fraction of shares outstanding available to borrow; loan quantity (*ON LOAN*) is the dollar value of shares on loan on a given day relative to market capitalization; utilization rate (*UTILIZATION*) is on loan divided by supply; and loan fee (*FEE*) is the difference between the risk-free interest rate and the rebate rate expressed in basis points (bps) per annum. The rebate rate is the portion of the interest rate on the collateral that is returned to the borrower. We use the effective Federal Funds rate as our proxy for the risk-free rate. Stocks that have a fee greater than

100 basis points (1%) are commonly considered to be *SPECIAL*. Such stocks are more closely watched by investors and are more expensive to borrow.

In Panel A of Table 1 we present descriptive statistics for the equity lending market for 8,411 firm-years. The table shows that during the 2007-2009 period, on average, 22.48% of a firm's market capitalization is available for lending with 3.44% on loan, resulting in a utilization rate of 14.66%. The minimum and maximum values of *SUPPLY* are 0.01% and 74.38%, respectively. Stocks that have low institutional ownership tend to have low lending supply. *ON LOAN* varies from a high of 42.01% to a low of zero. Some stocks are heavily borrowed while others are not borrowed at all. *UTILIZATION* is as high as 99.7% in our sample, implying that the supply of lendable securities barely meets the demand to borrow.

The mean annualized fee is 35 bps. Therefore the daily cost of borrowing \$1 billion worth of shares on the record date at the average fee is less than 10,000 (\$1 billion \* (0.3511%/365) = \$9,619). However, this cost can quickly rise for stocks in high demand. Using the maximum fee in our sample, 745 bps, the daily cost of borrowing the same amount would rise to \$204,241. The minimum fee of -39.06 bps implies that the lender pays the borrower. In fixed contract lending, it is possible for the fee to be negative because the rebate is fixed in advance. If the rebate is larger than the interest earned on the collateral, e.g. when interest rates quickly decrease, then the fee will be negative. During 2007-2009, 9.76% of the stocks had a fee greater than 100 basis points and were considered to be *SPECIAL*. In our sample the mean and median number of days for which stocks are on loan is 16 days and one day, respectively. Most loans are open loans, which are "open ended" and are rolled over every day.

Panel B of Table 1 shows that the supply of lendable securities as a percentage of market capitalization (*SUPPLY*) is relatively stable over the 2007-2009 period, even though some

smaller institutions have terminated their securities lending program after the financial crisis, ranging from 23.37% in 2007 to 22.43% in 2009. However, average demand for borrowing shares (*ON LOAN*) experiences a severe drop decreasing from 4.43% in 2007 to 2.49% in 2009. During the financial crisis, many restrictions were placed on short selling. These restrictions impacted several arbitrage strategies used by hedge funds, hence the drop in demand for borrowing shares. *UTILIZATION* shows a steady decline during the period, decreasing from 18.17% in 2007 to 10.87% in 2009. As a result, the average annualized fee (*FEE*) is lowest in 2008 at 24.26 bps. During the period 1998-99, Christoffersen et al. (2007) report lower average fees. In a recent paper, Asquith, Au, Covert, and Pathak (2010) report mean and median fees for bond loans to be 22 and 14 basis points, respectively.

## **3.2 Proxy Voting Descriptive Statistics**

We conduct a proposal-level daily analysis on 56,220 proposals obtained from RiskMetrics/ISS, henceforth ISS. The proxy voting data includes proposal-level characteristics such as proposal description, proposal sponsor, management recommendation, ISS recommendation, threshold for the proposal to pass, votes cast, and result for the Russell 3000 firms. For example, Table 2 shows that on average, 90.97% of the votes are cast in favor of the proposed proposal.

We create different categories of proposals, with the explicit aim of exploring those that might be considered as contentious, based on disagreements between different parties, and those that are associated with significant events. The three proposal categories are: shareholdersponsored, merger-related; and proposals for which management recommends FOR and ISS recommends AGAINST. Most proposals are sponsored by management and only 3.47% are sponsored by shareholders. Examples of shareholder-sponsored proposals include Say on Pay; requests that the firm or institution provide cumulative voting; reduce supermajority voting; require independent chairman of board; require a majority vote for the election of directors; and declassify the board of directors. Examples of management-supported and ISS-opposed proposals are: approve poison pill, approve or amend stock plan, authorize increase of common stock, and authorize new class of preferred stock. Finally, we identify mergers in a separate category because institutions frequently restrict lending or call back their shares to vote on a merger. In addition, a merger is a corporate event that the SEC is likely to consider material, in which case institutions may want to recall their shares.

Additionally, we also consider two further classifications of proposal in our analysis. First, we classify proposals as routine and non-routine. NYSE Rule 452 outlines non-routine proxy proposals as those in which broker voting is not allowed. Examples include proposals relating to ant-takeover provisions, mergers, firm capitalization and mergers. Second, we classify proposals based on their item description. We classify proposals using the following categories: directors, compensation, mergers, firm capitalization, antitakeover provisions, and routine business issues.

We note that even though ownership for voting purposes is established as of the record date the proxy ballot, and hence the recommendation of ISS or management, might not be known on the record date. However, ISS does issue proxy voting guidelines before the start of the annual proxy season, so market participants do have some idea of ISS's stance. Further, in most cases, the proposals on the ballot are not a complete surprise, because many proposals are repeated from one year to the next.

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# 3.2 Other Firm-Level Data

We use CRSP to obtain share price (PRICE), market capitalization (SIZE), turnover (TURNOVER), and bid-ask spread (SPREAD). We use only common shares with price over \$1, and further merge the data to Compustat and collect data on book equity (EQUITY) to calculate the book-to-market equity ratio (BM). We exclude closed-end funds, American Depositary Receipts (ADRs) and real estate investment trusts (REITs). We obtain ownership data from the Thomson Reuters CDA/Spectrum database on SEC 13F filings. The 13F filings must be reported on a quarterly basis by all investment companies and professional money managers with assets over \$100 million under management. For each stock, we calculate total institutional ownership as a percentage of market capitalization (INST) and institutional ownership concentration (INST) *CONC*), measured as the Hirschman-Herfindahl index normalized between zero and one. We use the firm-level corporate governance index GOV<sub>41</sub> as in Aggarwal, Erel, Ferreira and Matos (2010).  $GOV_{41}$  assigns a value of one to each of the 41 governance attributes if the company meets minimally acceptable governance guidelines on that attribute, and zero otherwise.<sup>10</sup> Table 2 shows that on average, firms in the sample meet 68% of the 41 governance attributes. The average, book to market is 0.71, and institutional ownership is 71%. Industry-adjusted returns in the quarter prior to the proxy record date are 1%. On average, these firms have negative stock market returns in the quarter preceding the proxy record date.

### 4. Empirical Results

Because daily securities lending data is available for the three-year period January 1, 2007 to December 30, 2009, we focus on this period. By doing so we are able to examine the day-by-day activity in the securities lending market around the record date.

<sup>&</sup>lt;sup>10</sup> Aggarwal, Erel, Stulz, and Williamson (2009) describe the data in more detail. The governance data is available on Aggarwal's website.

### 4.1 Lending, Borrowing, and Loan Fees Around Proxy Voting Record Date

Figure 1 shows the lending supply, borrowing, utilization, and loan fees for the period starting 30 days before the record date and ending 30 days after the record date. We define the record date (day 0) as the event date. On average, the time between the record date and the shareholder meeting is 53 days. On the event date, to have the right to vote the borrowed shares, an investor must be the owner of record. The data on lending supply and borrowing are based on settlement taking place on the reported day, which accounts for any settlement period. To have borrowing rights, a borrower must settle the transaction by the record date but can immediately reverse the position on day 1.

The plots in Figure 1 represent the average *SUPPLY*, *ON LOAN*, *UTILIZATION*, and *FEE* on each of the days (-30,+30) around the record date for both the full sample and also for the subsample of firms in which utilization is in the lowest/highest quartile. For those firms in the highest utilization quartile, the equity lending market is more likely to be binding. When we examine the mean time series for lending supply, on loan, utilization and fees, we see that there is an event date effect on the record date. The supply of shares available to lend as a fraction of market capitalization is at its lowest point on day 0, and starts to decrease about 15 days before a vote. There are 7,415 firm-record dates for this period.<sup>11</sup> *SUPPLY* starts at 24.05% on day -30 and reduces to 22.09% by the record date, which corresponds to an 8.15% reduction in supply. The amount available to lend is reduced by 1.96% of market capitalization. This result is consistent with institutions calling back their shares at the time of a vote and withdrawing them from the lendable pool of securities.

<sup>&</sup>lt;sup>11</sup> The sample is reduced to 7,415 record dates due to the requirement of observing all regression variables on each of the days in the window (-30,+30). Our results remain the same even if we do not impose this restriction on the sample.

The results suggest that institutions start restricting supply in advance of the proxy record date to ensure that shares can be recalled and that they can exercise the vote. In practice, institutions are generally advised to allow two weeks for a recall prior to a proxy vote, and possibly longer if the stock is special. Consistent with industry practice, we find that the drop in lendable shares starts to occur about two weeks before the record date. Hu and Black (2008) discuss the case of Fidelity and Morgan Stanley, who together held 10% shares of Telecom Italia and led a campaign against a takeover of Pirelli. However, they were only able to vote 1% of the votes because the remaining shares were lent out and could not be called in in time for the vote. The Pirelli bid was approved. Institutions might also recall shares in advance to provide sufficient notice to borrowers, thus alleviating possible problems for borrowers to find shares and improving an institution's reputation as a stable and reliable lender.

Examining the plot for borrowing demand (*ON LOAN*) shows a small increase around the record date. On day -30, on average, 4.12% of a firm's market capitalization is on loan, and by the record date it grows to 4.14%. The demand for borrowing stock increases by 0.02% of a firm's market capitalization. Finally, *UTILIZATION* and *FEE* both increase in the 15 days prior to the record date mirroring the decrease in supply. The reduced lending supply and the increased demand to borrow result in an increase in the utilization rate and loan fees by 9.36% and 9.52%, respectively.

We find that the lending supply is lowest for the high utilization group even at the start of the event window, and that the record date effect is similar to that for the full sample. However, we find that for borrowing demand, the on loan variable first decreases in the period prior to record date and then increases on the record date. At the same time, utilization and fees both increase before the record date and then drop after the proxy voting record date. The graphical analysis for firms in the top quartile of utilization is consistent with a scenario in which, due to prior high utilization, the recall of supply leading up to the record date both increases utilization and diminishes borrowing, because borrowers find their loans recalled. There is a much smaller movement in the demand for borrowing prior to the event date. Utilization and fees both increase prior to the voting record date, due more to supply constraints than to an increase in demand. On the first day after the record date, *SUPPLY* returns to pre-event levels because institutions do not want to lose revenue from lending.

In Figure 2 we present fitted plots of loan fees against lending supply, borrowing demand, and utilization. Fees remain low for very low levels of utilization, but start to rise as utilization increases above 20-30%. Interestingly, loan fees begin to increase even when lending supply is slack, suggesting that lending supply is an important determinant of fees even when utilization is relatively low. The documented relation between utilization and fees is consistent with the results in Kolasinski, Reed, and Ringgenberg (2010) and Saffi and Sturgess (2010). The finding also adds insight to Blocker, Reed, and Van Wesp (2010), who argue that shifts in supply matters only for stocks on special by revealing that supply shifts become important even at relatively low levels of utilization.

## 4.2 Determinants of Lending Supply, Borrowing Demand, and Loan Fees

We investigate the determinants of the equity lending market by estimating separate pooled regressions in which we use daily lending supply, borrowing, and loan fees on the record date as the dependent variables. For each of the 7,415 record dates, we consider the event window of -30 days to +30 days, where t=0 is the proxy voting record date. We include a record

date dummy (*RDATE*) to examine whether there is abnormal equity lending market activity on the record date compared to the 30 days before and after the record date.

We follow Saffi and Sturgess (2010) by including the following variables to explain securities lending: To control for ownership, we use *INST*, institutional ownership from the end of the previous quarter measured as a percentage of market capitalization, and *INST CONC*, concentration of institutional holdings using the Hirschman-Herfindahl index. We use lagged values of log of market capitalization (*SIZE*), book-to-market ratio (*BM*), turnover (*TURNOVER*), and spread (*SPREAD*) as explanatory variables to control for firm characteristics. We also include a dummy for stocks with a share price below five dollars (*DPRICE*). We measure firm performance in the previous quarter by *ROA* and stock returns (*RET*). We classify firms as having *LOW ROA* or *LOW RET* if their return is below the 2-digit SIC industry median for that quarter. In all regressions we cluster standard errors by firm and include year-quarter fixed effects.

Columns 1-3 of Table 3 report the results for the determinants of lending supply. The dependent variable is lending supply, expressed as percentage of market capitalization. In column 1, we use firm-level attributes to explain lending supply, and we examine record-date effects. The explanatory variable *RDATE* has a coefficient of -1.672, which is significant at the 1% level. In terms of economic significance, the coefficient indicates that on average, lending supply is lower on the record date by 1.672% of market capitalization, or approximately 8% of the level on day -30. In addition to standard control variables, we include firm-level corporate governance, *GOV41*. The positive and statistically significant coefficient of 3.88 on *GOV41* indicates that firms with better governance have a higher lending supply in general, even after we control for institutional ownership and other firm characteristics. This finding shows that the lower supply

on the record date is not simply a governance effect. This result is consistent with the argument that better governance alleviates shareholders' concerns that share lending will be detrimental to the value of their holdings. In addition, lending supply is higher when institutional ownership (*INST*) is higher, when institutional ownership is not concentrated (*INST CONC*), and for value stocks (*BM*); and lower for stocks with price below \$5 (*PRICE*<\$5). The *SIZE* coefficient is negative and significant when we include other firm-level attributes. However, it is positive and significant if these other attributes are not included, particularly *INST*, because of the high correlation with *SIZE*.

We might expect that institutional investors have stronger preferences to exercise voting rights in firms with poor performance. In column 2 we introduce *LOW ROA* and the interaction of *RDATE* and *LOW ROA*. We find that for firms with poor performance as measured by *LOW ROA*, lending supply on the record date is an additional 0.862% lower than during the period -30 to +30 days. In column 3, we repeat the analysis with a different proxy for firm performance based on stock price performance. The coefficient of the interaction term *RDATE x LOW RET* is negative and statistically significant. Using stock price performance as our proxy, we find that for poorly performing firms, on the record date lending supply is lower by 0.206% of market capitalization.

The determinants of borrowing demand appear in columns 4-6 of Table 3. The positive coefficient on borrowing demand indicates that demand is statistically higher on the record date. In the full model shown in column 4, the coefficient of *RDATE* is 0.075, which amounts to an increase of 1.9% compared to the average of the 60-day period. Again, we include the corporate governance index *GOV41* in this analysis. We note that the coefficient on *GOV41* is negative and significant. Although better corporate governance alleviates shareholders' concerns when

lending stocks, it appears to deter those investors who borrow stock. This result is consistent with the hypothesis that better governance deters stock borrowing and subsequent short selling because, all else equal, better governance is associated with fewer opportunities for investors to profit on the downside. Borrowing demand is higher if institutional ownership is higher and dispersed and for stocks that are more liquid, and lower for stocks priced below \$5. Once again, we examine if the record-date borrowing demand is greater for firms with poor performance. In columns 5 and 6 we find no significant association between performance and borrowing demand on the record date.

Table 4 reports the results of similar tests using *FEE* as the dependent variable. Again, we use pooled regressions to examine abnormal fees on the record date, and again we consider the event window of -30 days to +30 days, where t=0 is the record date. The results in column 1 indicate that the fee for borrowing stock increases, on average, by 1.946 bps on the record date, which is both statistically and economically significant. The record-date increase in the fee represents a 3.7% increase compared with the average of the 60-day period. We find that larger firms and firms with more dispersed institutional ownership are associated with lower loan fee.

Based on the results for lending supply and borrowing demand, there is evidence of lower lending supply and higher demand around the time of a proxy vote. There is some evidence of higher fees on the record date. In the next section we examine if the record date change in lending supply, on loan, and fees is related to proposal characteristics.

### 4.3 Change in Lending Supply, Borrowing Demand, and Loan Fees

In this section we examine how the change in lending supply, on loan, and fees in the period immediately before and after the proxy record date varies for non-routine proposals. NYSE Rule 452 outlines non-routine proxy proposals in which broker voting is not allowed. Examples include proposals relating to ant-takeover provisions, mergers, firm capitalization and mergers. Since several proposals are usually considered in a given shareholder meeting and equity lending variables are firm-level measures, we examine only those proposals that are considered non-routine and drop all non-contested director proposals and proposals that relate to operational items. We also remove proposals relating to social responsibility. Doing so leaves 9,268 non-routine proposals. If institutions follow governance polices stipulating that they will recall their lending supply around the record date, then we expect to find negative changes in the period prior to and including the record date, and positive changes in the period after the record date when institutions reverse the recall. Similarly, if the borrowing demand we documented earlier is a record-date effect, then we should see positive changes in the period prior to the record date and a decrease in on loan after the record date.

In Table 5, we examine the daily changes in lending supply and on loan in a regression framework. We include an event dummy equal to one for the ten days leading to the record date (RDATE (-9,0)) and a second event dummy equal to one in the ten days immediately following the record date (RDATE (0,10)). We find the results are robust to shorter and longer estimation periods. The regressions include lagged changes in the firm-level control variables described earlier that are not presented for brevity. In columns 1–5 of Table 5, we examine the effects of record day, merger proposals (DMERGER), proposals opposed by ISS and supported by management (DISS), and proposals sponsored by shareholders (DSH). Consistent with our earlier results and with institutions recalling lending supply, we see that supply decreases in the ten-day window prior to the record date and rebounds in the ten days after the record date. On average, supply decreases by 0.065% per day in the ten days prior to record date and increases by 0.108%

per day in the ten days after the record date, as captured by the coefficient of *RDATE* (-9,0) and *RDATE* (1,10), respectively, in column 1.

Columns 2-4 show that for each of the three categories of proposals, *DMERGER*, *DISS*, and *DSH*, there is a pre-record date decrease in supply followed by a post-record date increase. We include but do not present the *DMERGER*, *DISS*, and *DSH* dummy variables for brevity. The coefficient of each of the four interaction terms is negative and statistically significant during the periods -9 to 0. During the period 0 to +10, because supply is made available after the record date, each coefficient is positive and significant. After controlling for the decrease in lending supply for the full sample, in column 5 we examine the additional impact of the proposal type. The coefficient of *RDATE* (-9,0) x *DISS* is -0.033 and statistically significant at the 1% level. Compared to the full sample record-date recall in supply, the reduction in supply is 50% bigger when ISS opposes a proposal. This finding suggests that the results are not driven by the standing policy of institutions such as Putnam, which always recall their shares. Proposals that are opposed by ISS are associated with a larger recall of supply. For merger proposals we find no additional impact on supply; while for shareholder sponsored proposals we find that the recall is less than for the full sample consistent with comparison of the results in columns 1 and 4.<sup>12</sup>

In columns 6-10 of Table 5, we report the results for changes in borrowing demand. We find that borrowing demand increases in the run-up to the record date and decreases after the record date. The positive and significant coefficients of the interaction of *RDATE* with *DMERGER* and *DSH* in columns 7 and 9, respectively, show that there is some evidence of higher borrowing demand for merger proposals and shareholder-sponsored proposals. However,

<sup>&</sup>lt;sup>12</sup> The insignificant result for mergers is surprising given that 92.3% of respondents indicated that mergers and acquisitions were the most important reason to recall shares in the ISS survey. However, this may be explained by the small number s of mergers (180) in the three-year sample period; additionally the number of merger related proposals dropped dramatically in 2008 and 2009.

it is not obvious that the result stems from empty voting. In column 10, when we control for the overall increase in demand, the only interaction term that has a significant coefficient is  $RDATE(-9,0) \times DISS$ , but this coefficient is negative, implying a significantly smaller record-date increase in demand. Overall, the coefficients associated with material and contested proposals are not positive and significant for the period leading to the record date. Based on the evidence in Tables 3 and 5, if empty voting is a concern for shareholders, then we are puzzled to see that it is less so for these special types of proposals. In the case of merger proposals, it is possible that the results are being driven by merger arbitrage strategies as investors set up their arbitrage positions. However, proposals on which management and ISS differ should not be affected by borrowing related to arbitrage strategies.

Earlier results show that supply is recalled and borrowing demand increases around the record date, which suggests that the loan fee should increase. Indeed, both in Table 4 and in univariate results we find that the fee is higher on the record date, and that the fee increases prior to the record date and decreases after the record date. In unreported results for non-routine proposals, we find that fees increases in the period before the record date and decreases after the record date, however the average daily change in the fee is not significant.

The results on changes in lending supply and borrowing demand for non-routine proposals provide further evidence for our conclusions that owners recall lending supply around the time of a proxy vote, and further that the reduction in supply is more pronounced if there is an agenda item opposed by ISS. We find evidence that borrowing increases around the time of a proxy vote, but no evidence that increased demand is related to the materiality of the proposal.

## 4.5 Voting Outcome

To better understand why institutional investors recall supply, we assess whether it has an economically significant impact on the vote outcome at the subsequent shareholder meeting. At the same time, we investigate whether the increase in on loan at the record date has an impact on voting outcome.

We estimate regressions where the dependent variables are related to voting behavior for all 55,240 proposals on 7,415 shareholder meeting dates.<sup>13</sup> For each proposal we investigate if the recall in lending supply and the increase in demand around the record date plays a role on how votes are cast on the meeting date. If institutions recall lending supply to exercise their vote, then we should expect support for proposals to be associated with recalled supply, but if empty voting is at play, then support should be related to the record date increase in borrowing demand.

We define the following proposal-level dependent variables: *VOTE RATIO* is the natural logarithm of the number of FOR votes to the number of AGAINST votes; *AGAINST MGT* measures the percentage of the overall votes that went against the management's recommendation for each proposal; and *CLOSE* measures if the voting outcome was close, being equal to one if the percentage of votes for the proposal was within 5% of the vote requirement for the proposal to pass and zero otherwise. All three outcome variables measure the support for each proposal, allowing us to test if lending market activity affects corporate governance through the voting ballot.

To examine the voting patterns at the proposal-level, we include indicator variables for proposals that management supports and ISS opposes (*DISS*), merger proposals (*DMERGER*), and shareholder sponsored proposals (*DSH*). Additionally, we interact the recall in supply and

<sup>&</sup>lt;sup>13</sup>Unlike the regressions estimating equity lending variables, in the regressions estimating voting outcome each proposal has its own dependent variable (the outcome observation). Therefore we retain all proposals in the estimations.

increase in on loan with proposal characteristics to better understand when equity lending is important to determine support for proposal. Further, we include the firm-specific characteristics included in the earlier estimations, but present only those relating to institutional ownership and governance for brevity. All regressions include time dummies and the standard errors are clustered to account for correlation both at the firm- and quarterly-level.

We present our results in Table 6. The independent equity lending variables are the change in lending supply,  $\Delta Lending Supply$ , and the change in borrowing demand,  $\Delta On Loan$ , during the ten-day period leading up to the record date. In column 1, we find that a change in lending supply during the ten-day period leading up to the record date is positively associated with *VOTE RATIO*. The positive coefficient indicates that institutional investors that recall equity lending supply at the record date, on average, exercise their voting power to vote against proposals. This is consistent with institutional investors responsibly fulfilling a monitoring role whereby they provide prudence on behalf of shareholders. We find no relation between borrowing demand and support for proposals.

Next, we examine those proposals most likely to be contentious. If the proposal is sponsored by shareholders, or is both supported by management and opposed by ISS, then it is likely to receive fewer FOR votes. Merger proposals in general receive more FOR votes but less so when the recall in equity lending supply is larger. The coefficient on  $\Delta$ Lending Supply x DMERGER of 4.714 is an order of magnitude larger than the coefficient on  $\Delta$ Lending Supply of 0.464. These results build further upon the finding that institutional investors recall lending supply for proposals that are likely to be economically significant such as mergers. Our finding is similar to those found in the spot market by Bethel, Hu, and Wang (2009) with respect to

mergers. Further, we find that shareholder sponsored proposals receive more FOR votes where the recall in equity lending supply is larger at the record date.

In column 2 of Table 6 we present results for AGAINST MGT, which measures the percentage of votes that went against the management recommendation for the proposal. The coefficient of  $\Delta$ Lending Supply is negative (-2.916) and significant implying that more votes are cast against management when institutions restrict lending supply, but there is no association between votes cast and borrowing demand. We find that the percentage of votes cast against management is greater when ISS opposes the management recommendation, and for shareholder sponsored proposals. Collectively, the findings for votes against management are consistent with those for the VOTE RATIO, and indicate that the recall of lending of supply has a meaningful impact on voting outcomes. Further, while the number of votes against proposals may not result in the proposal being rejected there is evidence that votes recorded against proposals have spillover governance effects. Cai, Garner, and Walkling (2009) and Fischer et. al. (2009) show that meaningful vote totals against director election proposals are followed by changes in the board, management, or corporate actions within the next year. Finally, the results on proposal characteristics in general compare favorably with those found by Iliev, Lins, Miller, and Roth (2011), regarding votes against management globally.

Next, in the results reported in column 3 of Table 6, we estimate probit regressions where the dependent variable is the dummy variable *CLOSE*, equal to one if the votes cast are within 5% of changing the outcome of the voting.<sup>14</sup> The coefficients of change in lending supply and change in borrowing demand are not significant. However, the positive and significant coefficient of -5.086 on *ALending Supply x DISS* indicates that the voting outcome is more likely to be close if institutional investors recall equity lending supply and ISS opposes the

<sup>&</sup>lt;sup>14</sup> There are no merger proposals with close outcomes in our sample.

management recommendation to support the proposal. We also find that proposals where ISS opposes the management recommendation are more likely to be closely contested. The results indicate that institutions act on ISS recommendations and recall lending supply to vote against management.

Combined with the earlier results for *VOTE RATIO* and *AGAINST MGT*, the findings for *CLOSE* are consistent with other studies that show that recommendations made by ISS against management matter to determine voting outcomes. Both Cai, Garner, and Walkling (2009) and Bethel and Gillan (2002) examine director elections and show that unfavorable recommendations by ISS lead to more votes against management.

In our final analysis on voting outcome, we investigate if the relation between recall in lending supply and votes against management varies across proposal type. In Table 7 we provide results from regressions that split proposals by the following categories: directors, compensation, mergers, firm capitalization, antitakeover provisions, and routine business issues. We present only the independent variables of interest for the sake of brevity. Column 1 of Table 7 shows results for the complete sample of proposals and in columns 2 - 7 results are reported for each proposal type. We find that *△Lending Supply* is negatively associated with more votes against management for proposals relating to directors and compensation. For mergers the coefficient is also negative but insignificant, likely due to the small number of mergers. For changes in on loan, we find evidence that an increase in equity borrowing at the record date is associated with more votes against management in proposals relating to compensation, though the coefficient is an order of magnitude smaller than that of change in supply.

These results on proposal-level voting outcomes suggest that there is an economically significant relation between the supply side of the securities lending market and voting outcome.

Once again, this result is consistent with beneficial owners of securities recalling shares ahead of the proxy record date to exercise their vote. Further, firms that have stronger corporate governance are likely to get more support for proposals. Since most proposals are managementsponsored, shareholders are likely to vote with management if the firm has strong governance. Finally, consistent with Alexander, Chen, Seppi, and Spatt (2010), we find that the recommendations of proxy advisors play an important role in the outcome of proposals.

## 5. Additional Analysis

#### 5.1 Dividend Record Dates

There is some evidence that the equity lending market is affected by the dividend record date due to tax-arbitrage strategies (Christoffersen et al. (2005), Saffi and Sigurdsson (2011), and Thornock (2010)). To ensure that our results are not driven by an alternative explanation based on dividend tax-arbitrage strategies, we examine the frequency of dividend and proxy record dates. For the 7,415 proxy record dates in the period 2007-2009 we observe 2,609 dividend record dates in the (-30,+30) days window around the proxy record date. The mean (median) number of days between the proxy record date and the dividend record date is 11.6 (11) days and only 235 proxy record dates coincide with a dividend record date.

In Figure 3 we plot the equity lending market activity around the dividend record date. We find a large spike in borrowing demand and fees around dividend record dates, but little change in lending supply. These results contrast sharply with Figure 1, which shows that the activity around proxy voting dates is characterized by a marked reduction in lending supply and only a small change in borrowing demand and fees. In Panel A of Table 8 we present additional robustness results. We repeat the tests conducted for the proxy record date, but now we adjust for dividend record dates. We include a dummy variable equal to one if the firm reports paying a dividend at least once in the past three years (*DIV DUMMY*), and a dividend record date dummy equal to one if we find that the dividend record date is within (-1, +1) days of a proxy voting record date (*DIV RDATE*). We first estimate regressions by using only the dividend record date, and then include the proxy voting record date. When we examine the effects of dividends, we find that on average, the firms that pay dividends exhibit a higher lending supply. In tests in which we exclude the proxy voting record date, we find a significant recall in supply of -1.358% of market capitalization on the dividend record date and an increase in borrowing demand.

When we introduce the proxy voting record date, we see that our earlier results of reduced lending supply, increased borrowing demand, and fees continue to hold. However, after controlling for the proxy voting record date, we find that the results reported by Thornock (2010) and Ringgenberg (2010), that lending supply is lower around ex-dividend dates, does not hold. Borrowing demand and loan fees both increase around the dividend record date. The increase of 0.596% in borrowing demand is economically large, and much greater than the change in borrowing of 0.075% associated with the proxy voting record date. The equity lending market behaves differently around proxy voting record dates than it does around dividend record dates. There is a much larger increase in shares borrowed around a dividend record date than around the time of a proxy vote.

## 5.2 Financial Crisis

During the financial crisis of 2008 there was considerable concern about counterparty risk following the events surrounding Bear Stearns and Lehman Brothers. Singh and Aitken (2009) examine the 10-Q reports of three major custodian banks (Bank of New York, State Street, and J.P. Morgan) before and after the bankruptcy of Lehman Brothers and find a decrease in total securities lending from \$1.48 trillion in June, 2008 to \$0.82 trillion by December, 2008. Some investors had concerns about the instruments used to invest the collateral and some custodial banks were sued by equity lenders. The drop off in the securities lending during the crisis was due to a number of factors including decrease in demand as borrowers decreased their leverage and pulled to the side and very conservative cash reinvestment guidelines that got put into place.

The short-selling bans imposed by regulators in many markets also had an impact on short selling and securities lending. Beber and Pagano (2010) find that the short-selling bans imposed in more than 20 different countries during the financial crisis reduced liquidity, slowed price discovery, and failed to support stock prices. Boehmer et al. (2009) study the short-selling ban in the U.S. and find a reduction in shorting activity and an increase in spreads, price impact, and intraday volatility. Kolasinski et al. (2010) find a significant increase in loan fees following the ban.

We introduce a dummy *LEHMAN*, which we set equal to one for all days in 2008 on or after September 15<sup>th</sup> that characterize our "crisis" period. We use this dummy to examine the effect of the financial crisis on the equity lending market around record dates. We re-estimate our regressions by including the *LEHMAN* dummy and present results in Panel B of Table 8. Supply, demand, and fees all decreased during the crisis period. Borrowing demand decreased more than lending supply, which explains why fees decrease by about 29 bps. Even after controlling for the

financial crisis period, we find reduced supply and a small increase in demand at the record date; thus, our results continue to hold. The interaction of *RDATE* with *LEHMAN* does not result in any significant changes in lending supply before or after the crisis. However, we do find evidence to support less borrowing demand and fees on record dates following Lehman's bankruptcy. This finding is consistent with borrowers becoming less keen to engage in short selling.

#### 6. Conclusion

Understanding institutional investor preferences regarding corporate governance is important for firms trying to attract new investors as well as policy makers considering the regulation of different governance mechanisms. The activities of institutional investors in the securities lending market provide one of the few opportunities to directly examine the behavior of institutional investors in influencing firm-level governance.

To study the securities lending market for U.S. firms during the period 2007-2009, we use a proprietary data set comprising shares available to lend (supply), shares borrowed (demand), and loan fees. The data covers more than 85% of the securities lending activity for these firms and allows for a comprehensive analysis during a period of tremendous growth in that market. In the past, understanding the securities lending market has been limited partly due to the lack of transparency in this fragmented market. We find that on average, 22.48% of a firm's market capitalization is available for lending, 3.44% is actually borrowed, and the annualized loan fee is 35 basis points. The supply of lendable shares shows great variation, with minimum and maximum values of 0.01% and 74.38% of market capitalization. We find that more lending supply is available for stocks with larger institutional ownership. There is

considerable interest in some stocks and almost 100% of the available supply of such stocks is actually borrowed and on loan. The annual fee can be quite high, with the maximum at 745 bps. During 2007-2009, 10% of the stocks were very expensive to borrow and had a fee greater than 100 basis points. 2007 was the peak year for the securities lending market, with activity dropping off after the financial crisis.

We analyze the supply of lendable shares around the time of a proxy vote to examine the role of institutional investors in the voting process. Just prior to the proxy record date there is a significant reduction in the supply of lendable shares, because institutions restrict or call back their loaned shares prior to a vote. The reduction in supply of almost 2% of market capitalization on the record date is economically significant. Our results suggest that institutions take their responsibility to vote seriously, and that they are even willing to give up revenue from lending securities when they see benefits from voting. The reduction in securities lending by institutions around the time of a vote is direct evidence that to bring about changes at companies, institutions play a role in the voting process. The reduction in the supply of lendable shares is most pronounced when there are contentious proposals on the ballot, i.e., when management supports the proposals but ISS recommends voting against the proposal. We find that the recommendations of proxy advisors have a strong influence on the securities lending market around proxy voting.

We find that the recall in equity lending supply is economically important in determining the subsequent vote outcome. Votes cast against management's recommendation and votes cast against a proposal are positively related to a recall in lending supply. If proposals are sponsored by shareholders or proposals that are opposed by ISS, then we find they are likely to get fewer FOR votes. The outcome of the result is more likely to be close when lending supply is recalled

and ISS opposes the proposal. The results show that beneficial owners of securities recall lending supply ahead of the proxy record date in order to exercise their vote. In doing so, institutional investors reveal both that corporate governance is important and that the proxy process is an important channel for corporate governance.

To address concerns related to empty voting, we also examine changes in borrowing demand around the time of a vote. There is a statistically significant increase in demand around the time of the record date. However, the increase in demand is economically small compared to the sharp reduction in supply. We find that stronger corporate governance is associated with a larger lending supply, perhaps because it alleviates shareholders' concerns when lending. Stronger governance is negatively related to borrowing demand. This finding is consistent with the hypothesis that better governance deters shorting activities. Lastly, we find no relation between borrowing demand and vote outcome. These results on borrowing demand and proxy voting imply that empty voting is likely to be limited.

In contrast to the activity around a proxy vote's record date, we find that the large increase in loan fees around the time of the ex-dividend record date is driven by an increase in borrowing demand for cash flow reasons. During the financial crisis of 2008, activity in the securities lending market decreased as demand for borrowing decreased and institutions cut back on their lending programs. Lending fees also experienced large reductions during the financial crisis.

Our results suggest policy makers should address several issues related to proxy voting, including the need for investors to learn about proxy items before the record date so that they can decide whether to lend their shares or not. However, our results also suggest that the use of

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borrowed shares for voting purposes is limited. It is quite possible that this activity has been reduced in recent years because of the publicity related to empty voting.

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### Figure 1 Equity Lending Market Activity Around Record Date

The figure presents a daily plot of lending supply, on loan, utilization, and fees for the period (-30,+30) days around 7,415 record dates (day t=0 is the proxy voting record date) during 2007-2009. *SUPPLY* is the percentage of market capitalization available to lend; *ON LOAN* is the percentage of market capitalization actually borrowed; *UTILIZATION* is the ratio of *ON LOAN* to *SUPPLY* expressed in percentage; *FEE* is the annualized borrowing fee expressed in basis points. Average supply, on loan, utilization, and fees are presented for the full sample, and also for stocks with high and low utilization. We define High (Low) Util. as stocks with utilization in the top (bottom) quartile in a given month.



## Figure 2 Fitted Plot of Equity Lending Supply, On Loan and Utilization

The figure presents fitted plots of loan fees versus equity lending supply, on loan, and utilization. *SUPPLY* is the percentage of market capitalization available to lend; *ON LOAN* is the percentage of market capitalization actually borrowed; *UTILIZATION* is the ratio of *ON LOAN* to *SUPPLY* expressed in percentage; *FEE* is the annualized borrowing fees expressed in basis points. Each plot is based on a fitted polynomial of winsorized (1%, 99%) record date observations. *FEE* starts to increase even at low levels of utilization.



#### Figure 3 Equity Lending Market Activity around Ex-Dividend Dates

The figure presents a daily plot of lending supply, on loan, utilization and loan fees for the period (30,+30) for 14,278 dividend ex-dividend dates (day t=0 is based on settlement taking place on exdividend date) during the years 2007-2009. *SUPPLY* is the percentage of market capitalization available to lend; *ON LOAN* is the percentage of market capitalization actually borrowed; *UTILIZATION* is the ratio of *ON LOAN* to *SUPPLY* expressed in percentage; *FEE* is the annualized borrowing fees expressed in basis points. In the top panel *SUPPLY* is shown on the left-hand axis and *UTILIZATION* is shown on the right-hand axis. In the bottom panel, the left-hand axis shows *ON LOAN* and the right-hand axis shows *FEE*.h





# Table 1Equity Lending and Firm Characteristics

The table presents characteristics of the equity lending market from 2007 to 2009 for Russell 3000 firms. Panel A presents equity lending characteristics. *SUPPLY* is the percentage of market capitalization available to lend; *ON LOAN* is the percentage of market capitalization actually borrowed; *UTILIZATION* is the ratio of *ON LOAN* to *SUPPLY* expressed in percentage; *FEE* is the annualized borrowing fee expressed in basis points; and *SPECIAL* is the fraction of stocks that have a borrowing fee greater than 100 basis points. In Panel B we show the yearly averages of the equity lending variables.

Panel A: Equity Lending Characteristics									
	Obs.	Mean	Median	Std Dev	Min	Max			
SUPPLY	8,411	22.48%	23.39%	11.93%	0.01%	74.38%			
ON LOAN	8,411	3.44%	1.84%	4.28%	0.00%	42.01%			
UTILIZATION	8,411	14.66%	9.06%	15.69%	0.01%	99.70%			
FEE	8,411	35.11	6.60	124.28	-39.06	745.48			
SPECIAL	8,411	0.10	0.00	0.30	0.00	1.00			

### Panel B: Average Equity Lending Over Time

	2007	2008	2009
SUPPLY	23.27%	22.37%	22.43%
ON LOAN	4.43%	3.36%	2.49%
UTILIZATION	18.17%	14.26%	10.87%
FEE	56.81	24.26	33.92
SPECIAL	0.13	0.09	0.06

# Table 2 Descriptive Statistics – Voting Proposals

The table presents descriptive statistics for 56,220 proxy proposals in the 2007-2009 period. *VOTES CAST* is the ratio of the total of FOR, AGAINST, and ABSTAIN votes relative to shares outstanding. *FOR, AGAINST, and ABSTAIN* are, respectively, the total number of votes in favor of the proposal, against, and votes that abstained. *SH Sponsored* is a dummy equal to one if shareholders sponsor the proposal, the remaining proposals are sponsored by management. *GOV41* is the internal governance measure from Aggarwal et al. (2010). Control variables comprise institutional ownership (*INST*), concentration of institutional ownership as measured by the Herfindahl index (*INST CONC*), the natural logarithm of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), a small stock dummy (*PRICE*<\$5), return on assets (*ROA*), and quarterly stock market return (*RETURN*).

	Mean	Median	Std Dev	Min	Max
VOTES CAST	86.44%	88.63%	10.04%	0%	100%
FOR	90.97%	97.15%	16.01%	0%	100%
AGAINST	7.54%	2.56%	13.13%	0%	100%
ABSTAIN	0.42%	0%	2.07%	0%	57.14%
SH Sponsored	3.47%	0%	18.30%	0%	100%
GOV41	0.68	0.68	0.09	0.32	0.93
INST	0.71	0.76	0.24	0.06	1.00
INST CONC	0.07	0.05	0.06	0.02	0.40
SIZE	7.21	6.94	1.80	0.56	13.07
BM	0.71	0.51	0.78	-0.45	5.35
TURNOVER	1.17	0.84	1.11	0.04	6.65
SPREAD	0.00	0.00	0.01	0.00	0.04
PRICE<\$5	0.10	0.00	0.30	0.00	1.00
ROA	0.01	0.04	0.15	-0.90	0.24
RETURN	-5.62%	-3.62%	23.70%	-67.21%	65.45%

# Table 3 Abnormal Lending Supply and Borrowing Demand around Proxy Voting Record Dates

The table presents results from an event study on the effect of proxy voting on equity lending supply and borrowing demand in the period (-30,+30) days around 7,415 voting record dates (voting record date is t=0). Lending supply is the percentage of market capitalization available to lend; and borrowing demand is measured as the dollar amount on loan relative to market capitalization. *RDATE* is a dummy equal to one on the record date. Firms are classified as having *Low ROA* or *Low RET* if their return is below the 2-digit SIC industry median for that quarter. Control variables comprise institutional ownership (*INST*), concentration of institutional ownership as measured by the Herfindahl index (*INST CONC*), the natural logarithm of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), and a small stock dummy (*PRICE*<\$5). All regressions include quarterly time-effects and robust standard errors clustered at the firm-level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

	L	ending Supply	y	Borrowing Demand			
	(1)	(2)	(3)	(4)	(5)	(6)	
RDATE	-1.672***	-1.336***	-1.575***	0.075***	0.066***	0.052**	
	[0.038]	[0.039]	[0.051]	[0.013]	[0.016]	[0.025]	
RDATE x Low ROA		-0.862***			0.024		
		[0.070]			[0.028]		
RDATE x Low RET			-0.206***			0.049	
			[0.079]			[0.047]	
Low ROA		-0.28			0.157		
		[0.181]			[0.107]		
Low RET			0.125			0.224***	
			[0.113]			[0.064]	
GOV41	3.880***	3.914***	3.878***	-2.325***	-2.344***	-2.328***	
	[1.178]	[1.178]	[1.178]	[0.697]	[0.696]	[0.696]	
INST	28.096***	28.195***	28.086***	5.333***	5.280***	5.313***	
	[0.441]	[0.446]	[0.441]	[0.259]	[0.264]	[0.260]	
INST CONC	-51.557***	-51.455***	-51.498***	-4.270***	-4.325***	-4.162***	
	[2.261]	[2.257]	[2.266]	[0.718]	[0.711]	[0.719]	
SIZE	-0.727***	-0.740***	-0.726***	-0.718***	-0.711***	-0.715***	
	[0.068]	[0.068]	[0.068]	[0.039]	[0.039]	[0.039]	
BM	1.139***	1.181***	1.124***	0.004	-0.019	-0.024	
	[0.150]	[0.154]	[0.152]	[0.084]	[0.083]	[0.085]	
TURNOVER	0.049	0.049	0.049	1.110***	1.110***	1.108***	
	[0.064]	[0.064]	[0.064]	[0.048]	[0.048]	[0.048]	
SPREAD	-0.203	-0.222*	-0.203	-0.312***	-0.301***	-0.312***	
	[0.125]	[0.124]	[0.125]	[0.047]	[0.047]	[0.047]	
PRICE<\$5	-2.239***	-2.191***	-2.251***	-0.614***	-0.639***	-0.636***	
	[0.260]	[0.261]	[0.260]	[0.130]	[0.131]	[0.130]	
Constant	10.105***	10.185***	10.050***	6.994***	6.949***	6.895***	
	[0.922]	[0.921]	[0.924]	[0.515]	[0.518]	[0.516]	
Adj. R-squared	0.67	0.67	0.67	0.28	0.28	0.28	

# Table 4 Abnormal Fees Around Proxy Voting Record Date

The table presents results from an event study on the effect of proxy voting on equity lending fees in the period (-30,+30) days around 7,415 voting record dates (voting record date is t=0). *RDATE* is a dummy equal to one on the record date. Firms are classified as having *Low ROA* or *Low RET* if their return is below the 2-digit SIC industry median for that quarter. Control variables comprise institutional ownership (*INST*), concentration of institutional ownership as measured by the Herfindahl index (*INST CONC*), the natural logarithm of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), and a small stock dummy (*PRICE*<\$5). All regressions include quarterly time-effects and robust standard errors clustered at the firm-level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

	(1)	(2)	(3)
RDATE	1.946***	1.488***	0.992
	[0.389]	[0.484]	[0.834]
RDATE x Low ROA		1.151	
		[0.793]	
RDATE x Low RET			2.034
			[1.659]
Low ROA		-9.451**	
		[4.309]	
Low RET			0.782
			[3.018]
GOV41	18.24	19.346	18.232
	[29.683]	[29.754]	[29.689]
INST	-137.044***	-133.901***	-137.115***
	[15.661]	[15.548]	[15.659]
INST CONC	272.581***	275.878***	272.973***
	[55.227]	[55.276]	[55.233]
SIZE	-7.969***	-8.379***	-7.959***
	[1.366]	[1.422]	[1.363]
BM	-5.904	-4.542	-6.005
	[5.391]	[5.472]	[5.423]
TURNOVER	22.210***	22.187***	22.205***
	[2.092]	[2.085]	[2.092]
SPREAD	-12.690***	-13.297***	-12.694***
	[3.500]	[3.493]	[3.499]
PRICE<\$5	50.750***	52.266***	50.669***
	[10.897]	[10.875]	[10.963]
Constant	156.719***	159.451***	156.375***
	[25.929]	[26.059]	[25.810]
Adj. R-squared	0.11	0.11	0.11

# Table 5 Abnormal Changes in Lending Supply and Borrowing Demand for Non-Routine Proposals

The table presents results from an event study on the effect of proxy voting on the daily percentage change in equity lending supply during the (30,+30) days period for 9,268 non-routine proposals. Voting record date is t=0. *RDATE (-9,0)* is a dummy equal to one on the record date and nine prior days; *RDATE (1,10)* is a dummy equal to one on the ten days post record date. *DMERGER* is a record-date dummy equal to one for merger proposals. *DISS* is dummy equal to one if management is in favor and ISS is against the proposal. *DSH* is a dummy equal to one if the proposal is sponsored by shareholders. *GOV41* is the governance index from Aggarwal et al. (2010). Control variables (not shown) include institutional ownership (*INST*), concentration of institutional ownership (*INST CONC*), natural log of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), and a small stock dummy equal to one if stock price is less than \$5 (*PRICE*<\$5). All regressions include quarterly time-effects and robust standard errors clustered at the firm-level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

	Change in Lending Supply					Change in Borrowing Demand				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
RDATE (-9,0)	-0.065***				-0.067***	0.010***				0.010***
	[0.008]				[0.007]	[0.003]				[0.003]
RDATE (1,10)	0.108***				0.114***	-0.014***				-0.013***
	[0.006]				[0.006]	[0.003]				[0.003]
RDATE (-9,0) x DMERGER		-0.074***			0.001		0.016*			0.006
		[0.023]			[0.024]		[0.009]			[0.010]
RDATE (1,10) x DMERGER		0.075***			-0.031		0.014			0.027**
		[0.021]			[0.022]		[0.013]			[0.013]
RDATE (-9,0) x DISS			-0.106***		-0.033***			0.002		-0.009**
			[0.012]		[0.012]			[0.004]		[0.005]
RDATE (1,10) x DISS			0.094***		-0.012			-0.012***		0.001
			[0.010]		[0.010]			[0.004]		[0.004]
RDATE (-9,0) x DSH				-0.038***	0.036***				0.012*	0.001
				[0.014]	[0.012]				[0.006]	[0.005]
RDATE (1,10) x DSH				0.081***	-0.027***				-0.018***	-0.019**
				[0.010]	[0.008]				[0.005]	[0.008]

#### Table 6 Voting Outcome

The table presents results from regressions on up to 56,220 proposals. The dependent variable is the natural log of the ratio of the number of *FOR* votes to the number of *AGAINST* votes, *VOTE RATIO*, the percentage of votes against management, *AGAINST MGT*, or if the proposal is closely contested within 5%, *CLOSE. VOTE RATIO* and *AGAINST MGT* are based on OLS regressions and *CLOSE* uses a probit model. The independent variables are *ALending Supply* and *AOn Loan*, which are the ten-day change prior to the proxy record date. *DISS* is dummy equal to one when management is in favor and ISS is against the proposal. *DMERGER* is a dummy equal to one for merger proposals. *DSH* is a dummy equal to one if shareholders sponsor the proposal. *GOV41* is the internal governance measure from Aggarwal et al. (2010). Control variables include institutional ownership (*INST*), concentration of institutional ownership as measured by the Herfindahl index (*INST CONC*), the natural logarithm of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), a small stock dummy (*PRICE<\$5*), and prior quarter return (*RETURN*). All regressions include monthly time-effects and robust standard errors clustered at the firm and quarterly level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

	VOTE RATIO	AGAINST MGT	CLOSE
∆Lending Supply	0.464***	-2.916***	1.587
	[0.143]	[0.643]	[2.277]
∆On Loan	-0.045	0.262	0.249
	[0.045]	[0.182]	[0.196]
$\Delta$ Lending Supply x DISS	-0.074	5.304	-5.086**
	[0.402]	[4.513]	[2.402]
∆On Loan x DISS	0.019	-0.52	0.069
	[0.078]	[0.690]	[0.313]
ΔLending Supply x DMERGER	4.714***	-5.909	
	[1.162]	[17.205]	
∆On Loan x DMERGER	0.305	-1.907	
	[0.301]	[1.591]	
$\Delta$ Lending Supply x DSH	-2.324***	-1.124	-0.594
	[0.633]	[9.276]	[2.657]
∆On Loan x DSH	0.12	0.435	0.004
	[0.085]	[0.840]	[0.245]
DISS	-2.574***	27.733***	2.618***
	[0.097]	[0.958]	[0.565]
DMERGER	1.078***	-4.329***	
	[0.133]	[1.237]	
DSH	-4.146***	29.066***	4.800***
	[0.102]	[0.775]	[0.404]
GOV41	0.278**	-5.649***	-0.392
	[0.122]	[1.231]	[0.791]
INST	-0.253***	3.214***	1.683***
	[0.073]	[0.706]	[0.381]
INST. CONC.	2.698***	-6.851***	-5.438***
	[0.572]	[1.705]	[1.624]
Adjusted R-squared	0.27	0.29	0.36

# Table 7Voting Outcome and Proposal Type

The table presents results from OLS regressions where the dependent variable is the percentage of votes against management, AGAINST MGT. The first column presents results for all proposals. Columns two to seven present results for proposals relating to just routine business matters, directors, antitakeover provisions (ATP), mergers, firm capitalization (Capital), and compensation (Comp) respectively. The independent variables are  $\Delta Lending$  Supply and  $\Delta On Loan$ , which are the ten-day change prior to the proxy record date. DISS is dummy equal to one when management is in favor and ISS is against the proposal. DSH is a dummy equal to one if shareholders sponsor the proposal. GOV41 is the internal governance measure from Aggarwal et al. (2010). Control variables include institutional ownership (INST), concentration of institutional ownership as measured by the Herfindahl index (INST CONC), the natural logarithm of market capitalization (SIZE), book to market (BM), stock turnover (TURNOVER), bid-ask spread (SPREAD), a small stock dummy (PRICE<\$5), and prior quarter return (RETURN). All regressions include monthly time-effects and robust standard errors clustered at the firm and quarterly level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

	ALL	Routine	Director	ATP	Merger	Capital	Comp
$\Delta$ Lending Supply	-2.960***	0.482	-3.428***	-8.646	-17.549	1.308	-6.535***
	[0.650]	[1.090]	[0.735]	[35.524]	[15.452]	[5.232]	[1.955]
∆On Loan	0.26	0.175	0.245	0.058	-1.166	-0.182	0.643**
	[0.183]	[0.384]	[0.243]	[1.379]	[1.643]	[1.008]	[0.260]
ΔLending Supply x DISS	5.175	5.108	16.579	-76.374	55.49	4.772	8.061
	[4.543]	[5.636]	[11.627]	[60.249]	[66.136]	[23.002]	[4.967]
$\Delta On \ Loan \ x \ DISS$	-0.516	-0.64	0.79	14.556**	8.199	2.414	-0.23
	[0.691]	[2.084]	[0.811]	[6.795]	[24.297]	[1.514]	[1.120]
∆Lending Supply x DSH	-0.833	38.494	-1.945	30.725		-28.708	13.423
	[9.316]	[50.970]	[11.011]	[39.597]		[22.791]	[13.323]
∆On Loan x DSH	0.439	2.451**	-0.317	-0.354		-5.336***	0.106
	[0.841]	[1.049]	[1.329]	[1.607]		[1.536]	[0.460]
DISS	27.707***	48.966***	19.466***	19.167***	17.923*	20.383***	19.190***
	[0.960]	[0.993]	[1.358]	[4.371]	[9.517]	[4.347]	[0.653]
DSH	29.061***	31.603***	29.876***	42.132***		24.528***	27.186***
	[0.773]	[4.308]	[1.397]	[1.876]		[4.114]	[0.977]
GOV41	-5.626***	-0.583	-7.416***	12.169	-7.899	19.391***	-0.024
	[1.224]	[2.403]	[1.427]	[8.420]	[12.880]	[5.918]	[1.396]
INST	3.232***	0.033	3.309***	5.684	-3.962	4.281	4.988***
	[0.704]	[0.435]	[0.743]	[9.168]	[3.800]	[3.530]	[1.196]
INST. CONC.	-6.870***	-6.119**	-3.844*	-6.067	-12.757	-18.759***	-42.328***
	[1.686]	[2.849]	[2.069]	[14.635]	[29.685]	[6.376]	[4.451]
Observations	55,240	6,899	42,393	355	145	578	4,223
Adj R-squared	0.29	0.59	0.16	0.74	0.24	0.31	0.41

# Table 8Equity Lending Market around Dividend Record Date and the Financial Crisis of 2008

The table presents results from an event study on the effects of proxy voting on the equity lending market in the period (-30,+30) days around 7,415 voting record dates (record date is at t=0) during the 2007-2009 period. The independent variables are equity lending supply, borrowing demand and borrowing fee. *RDATE* is a dummy equal to one on the voting record date. *GOV41* is the internal governance measure from Aggarwal et al. (2010). In Panel A we investigate the robustness of results to the inclusion of dividend record dates. *DIV DUMMY* is a dummy variable equal to one if the firm has paid a dividend in the past three years. *DIV RDATE* is a dummy variable equal to one for the 326 dividend record dates in the window (-1,+1) around proxy voting date. In Panel B we examine the equity lending market post financial crisis. *LEHMAN* is a dummy equal to one for all days in 2008 on or after 15<sup>th</sup> September, and *RDATE x LEHMAN* is dummy equal to one of the voting record date falls in this period. Control variables (not shown) include institutional ownership (*INST*), concentration of institutional ownership (*INST CONC*), the natural log of market capitalization (*SIZE*), book to market (*BM*), stock turnover (*TURNOVER*), bid-ask spread (*SPREAD*), a small stock dummy equal to one if stock price is less than \$5 (*PRICE*<\$5), and a cumulative five day return (*RETURN*). Dividend record date regressions include quarterly time effects. All regressions include robust standard errors clustered at the firm-level, presented in parentheses. \*\*\* (\*\*,\*) indicates significance at the 1% (5%, 10%) level.

		Р	anel A: Divide	end Record Dat	æ		Pane	l B: Financial	Crisis
	Len Sup	ding oply	Borre	owing nand		Fee	Lending Supply	Borrowing Demand	Fee
RDATE		-1.659***		0.060***		1.340***	-1.634***	0.096***	2.170***
		[0.039]		[0.015]		[0.394]	[0.044]	[0.017]	[0.421]
RDATE X LEHMAN							-0.073 [0.048]	-0.044* [0.026]	-1./63** [0.738]
LEHMAN							-0.698**	-1.102***	-40.493***
	1 003***	1 001***	0 179	0 179	-/1 389	-/ 388	[0.347]	[0.198]	[9.017]
	[0.219]	[0.219]	[0.129]	[0.129]	[4.902]	[4.902]			
DIV RDATE	-1.358***	-0.187	0.596***	0.554**	5.459	4.513			
	[0.315]	[0.325]	[0.212]	[0.216]	[6.084]	[6.195]			
GOV41	3.566***	3.567***	-2.355***	-2.355***	-43.455	-43.456	4.210***	-2.276***	-49.346*
	[1.171]	[1.171]	[0.692]	[0.692]	[29.524]	[29.524]	[1.182]	[0.697]	[29.787]
Adj. R-squared	0.67	0.67	0.29	0.29	0.29	0.06	0.67	0.28	0.05