



The market for shareholder voting rights around mergers and acquisitions: Evidence from institutional daily trading and voting[☆]

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ARTICLE INFO

Article history:

Received 24 September 2008

Accepted 25 September 2008

Available online 17 October 2008

JEL classifications:

G34

Keywords:

Shareholder voting rights

Institutions

Trading

ABSTRACT

This paper explores the market for voting rights and shareholder voting around 350 mergers and acquisitions between 1999 and 2005 by examining institutional-investor trading and voting outcomes. Our results show institutions in aggregate buy shares and hence voting rights before merger record dates. This trading is not related to proxies for merger arbitrage or trading around merger announcements, and thus is not simply a continuation of the latter. Trading and buying before record dates are positively related to voting turnout and negatively related to shareholder support of merger proposals. We explore several possible interpretations of these results.

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A fundamental tenant of shareholder governance is the right of shareholders to vote on key managerial decisions such as mergers and acquisitions. Recent evidence indicates investors may acquire voting rights, with or without the accompanying cash-flow rights, to try to influence the outcome of merger proposals (Hu and Black, 2007). In addition to voting, shareholders can express their preferences by selling and buying shares; i.e. the Wall Street walk (Admati and Pfleiderer, 2005; Edmans, 2007; Gopalan, 2006; Parrino et al., 2003). Given that investors generally have both mechanisms at their disposal, it seems reasonable to assume that voting with one's hand and voting with one's feet interact with each other. Having the ability to buy and sell shares should affect how one votes, and the availability of voting rights or lack thereof should affect one's willingness to hold shares.

In this paper, we investigate whether a market exists for shareholder voting rights around mergers and acquisitions, and how this market relates to voting outcomes. We focus on institutional investors, which beneficially own more than half of all shares outstanding in the market and which typically have a fiduciary duty to vote shares. We analyze institutions' daily trading using institutional trading data from a leading trade execution-quality measurement service provider around 350 mergers and acquisitions that required shareholders' approval between 1999 and 2005. We ask two central questions. First, how do institutional investors trade around merger record dates? Do institutions retain previously established shareholder voting rights or are voting rights reallocated through trading after deal announcements but before or on record dates? Is there a spot market for shareholder voting rights? Do institutions buy shares in acquiring firms when the market response to mergers is positive and sell shares when the market response to mergers is negative? Second, how is the market for shareholder voting rights related to investor voting on

[☆] The authors have greatly benefited from helpful comments from Bernard Black, Cathy Dixon, Alex Edmans, Wei Jiang, Harley Ryan, and seminar participants at the Shareholders and Corporate Governance Conference at Oxford University and the Conference on Corporate Control, Mergers, and Acquisitions. The authors gratefully acknowledge a grant from Yale School of Management's Millstein Center for Corporate Governance and Performance, and research assistance from Eric Chan and Jing Mai. Hu acknowledges support from a Babson Faculty Research Fund award.

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merger proposals? Is shareholder support higher when the market response to mergers is positive and lower when the market response is negative?

We document a market for voting rights after deal announcements but before or on record dates. Our results show that in aggregate institutions are net buyers of shares and hence voting rights around record dates. We find no relation between record-date trading and common measures of deal quality, such as gains to bidding and target firms. We find no evidence that record-date trading is related to proxies for merger arbitrage. We also do not find relations between trading around record dates and trading around merger announcements, suggesting that record-date trading is uniquely related to the pursuit of shareholder voting rights.

Our results show institutional trading and buying around record dates are positively related to voting turnout and negatively related to shareholder support of merger proposals. Because our data do not let us identify specific institutions' trading and voting behaviors, we cannot definitively attribute causality among trading, voting turnout, and shareholder support for merger proposals. As such, we identify and explore several possible interpretations of the observed relations. First, certain deals, such as those that are contentious and hence likely to receive lower shareholder support, may be characterized by particular trading and voting behavior. For example, controversial mergers may entail more proxy solicitation, thereby creating unusually active markets in voting rights and causing higher than average voting turnout. Consistent with this interpretation, we find the market for shareholder voting right is active in contentious deals.

Second, institutional investors that hold equity stakes in both bidders and targets may try to maximize the value of their overall holdings by trading around record dates (Harford et al., 2007; Matvos and Ostrovsky, 2008). Investors may buy bidder shares at post-announcement depressed prices to obtain voting rights. They may then vote for merger proposals to increase the probability that proposals pass so that they are able to gain on target shares. Shareholder support overall, however, may be low, because not all bidder shareholders hold target shares. Shareholders with concentrated bidder stakes may vote against merger proposals. Our results show institutions that are overweighted in bidder shares are more likely to become net buyers of shares (and hence votes) before or on record dates.

Third, institutions may have incentives to buy shares of bidding firms for which they either manage or would like to manage pension-fund accounts (Ashraf et al., 2008; Black, 1998; Cohen and Schmidt, 2008; Romano, 2000). Buying shares would allow these funds to support management by voting for merger proposals. If funds preferentially buy bidder shares when mergers are contentious (and thus shareholder support is low overall), then buying bidder shares and being overweighted in bidder shares should be negatively related to shareholder support for merger proposals. If funds buy shares irrespective of shareholder sentiment, the relations should be positive. We find negative relationships. In addition, we find that institutions that are overweighted in bidder shares continue to hold shares after record dates. This finding suggests record-date buying is not exclusively related to acquiring voting rights, but may be related to other factors, such as bidding-firm price support or support for management on other issues.

Fourth, institutions may buy shares around record dates because they are bullish on firms' long-term prospects, even though mergers dissipate bidder-shareholder wealth on average. If merger announcements do not alter investors' views enough to change their desire to buy shares, they may buy additional shares at post-announcement depressed prices, but vote against merger proposals if they think they are misguided. If so, we would and do observe a negative relation between institutional-investor buying around record dates and shareholder support for merger proposals.

Finally, institutions may want to window dress; that is, appear vigilant or perhaps even activist. Doing so does not cost much: Neither Christoffersen et al. (2007) nor we find abnormal returns around record dates. It appears that shareholders do not pay very much for voting rights. Given institutions generally have an obligation to vote shares, it would appear voting against merger proposals should not impose additional costs. One important implication of these final two interpretations is that institutions should continue to hold shares after record dates. We find a negative relation between an institution being a net buyer before a record date and the probability of being a seller afterwards. We also find no relation between buying behavior before record dates and short interest in bidder shares. Institutions that buy votes retain their economic exposures after record dates.

Previous work in the area suggests that institutions typically exercise one of two options, they either "vote with their feet" by selling shares (Parrino et al., 2003) or "vote with their hands" for management (Gordon and Pound, 1993). The results of this study are important in that they highlight yet another option. Institutions gain voting rights around merger record dates by buying shares. This result suggests institutions may play a different role than what was previously understood—a role that can only be recognized by examining trading activity.

This research is related to recent work on institutional-investor trading around mergers and acquisitions. Gaspar et al. (2005) examine the relation between institutional-investor holding periods and returns to bidding and target firms. Chen et al. (2007) investigate the relation between the concentration of institutional-investor holdings and merger performance. Ashraf and Jayaraman (2007) classify institutions as either active or passive and then use quarterly 13-f data to evaluate how institution type affects trading behavior. In contrast to these studies, we examine institutions' trade-by-trade behavior before and after merger record dates to determine whether a market exists for shareholder voting rights. We then examine shareholder voting to explore the interaction between voting rights and shareholder support for merger proposals.

This study is closely related to recent work by Christoffersen et al. (2007) on voting rights in the equity-loan market around annual-meeting record dates. Shareholders can obtain voting rights in two ways. They can buy shares in the open (spot) market before or on the record date and either hold or sell them afterwards.³ In these instances voting and cash-flow rights are bundled. Alternatively, shareholders can borrow shares over the record date in the equity-loan market. In this case, voting and cash-flow rights are unbundled. Christoffersen et al. (2007) show that the equity-loan market hosts a market for shareholder voting rights,

³ Shareholders can also buy shares before record dates and hedge with options to limit economic exposure.

but find no evidence in the spot market. The authors interpret these findings as suggesting the spot market for shareholder voting rights is less efficient economically than the equity-loan market, because investors in the spot market must either retain economic exposure or pay transactions costs to sell shares. Here we extend their study by examining the spot market for bundled voting and cash-flow rights using institutional-investor trading data and voting data around merger proposals. We look at mergers, which typically are economically significant events, and examine the behavior of sophisticated market participants. In contrast to their results, we document a market for shareholder voting rights in the spot market, even though shareholders pay holding and trading costs.

The existence of a spot market for shareholder voting rights highlights a potentially important policy consideration. The market for voting rights suggests that at least some investors value these rights, as well as cash-flow rights. In the United States, institutions generally know record dates in advance, but retail investors do not. Thus certain classes of investors do not know whether voting rights are bundled with cash-flow rights when they trade. A question is then raised as to whether investors at large should be informed of record dates before they occur.⁴ Options other than the U.S. model exist. In the United Kingdom, for example, institutional and retail investors know in advance when record dates occur.⁵ As markets around the world integrate, it may become important for investors to understand such differences. It may also raise a potentially important policy question.

The results of this study shed light on how institutions react when faced with merger announcements. Because merger announcements generally are surprises and result in bidding-firm price drops, we observe trading in the face of wealth destruction that was not previously anticipated. Institutions usually are not able to sell shares before firms announce transactions, and thus must conserve client wealth after share prices have fallen. In addition, because institutions already own shares when mergers are announced, deals that require shareholder approval provide an opportunity for them to exercise voting power at minimal cost, which is different from many other opportunities for shareholder activism. Studying mergers and acquisitions of public firms that require shareholder approval provides a unique opportunity to study the role of shareholder trading and voting rights around important unanticipated corporate investment events.

The remainder of the paper is organized as follows. Section 1 covers the institutional background and the theoretical framework for the paper. Section 2 describes the data and preliminaries of the sample. Section 3 provides the basic results on the market for shareholder voting rights. We analyze shareholder voting and the link between trading and voting behavior in Section 4, while Section 5 summarizes and concludes.

1. Background

1.1. Institutional investors: monitoring and overseeing firms

It is now well understood that hostile takeovers and leveraged buyouts during the 1980s in the United States were accompanied by corporate governance changes, operational improvements, and substantial shareholder gains. Similarly, investments by activist investors with reputations for conflict were associated with senior executive turnover and improved performance.⁶ Notably absent from the corporate governance landscape during that period were institutional investors. The general lament from critics was that although institutional investors beneficially owned more than half of all shares outstanding in the market, they were passive monitors at best, “voting only with their feet” through share sales (Parrino et al., 2003). At worst, institutional investors “voted with their hands” to support managers in deals that on average destroyed value, dissipating vast wealth at many firms (Gordon and Pound, 1993).

Since that time, many changes have occurred in the corporate governance environment, including increased shareholder activism overall and a revitalized focus on corporate governance in the face of corporate scandals. The efficacy of institutional investors in corporate affairs, however, is still being debated. On the one hand, institutions hold over half the shares in most companies, and thus should have a strong economic interest to monitor managers' decisions and vote shares relative to more atomistic shareholders (Admati et al., 1994; Black, 1992; Jensen and Meckling, 1976; Shleifer and Vishny, 1986). Given their financial resources, one might expect institutions to be powerful and effective monitors. On the other hand, individual fund managers may hold relatively small stakes in publicly traded companies, particularly if they manage diversified portfolios. Investment managers may also lack the skills and experience to second guess firms' managements (Lipton and Rosenblum, 1991). Perhaps even more problematic, mutual-fund managers may face conflicts of interest if they hold shares in companies for which they either manage or would like to manage pension-fund accounts (Black, 1998; Romano, 2000). Similarly, public pension-fund managers may be reticent to intervene in the affairs of firms whose shares they hold, especially if the actions they feel are necessary to undertake are likely to be unpopular with politicians who award jobs and compensation (Romano, 1993). Fund managers may also face legal and institutional obstacles to activism (Black, 1990; Roe, 1990).

⁴ Unlike other types of information that may enhance price efficiency and may be proprietary and costly to generate, knowledge of record dates is but a regulatory artifact.

⁵ Firms in the U.K. must notify investors before record dates of record dates and the resolutions to be voted on in a “Notice of Meeting” (Section 376 of the Companies Act of 1985).

⁶ A rich literature suggests that large block shareholders vote shares and influence outcomes. Holderness and Sheehan (1985) and Barclay and Holderness (1991) find that block purchases of at least five percent of firms' shares are followed by increases in share value and abnormally high rates of top management turnover. Similarly, Mikkelson and Ruback (1985) show an increase in share price following 13-D filings of 5% ownership. More recently, Bhagat et al. (2004) find that long-term blockholders invested in firms whose value outperformed their peers. Focusing on the 1980s, Bethel et al. (1998) show that performance at firms improved after activist blockholders bought shares.

The effectiveness of institutional investors as monitors, therefore is unclear, and is an empirical question. There are a number of examples where institutional investors have evaluated firms, identified poor performers, and either expressed their concerns directly to management or helped coordinate the submission of shareholder proposals. Some studies find evidence of positive short-term market reactions to these activities. Carleton et al. (1998), for example, report positive abnormal returns in firms targeted by TIAA-CREF, while Strickland et al. (1996) observe positive returns around announcements of settlements between the United Shareholders' Association and target firms. Other studies find evidence of corporate changes over the longer term after institutional investors target firms. Del Guercio and Hawkins (1999), for example, report that firms targeted with shareholder proposals by prominent institutions sell and restructure assets. Cremers and Nair (2005) and Qiu (2006) find evidence that institutions—especially pension funds—play an important role in supporting value-enhancing acquisitions and avoiding bad ones.

A number of other studies, however find that institutional investors engage in little activism and even when they do, there is little or no link between activism and performance. Studies have failed to find a relation between CalPERS activism and performance (Anson et al., 2004; Nesbitt, 1994; Smith, 1996). The same holds for activism by other public pension funds (Del Guercio and Hawkins, 1999) and the United Shareholders Association (Strickland et al., 1996). Karpoff et al. (1996), Wahal (1996), and more recently Song and Szczyk (2003) find no evidence of improved long-run accounting or market performance after institutional investors target firms. On average, these studies find little evidence of wealth creation resulting from institutional-investor involvement.

Some institutional investors such as hedge funds, which face fewer regulatory requirements and conflicts of interest than traditional investors (Kahan and Rock, 2006), appear to be taking a more active role in corporate governance. Brav et al. (2008), Klein and Zur (2006), and Boyson and Mooradian (2007) conclude that hedge funds have been relatively successful in eliciting change in firms in the U.S., whereas Becht et al. (2006) find similar results from the activism of the Hermes Focus Fund in the U.K. Hedge funds, however, represent but a small percentage of institutional investors. There is a paucity of evidence on the more recent role of institutional investors generally, especially in situations where substantial shareholder value is at stake, such as in the case of mergers and acquisitions. What is not generally well understood is how institutional investors represent the financial interests of clients on whose behalf they own shares.

1.2. Shareholder approval of mergers and acquisitions

Shareholders in the United States have the right to vote on significant corporate decisions, including certain mergers and acquisitions.⁷ The listing rules of the three major stock exchanges mandate firms obtain shareholder approval if they plan to finance transactions with newly issued equity equal to or exceeding 20% of common shares outstanding before issuances.⁸ In some cases bidding firms bypass shareholder approval by financing acquisitions with cash or a combination of cash and securities. Nevertheless, many mergers and acquisitions require shareholder approval (Hsieh and Wang, 2007). In our sample, 350 firms sought shareholder approval for merger proposals between 1999 and 2005.

1.3. Shareholder notification of merger and acquisition information

Holders of shares on record dates get to vote on merger proposals. Fig. 1 details the timing of shareholders' approval of mergers and acquisitions. Firms establish record dates, meeting dates, and the contents of proxies and prospectuses according to the laws of the states in which they are incorporated.⁹ State law requires firms to disclose this information, but typically not before record dates have passed.¹⁰ Investors therefore are usually not notified directly by firms of meeting information before record dates. Under SEC Rule 14a-13 firms are required to notify broker and bank recordholders at least 20 business days before record dates (or less if impracticable) of this information,¹¹ but are not required to notify investors. Stock exchange rules require that firms notify the exchanges of record and meeting dates at least ten days before record dates,¹² but again do not require that firms tell shareholders more generally. Thus firms are not required to notify investors of record dates and the contents of proxies and prospectuses until after record dates. In our sample, we find that definitive proxies and prospectuses, which include final dates and specific merger information, were almost never filed before record dates.

Institutional investors, however, typically know record dates in advance, because they subscribe to shareholder voting services that gather record and meeting dates from the NYSE and other sources.¹³ In contrast, retail investors usually do not subscribe to

⁷ Rodrigues and Stegemoller (2007) show that acquisitions by publicly traded corporations of privately-held targets classified as "insignificant" by the SEC appreciably affect acquiring firms' market prices. However, because the SEC defines these transactions as insignificant, information like target financial statements remain undisclosed to the market. The authors argue that these transactions should be disclosed and perhaps voted on as well.

⁸ See New York Stock Exchange Listed Company Manual, Section 312.03 Shareholder Approval; American Stock Exchange Company Guide, Section 712 Acquisitions; NASDAQ Manual: Marketplace Rules, Section 4350 Qualitative Listing Requirements for Nasdaq Issuers Except for Limited Partnerships. State regulations on bidder shareholder approval usually are less stringent than those required by the three major stock exchanges.

⁹ Unlike record dates for dividends, merger record dates have no ex-dates. One reason that dividend and mergers may differ with respect to ex-dates is that mergers occur many days after record dates, providing ample time for firms and brokers to identify holders of record.

¹⁰ State law governs when firms must notify shareholders of matters to be presented at shareholder meetings. For example, sample Delaware by-laws suggest that a record date not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and shall not, with respect to stockholder meetings, be more than sixty days nor less than ten days before the date of such meeting, or, with respect to stockholder consents, more than ten days after the date upon which the resolution fixing the record date is adopted by the Board of Directors.

¹¹ Bidding firms must inquire as to how many copies of proxy statements bank and broker recordholders will need to pass through to the beneficial owners.

¹² See 401.02 Notice to the Exchange.

¹³ The NYSE publishes meeting and record dates in its *Weekly Bulletin*.

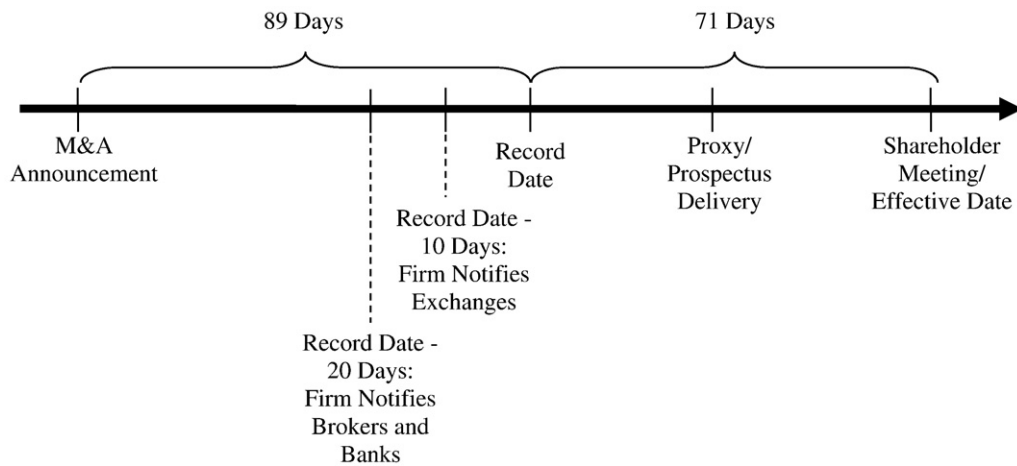


Fig. 1. Merger and acquisition shareholder approval process. The figure shows the timing of shareholder approval of mergers and acquisitions financed with newly issued equity equal to or exceeding twenty percent of common shares outstanding before issuances.

such services and therefore do not know record dates in advance. Because the gap between merger announcements and record dates is typically long, it is generally difficult to estimate when record dates will occur. In our sample period, record dates occur 89 days on average after merger announcements. Retail investors are therefore likely to be less informed about record dates relative to institutions during this period. Shareholder votes occur 71 days on average after record dates.

2. Data

2.1. Institutional trading data

We obtain transaction-level institutional trading data from the Abel/Noser Corporation, a leading trade execution-quality measurement service provider for institutional investors.¹⁴ The data are similar to those used by several other studies on institutional trading, such as Conrad et al. (2001), Goldstein et al. (forthcoming), Irvine et al. (2007), Jones and Lipson (2001), Keim and Madhavan (1995), and Lipson and Puckett (2007).

According to Abel/Noser, the data include all equity trading transactions by a large sample of institutions from January 1999 to December 2005. For each transaction, the data include the date of the transaction, the stock traded, the number of shares traded, the dollar principal traded, and whether it is a buy or sell. The data are provided to us under the condition that institutions' names are removed, although identification codes are provided enabling us to separately identify institutions. Sample institutions are either investment managers or plan sponsors. Investment managers are mutual-fund families such as Fidelity Investments, Putnam Investments, and Lazard Asset Management. Examples of plan sponsors include CalPERS, the Commonwealth of Virginia, and United Airlines.¹⁵

We merge the institutional trading data with the daily CRSP files from which we get information on share prices, number of shares outstanding, share volume, NYSE size breakpoints, and returns. Table 1 provides descriptive statistics of institution trading in the sample. In 1999 we have 329 institutions and these institutions accounted for 7.52% of the total dollar trading volume in the market. We place sample stocks into one of five size quintiles based on the NYSE size breakpoints. The institutions accounted for 4.87% of the trading volume among the smallest stocks (first quintile based on NYSE size breakpoints), and 7.63% of the trading volume among the largest stocks. The statistics are similar for the six subsequent years, as described in Table 1.

2.2. Sample of mergers and acquisitions

Our sample of mergers and acquisitions is taken from the Securities Data Company's (SDC) U.S. Mergers and Acquisitions database, Lexis/Nexis, and SEC Edgar filings. We select mergers and acquisitions with announcement and resolution dates between 1999 and 2005 that required bidding-firm shareholder approval with identified record dates for voting. To be included in the sample, the transaction value, defined as the total value of consideration paid by the bidder (excluding fees and expenses), must be at least \$1 million and CRSP must cover both the acquiring and the target firms. The bidder and target must be listed on one of the three major exchanges (NYSE, AMEX, and NASDAQ) to ensure that both acquiring and target firms follow the voting rules set by the exchanges. After collecting available acquisitions, we eliminate deals classified by SDC as divestitures, restructurings, liquidations,

¹⁴ We thank the Abel/Noser Corporation for generously providing us with the institutional trading data and Judy Maiorca for excellent technical assistance.

¹⁵ In unreported results, we analyze trading by institution type (investment managers and plan sponsors). The results of the differences between the types are sufficiently inconclusive that we focus on institutions in aggregate in remaining analyses.

Table 1
Summary statistics of the institutional trading data

Year	Number of institutions	Percent of total market trading volume					
		All stocks	Small stocks Q1	Q2	Q3	Q4	Large stocks Q5
1999	329	7.52	4.87	6.93	8.27	8.92	7.63
2000	321	7.19	3.83	6.10	7.90	8.05	7.35
2001	324	9.30	7.74	12.24	11.59	10.89	9.23
2002	342	10.49	10.13	12.51	12.18	11.65	10.49
2003	327	9.42	10.01	12.11	10.71	10.40	9.44
2004	300	8.81	8.59	10.85	9.35	9.68	8.91
2005	301	8.71	9.94	11.10	10.77	10.36	8.40

The table reports the summary statistics of the institutional investors and their trading activities. It reports the number of institutions in the sample. The table also reports the dollar value of trading volume by the institutions (maximum of buy vs. sell) in the sample as a percentage of dollar value of total market trading volume. The table shows the trading percentage for all stocks and for stocks in five size-quintiles based on NYSE breakpoints.

bankruptcies or reverse takeovers from the sample. We also exclude deals without any trading by any sample institution during the twenty-one days around the record date.

Table 2 displays the deal characteristics of the 350 mergers and acquisitions in the sample. The mean and median transaction values, where transaction value is the total market value of consideration (in millions), excluding fees and expenses, are \$4.4 billion and \$591 million, respectively. Mergers and acquisitions are large relative to bidder size: The transaction value divided by the average market value of equity of the bidder over the (-30, -11) day interval is 0.74. Almost 99% of transactions are friendly, defined as whether target management resisted or is faced with an unsolicited offer, and nearly 97% of deals are completed. In 3% of the cases, target firms have more than one bidder, and acquiring firms tender for shares of 2% of acquisitions. Ownership data from the Thomson Financial 13-f filings indicates that institutions own 56% of bidder shares at the end of the year before mergers are announced. Bidders are granted lockup options by targets in 16% of deals. Many deals are unrelated or diversifying acquisitions. In 25% of deals, the bidding and target firms have different two-digit SIC codes. In 30% of the cases, either the bidder or the target is in a regulated or financial industry (SIC 4900–4949 or 6000–6999).

The mean and median bid premiums, calculated as (offer price - PT)/PT, where PT is a target firm's average stock price over the (-30, -11) day interval, are 35.4% and 29.8%, respectively. The average cumulative abnormal returns for acquiring and target firms

Table 2
Summary characteristics of the mergers and acquisitions sample

Number of observations: 350							Num. of Obs.: 156.		
Deal characteristics		Deal types		Value impact		Time (days)		Voting results	
Transaction Value (\$M)	\$4422.4 [591.2]	Diversifying Deals (%)	25% [0]	Premium	35.4% [29.8%]	Duration	160.2 [138]	F/(F+A)	0.97 [0.99]
Relative size	0.74 [0.63]	Regulated industries (%)	30% [0]	ACAR	-6.3% [-5.9%]	Ann-Rec	89.1 [78]	F/(F+A+Ab)	0.95 [0.98]
Attitude (% Friendly)	0.989 [1]	Tender offers (%)	2% [0]	TCAR	13.4% [12.4%]	Rec-Eff	71.1 [49]	F/Shares	0.70 [0.71]
Deal status (% Success rate)	0.969 [1]	Competed Deals (%)	3% [0]	CCAR	-1.1% [0.15%]			Turnout	0.73 [0.74]
Institutional ownership	0.557 [0.578]	Acquirer lockup option (%)	16% [0]						

This table reports deal characteristics for the merger sample. The sample contains U.S. mergers and acquisitions between 1999 and 2005 that required bidding-firm shareholder approval and had identified record dates for voting. The sample sources are SDC, Lexis/Nexis, and SEC Edgar filings. To be included in the sample, the deal must be at least \$1 million with both the acquiring and the target firms covered by CRSP. We exclude deals without any trading by any sample institution during the twenty-one days around the record date. *Transaction Value* is the average market value of consideration, in millions (excluding fees and expenses). *Relative Size* is the average transaction value divided by bidder-firm equity. Bidder-firm equity is defined as the average market value of bidder equity over the (-30, -11) day interval. *Attitude*, measured as the percentage of friendly offers, is based on whether target management resisted or was faced with an unsolicited offer as determined by SDC. *Deal Status* is measured as the percentage of deals in which targets are successfully acquired. *Institutional ownership* is defined as the average percentage of shares owned by institutional investors relative to shares outstanding at the end of the year before a merger announcement. Institutional-investor ownership data are from the Thomson Financial 13-f filings. *Diversifying Deals* are those where the bidder and the target have different two-digit SIC codes. *Regulated Industries* is measured as the percentage of deals that either the bidder or the target competes in a regulated or financial industry. *Tender Offer* is the percentage of bids that are tender offers. *Competed Deals* is the percentage of deals that have more than one bidder for the same target. *Acquirer Lockup Option* is the percentage of deals where bidders are granted lockup options by targets. *Premium* is calculated as (offer price - P^T)/P^T, where P^T is a target firm's average stock price over the (-30, -11) interval. *ACAR* (*TCAR*) denotes the average five-day cumulative abnormal return of the acquiring (target) firms measured using the market model. The parameters for the market model are estimated over the (-210, -11) interval. The percentage synergy gain, *CCAR*, is defined as the average CAR for a value-weighted portfolio of bidder and target returns. The weights for bidder and target firms are based on the market values of equity ten days before announcements. *Duration* is measured as the length of time between the first formal announcement of the takeover and the announced resolution of the deal. We further report the days between announcement and the record date (*Ann-Rec*) and between the record date and deal effective date (*Rec-Eff*). The voting results are obtained from Institutional Shareholder Services (ISS). The table reports the percentage of "For" votes relative to "For" and "Against" (F/(F+A)), the percentage of "For" votes relative to "For", "Against" and "Abstain" (F/(F+A+Ab)), the percentage of "For" votes relative to shares outstanding (F/Shares), and *Turnout*, measured as the percentage of shares voted ("For", "Against" and "Abstain" votes) relative to shares outstanding. The table reports both mean and median (in brackets) values.

around the five-day (-2, +2) window when acquisitions are announced are -6.3% and 13.4%, respectively.¹⁶ The CRSP equally-weighted returns are used as the market returns and the parameters for the market model are estimated over the (-210, -11) day interval.¹⁷ Following Bradley et al. (1988), Hsieh and Wang (2007), and Moeller et al. (2004), we compute the percentage synergy gain as the abnormal announcement returns around an event window for a value-weighted portfolio of the bidder and target returns. The weights are based on the market value of equity ten days before merger announcements, and we use a five-day event window. The mean and median percentage synergy gains are -1.1% and 0.15%, respectively, and are statistically insignificant. These gains are consistent with the results reported in Matvos and Ostrovsky (2008) that show investors that hold both bidding and target firms have limited financial exposure.

Deals last 160 days on average, as measured from first formal announcements of takeovers to the announced resolutions. This period is comprised of 89 days from deal announcements to the record dates, and 71 days from record dates to the dates that deals became effective.

We obtained voting results from Institutional Shareholder Services (ISS). Shareholders overwhelmingly approve mergers and acquisitions. The percentage of “For” votes relative to “For” and “Against” ($F/(F+A)$) is 97%, whereas the percentage of “For” votes relative to “For”, “Against” and “Abstain” ($F/(F+A+Ab)$) is 95%. Many shares, however, are not voted. The percentage of “For” votes relative to shares outstanding ($F/Shares$) is 70%, and *Turnout*, measured as the percentage of shares voted (“For”, “Against”, and “Abstain” votes) relative to shares outstanding, is only 73%. These findings are consistent with voting results found in Bethel and Gillan (2002) and Burch et al. (2004).

We also obtained monthly short-interest data from the three major stock exchanges separately. We have NYSE short-interest data from January 1988 to December 2003, NASDAQ short-interest data from June 1988 to May 2003, and AMEX short-interest data from January 1995 to December 2003.

3. Market for shareholder voting rights

In this section, we explore how institutional investors trade around merger announcements and record dates to establish whether a market for shareholder voting rights exists in the spot market. Do institutions retain previously established voting rights or are shareholder voting rights reallocated through trading before or on record dates?

Fig. 2 shows institutional trading activity, including net buying, total trading, buying, and selling, before and after record dates. For each merger observation in the sample, we calculate for each of the ten days before (-10, -1) and ten days after (+1, +10) record dates a “raw” daily value of net buying (Buy-Sell), trading $((Buy+Sell)/2)$, buying, and selling of all institutions relative to total shares outstanding. We then compute a benchmark for each of the four variables by averaging the daily values of that variable for the twenty day period (-10 ... -1, and +1 ... +10). The four trading ratios, *Net Buying*, *Trade*, *Buy*, and *Sell*, are the “raw” daily value minus the average value, in percentages. These specifications allow us to normalize trading within period, while controlling for shares outstanding. Because trading volume around record dates is light compared to trading volume around merger announcements, it is important to use a benchmark of “normal” trading that does not include announcement-date trading.

Fig. 2 shows that institutions trade and buy more shares on average before and on record dates than afterwards, which suggests institutional investors buy shareholder voting rights. Panel A of Table 3 compares the average trading activity for the three-day (-2, 0) and five-day (-4, 0) periods before and including record dates, with the three-day (+1, +3) and five-day (+1, +5) periods after record dates. The results show that institutions trade and buy more actively before and on record dates than afterwards. The differences are statistically significant. We find no evidence of abnormally high selling by institutions around record dates.¹⁸

In Panels B and C of Table 3, we explore the determinants of institutional-investor trading around record dates. It is possible that record-date trading is related to how institutional investors perceive the value of deals. We rank the merger sample into three equal-size portfolios based on bidder and target shareholder gains (Panel B) and bidder shareholder gains (Panel C) when deals are announced, which are common measures of deal quality. We then measure institutional trading activity, including net buying, total trading, buying, and selling, five days before (-4, 0) and after (+1, +5) record dates for each of the three portfolios, and compare the best and worst shareholder-gain portfolios. The univariate results indicate that bidder shareholder gains are negatively related to net buying before record dates and unrelated to net buying after record dates. Shareholder bidder gains are positively related to trading, buying, and selling before record dates and negatively related to trading and buying after record dates. We explore this relation further in multivariate analyses reported in Table 5.

To identify whether a spot market for shareholder trading rights uniquely exists around record dates, we need to eliminate the possibility that heightened trading around record dates is but a continuation of abnormal trading around merger announcements.

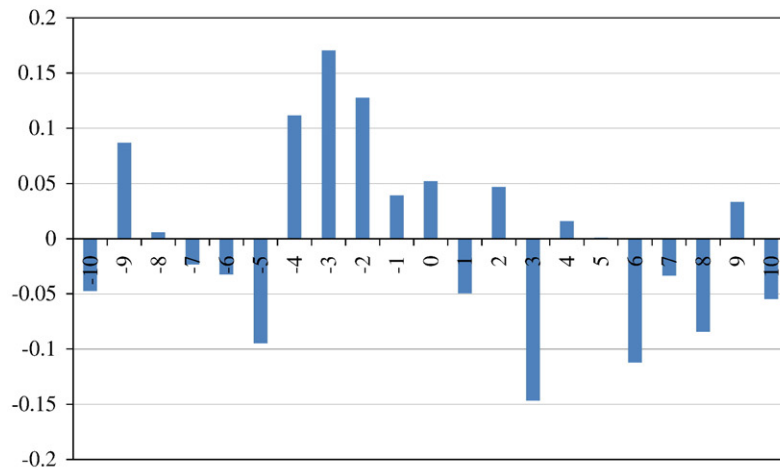
¹⁶ Because institutions know record dates in advance, we should not observe information leakage or run-ups before record dates. We therefore focus our analyses on three-day and five-day event windows. Kale et al. (2003) examine various event windows. In results not reported in the paper, we also measure abnormal returns using 11-day windows. The correlation between the 11-day window returns and five-day window returns is extremely high (0.94), indicating our results are robust.

¹⁷ Bidder and target abnormal returns calculated using the CRSP value-weighted returns as the market returns provide similar results.

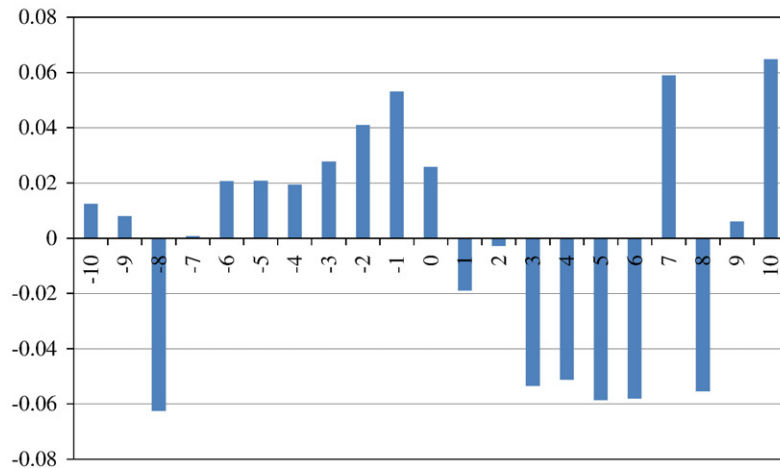
¹⁸ In unreported results, we analyze record-date trading by institution type (investment managers and plan sponsors). The results of the differences between the types are sufficiently inconclusive that we focus on institutions in aggregate in remaining analyses.

Fig. 3 shows institutional trading activity, including net buying, total trading, buying, and selling, before and after merger announcements. The figure shows institutions actively trade in the three days immediately following deal announcements, but trading activity falls thereafter. Panel A of Table 4 compares the average trading activity for the three-day (-3, -1) and five-day (-5, -1) periods

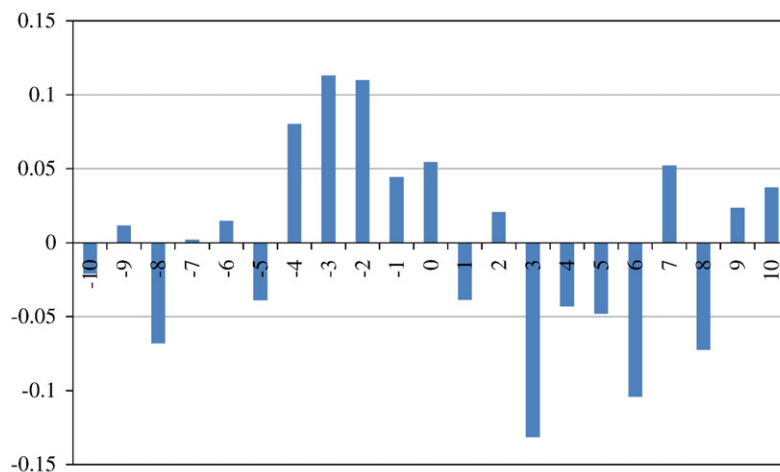
A. Net Buying



B. Trade



C. Buy



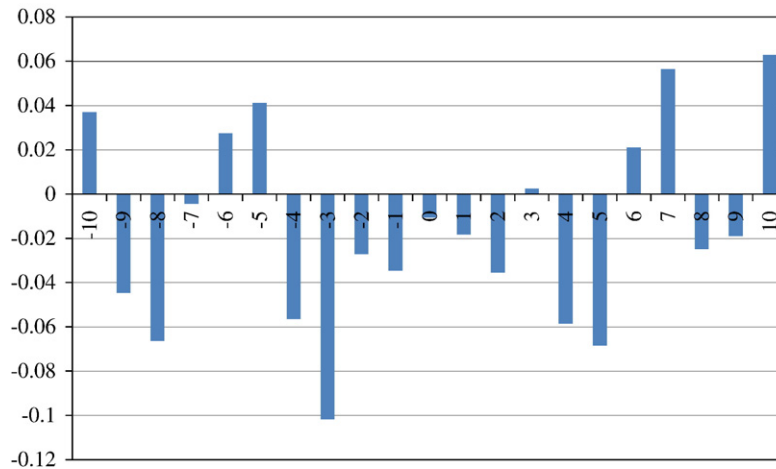
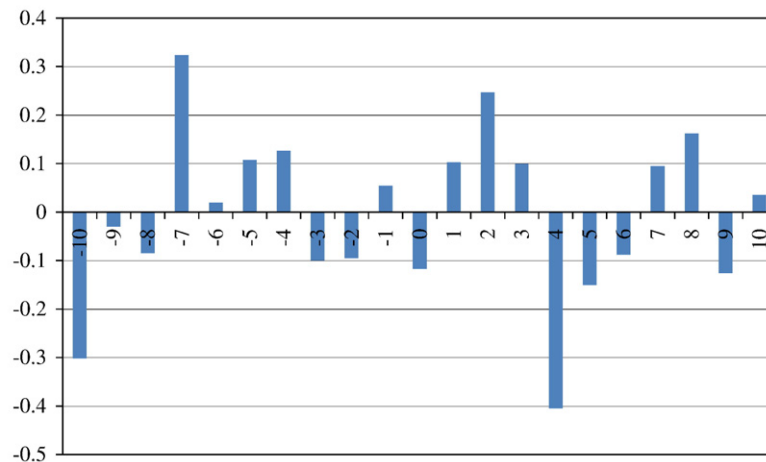
D. Sell**E. Stock Return**

Fig. 2. Institutional trading around record dates. The figure shows institutional trading activity, including net buying, total trading, buying, and selling, before and after record dates. For each merger observation in the sample, we aggregate the daily value of buy (sell) transactions of all institutions based on shares traded for the ten days before (-10, -1) and ten days after the record date (+1, +10) and further compute net buy (Buy-Sell) and trade ((Buy+Sell)/2). The four measures of trading activity (*Net Buy*, *Trade*, *Buy*, *Sell*) are defined as follows: For each measure, we compute the average daily trading activity for the twenty-day period (-10 ... -1, and +1 ... +10) relative to total shares outstanding. We report the difference in percentages between trading activity on each day (relative to shares outstanding) and the respective average daily trading activity. The last panel shows the daily returns of bidder stocks in the ten days before (-10, -1) and ten days after the record date (+1, +10). The stock returns are in percentages and are adjusted for 25 size and book-to-market benchmark returns.

before announcement dates, with the three-day (0, +2) and five-day (0, +4) periods after announcement dates. The results indicate that trading activity is high in the first three days following merger announcements. In Panels B and C of Table 4, we rank the merger sample into three equal-size portfolios based on bidder and target shareholder gains (Panel B) and bidder shareholder gains (Panel C) when deals are announced. We then measure institutional trading activity, including net buying, total trading, buying, and selling, five days before (-5, -1) and after (0, +4) announcement dates for each of the three portfolios, and compare the best and worst shareholder-gain portfolios. The univariate results indicate that shareholder gains are positively related to net buying, trading and buying before announcement dates and negatively related to net buying, trading, and buying after announcement dates. The results indicate that institutions buy shares after deal announcements in firms whose prices fall the most when deals are announced.

In Table 5 we further explore the determinants of institutional-investor trading in multivariate analyses, including whether it is related to deal characteristics and bidder attributes. Deal characteristics include *ACAR*, which is acquirer shareholder gains and is generally considered to be a measure of deal quality¹⁹; *Log(Transaction Value)*, defined as the logarithm of the total market value of consideration, in millions (excluding fees and expenses); *Relative Size*, which is the transaction value divided by the average market

¹⁹ Results based on CCAR (bidder + target) are similar.

Table 3
Institutional trading around record dates

	3-Day				5-Day			
	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel A. Full sample (N=350)								
Before	0.070	0.035	0.070	-0.020	0.108	0.036	0.081	-0.047
After	-0.050	-0.028	-0.053	-0.023	-0.022	-0.043	-0.054	-0.051
Difference	0.120	0.063	0.123	0.003	0.131	0.079	0.135	0.004
<i>p-value mean</i>	0.02 ^b	0.02 ^b	0.01 ^a	0.93	0.01 ^a	0.01 ^a	0.00 ^a	0.88
<i>p-value median</i>	0.01 ^a	0.06 ^c	0.04 ^b	0.20	0.04 ^b	0.19	0.01 ^a	0.22
	5 days before record date				5 days after record date			
CAR rank	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel B. Sorted on bidder and target shareholder gains (CCAR, N=350)								
Low CAR	0.092	-0.031	0.015	-0.094	0.020	-0.020	-0.010	-0.047
Medium	0.165	0.117	0.199	0.018	-0.078	-0.071	-0.110	-0.048
High CAR	0.070	-0.005	0.030	-0.064	-0.010	-0.039	-0.044	-0.057
Diff(L-H)	0.022	-0.026	-0.015	-0.031	0.030	0.019	0.034	0.010
<i>p-value mean</i>	0.88	0.45	0.68	0.54	0.53	0.48	0.29	0.81
<i>p-value median</i>	0.26	0.24	0.12	0.47	0.37	0.24	0.12	0.35
	5 days before record				Date 5 days after record date			
CAR rank	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel C. Sorted on bidder shareholder gains (ACAR, N=350)								
Low CAR	0.135	-0.044	0.024	-0.129	0.023	0.001	0.012	-0.029
Medium	0.181	0.048	0.138	-0.062	-0.112	-0.080	-0.136	-0.043
High CAR	0.012	0.077	0.083	0.049	0.017	-0.051	-0.043	-0.081
Diff(L-H)	0.123	-0.121	-0.059	-0.179	0.006	0.052	0.055	0.053
<i>p-value mean</i>	0.04 ^b	0.00 ^a	0.10 ^c	0.00 ^a	0.91	0.05 ^b	0.09 ^c	0.16
<i>p-value median</i>	0.03 ^b	0.08 ^c	0.02 ^b	0.08 ^c	0.34	0.22	0.33	0.19

The table reports institutional trading activity before and after record dates. For each merger observation in the sample, we aggregate the daily value of buy (sell) transactions of all institutions based on the shares traded for the ten days before (-10, -1) and ten days after the record date (+1, +10) and further compute net buy (Buy - Sell) and trade ((Buy + Sell) / 2). The four measures of trading activity (*Net Buy*, *Trade*, *Buy*, *Sell*) are defined as follows: For each measure, we compute the average daily trading activity for the twenty-day period (-10 ... -1, and +1 ... +10) relative to total shares outstanding. We compute the difference in percentages between trading activity on each day (relative to shares outstanding) and the respective average daily trading activity. Panel A compares the average trading activity for the three-day (-2, 0) and five-day (-4, 0) periods before and including record dates, with for the three-day (+1, +3) and five-day (+1, +5) periods after record dates. In Panel B, we rank the merger sample into three equal-size portfolios based on bidder and target shareholder gains (CCAR) and compute five-day before (-4, 0) and after (+1, +5) institutional trading activity for each portfolio. In Panel C, we rank the merger sample into three equal-size portfolios based on bidder shareholder gains (ACAR) and compute five-day institutional trading activity for each portfolio. We then compare the trading activity of high and low performers. *P*-values are reported in italics. *P*-value mean are the *p*-values from parametric *t*-tests, while *p*-value median are the *p*-values from non-parametric Wilcoxon signed rank tests. Statistical significance is indicated by *a* for 1% level, *b* for 5% level, and *c* for 10% level.

value of equity of the acquirer over the (-30, -11) day interval; *Stock%*, defined as the percentage that stock makes up of the total market value of consideration; *Attitude*, which equals one if a bid is friendly and zero otherwise; *Competed Deals*, which is one if more than one bidder bids for the same target, and zero otherwise; *Tender Offer*, which equals one if the bid is a tender offer, and zero otherwise; *Acquirer Lockup Option*, which equals one if the bidder is granted a lockup option by the target for the deal, and zero otherwise; *Diversifying Deals*, which is one if the bidder and target have different two-digit SIC codes, and zero otherwise; *Regulated Industry*, which is one if either the bidder or target competes in a regulated or financial industry (SIC 4900–4949 or 6000–6999), and zero otherwise; and *Institutional Ownership*, defined as the percentage of shares owned by institutional investors relative to shares outstanding at the end of year before a merger announcement. Bidder attributes include the market-to-book ratio, MV/BV, defined as the ratio of the market value of assets to the book value of assets; ROA, which is the ratio of operating income to total assets; *Leverage*, defined as the sum of long-term and short-term debt divided by book value of assets; and *stock-price Momentum*, which is the buy-and-hold return in the one-year period before a merger announcement, adjusted by 25 size and book-to-market portfolio returns.

We also examine in Table 5 whether heightened institutional trading around record dates is but a continuation of abnormal trading around merger announcements or results from merger arbitrage in bidder and target shares. If trading activity around record dates is a continuation of trading activity around announcement dates, we would expect positive relations between trading measures in bidder shares around merger announcements and trading measures in bidder shares around record dates. Alternatively, record-date trading may result from merger or risk arbitrage by institutional investors. Standard practice for merger arbitrage entails selling or shorting bidder shares and buying target shares shortly before or after merger announcements, and then reversing the trades later.²⁰ Chen et al. (2008) find that 57% of funds in 2006 were allowed to use short sales. Of those funds that were allowed to short, about ten percent actually did so, although many faced restrictions on leverage. It is therefore an empirical question as to whether record-date trading results from merger arbitrage. If they are related, we would expect trading (including

²⁰ For more detailed descriptions of merger or risk arbitrage, see Mitchell and Pulvino (2001) and Baker and Savasoglu (2002).

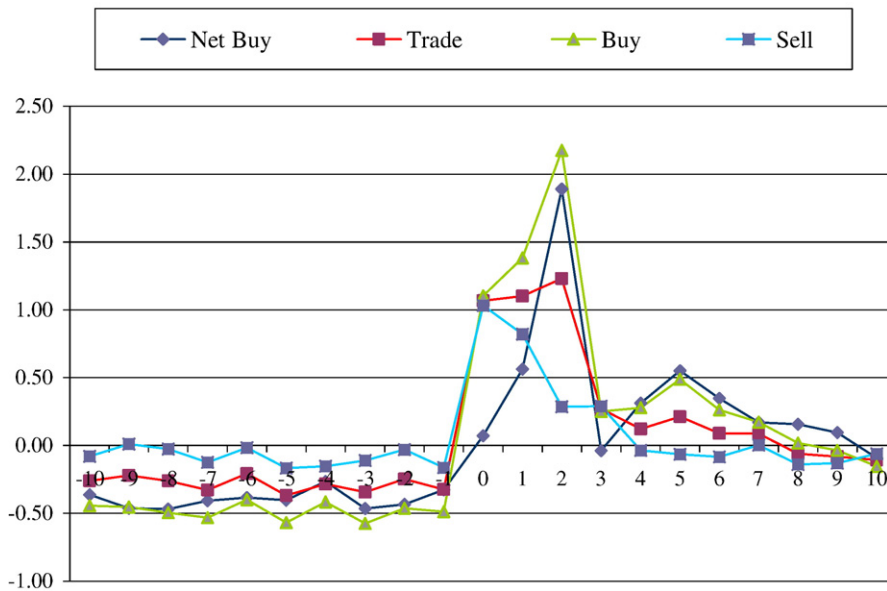


Fig. 3. Institutional trading around announcement dates. The figure shows institutional trading activity before and after announcement dates. For each merger observation in the sample, we aggregate the daily value of buy (sell) transactions of all institutions based on shares traded for the ten days before ($-10, -1$) and ten days after the announcement date ($+1, +10$) and further compute net buy ($\text{Buy} - \text{Sell}$) and trade $((\text{Buy} + \text{Sell})/2)$. The four measures of trading activity (*Net Buy*, *Trade*, *Buy*, *Sell*) are defined as follows: For each measure, we compute the average daily trading activity for the twenty-day period ($-10 \dots -1$, and $+1 \dots +10$) relative to total shares outstanding. We report the difference in percentages between trading activity on each day (relative to shares outstanding) and the respective average daily trading activity.

net buying, total trading, buying, and selling) in bidder shares around merger announcements to be negatively associated with trading (including net buying, total trading, buying, and selling) in bidder shares around record dates. We examine the five-day ($-4, 0$) periods before and including bidders' announcement and record dates.

Model 1 of Table 5 reports the cross-sectional regression results of trading activity in bidder shares around record dates on deal characteristics, bidder attributes, and announcement-date trading in bidder shares. The results in Table 5 show little relation between record-date trading activity and deal characteristics or bidder attributes. We find no evidence that *Net Buying*, *Trade* or *Buy* around record dates is related to *Net Buying*, *Trade* or *Buy* around announcement dates. We do find, however, that abnormal selling of bidder shares around record dates is negatively related to abnormal selling of bidder shares around announcement dates.

In Model 2 of Table 5, we examine whether net buying in target shares before and after merger announcements is related to trading (including net buying, total trading, buying, and selling) in bidder shares around record dates. We define *T Net Buying B* as net buying of target stocks by institutions in the five days ($-5, -1$) before merger announcements relative to shares outstanding, whereas *T Net Buying A* is net buying of target stocks by institutions in the five days ($0, +4$) after announcements. If record-date trading in bidder shares results from merger arbitrage activity, we would expect to find a positive relation between that trading and net buying of target shares before or after announcement dates. Again, we find no statistically significant relations. We also examine whether short interest in bidder shares before merger announcements is related to the buying and selling of bidder shares around record dates. We define *Short Interest* as shares shorted in the bidder relative to its shares outstanding in the month before the merger announcement. The number of observations here is smaller than in the other regressions, because we do not have short-interest data for the entire sample period. We find no statistically significant relation between short interest in bidder shares and buying of bidder shares before record dates. We find, however a negative relation between short interest and selling of bidder shares before record dates. Overall we find no evidence that trading activity in bidder shares around records dates is simply a continuation of announcement-date trading in bidder shares and find no evidence of merger arbitrage in bidder and target shares.

4. Shareholder voting

In this section we explore the relation between institutional trading around record dates, voting turnout, and shareholder support for merger proposals. Although we cannot observe how institutions individually vote shares, following Christoffersen et al. (2007) we can observe the association between institutional trading around record dates and shareholder voting in aggregate. Table 6 reports cross-sectional regression results of voting turnout and support on institutional-investor record-date trading. The voting turnout ratio, *Turnout*, is measured as the percentage of shares voted ("For", "Against", and "Abstain" votes) relative to shares outstanding. The measure of voting support, *Support*, is the percentage of shares voted "For" relative to all shares voted ("For", "Against", and "Abstain" votes). Trading activity includes *Net Buying*, *Trade*, *Buy*, and *Sell* in the five-day ($-4, 0$) period before and including the record date. We control for deal characteristics and firm attributes.

Table 4
Institutional trading around announcement dates

	3-Day				5-Day			
	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel A. Full sample (N=350)								
Before	-0.398	-0.299	-0.498	-0.100	-0.366	-0.306	-0.489	-0.123
After	0.827	1.100	1.514	0.687	0.555	0.738	1.015	0.460
Difference	1.225	1.399	2.012	0.787	0.921	1.044	1.504	0.583
<i>p-value mean</i>	0.01 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a
<i>p-value median</i>	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a	0.00 ^a
	5 days before announcement date				5 days after announcement date			
CAR rank	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel B. Sorted on bidder and target shareholder gains (CCAR, N=350)								
Low CAR	-0.624	-0.433	-0.745	-0.121	0.995	1.077	1.574	0.580
Medium	-0.233	-0.215	-0.331	-0.098	0.310	0.590	0.745	0.435
High CAR	-0.238	-0.268	-0.387	-0.149	0.364	0.548	0.730	0.366
Diff(L-H)	-0.386	-0.165	-0.358	0.028	0.631	0.529	0.844	0.213
<i>p-value mean</i>	0.01 ^a	0.03 ^a	0.01 ^a	0.60	0.08 ^c	0.01 ^a	0.02 ^b	0.03 ^b
<i>p-value median</i>	0.05 ^b	0.07 ^c	0.15	0.17	0.27	0.07 ^c	0.10 ^c	0.05 ^b
	5 days before announcement date				5 days after announcement date			
CAR rank	Net	Trade	Buy	Sell	Net	Trade	Buy	Sell
Panel C. Sorted on bidder shareholder gains (ACAR, N=350)								
Low CAR	-0.494	-0.413	-0.659	-0.166	0.997	1.062	1.560	0.563
Medium	-0.449	-0.288	-0.513	-0.063	0.325	0.563	0.726	0.401
High CAR	-0.152	-0.215	-0.291	-0.139	0.347	0.591	0.764	0.417
Diff(L-H)	-0.342	-0.197	-0.368	-0.027	0.650	0.471	0.796	0.146
<i>p-value mean</i>	0.01 ^a	0.01 ^a	0.01 ^a	0.60	0.07 ^c	0.02 ^b	0.03 ^b	0.15
<i>p-value median</i>	0.07 ^c	0.04 ^b	0.06 ^c	0.03 ^b	0.33	0.09 ^c	0.24	0.18

The table reports institutional trading activity before and after announcement date. For each merger observation in the sample, we aggregate the daily value of buy (sell) transactions of all institutions based on shares traded for the ten days before (-10, -1) and ten days after the announcement date (+1, +10) and further compute net buy (Buy-Sell) and trade ((Buy+Sell)/2). The four measures of trading activity (*Net Buy, Trade, Buy, Sell*) are defined as follows: For each measure, we compute the average daily trading activity for the twenty-day period (-10 ... -1, and +1 ... +10) relative to total shares outstanding. We calculate the difference in percentages between trading activity on each day (relative to shares outstanding) and the respective average daily trading activity. Panel A compares the average trading activity for the three-day (-3, -1) and five-day (-5, -1) period before the announcement date, and for the three-day (0, +2) and five-day (0, +4) period after and including the announcement date. In Panel B, we sort the merger sample into three portfolios based on Bidder and Target shareholder gains (CCAR) and compute five-day before (-4, 0) and after (+1, +5) institutional trading activity for each portfolio. In Panel C, we sort the merger sample into three portfolios based on bidder shareholder gains (ACAR) and compute five-day before (-4, 0) and after (+1, +5) institutional trading activity for each portfolio. We then compare the trading activity of high and low performers. *P*-values are reported in *italics*. *P*-value mean are the *p*-values from parametric *t*-tests, while *p*-value median are the *p*-values from non-parametric Wilcoxon signed rank tests. Statistical significance is indicated by *a* for 1% level, *b* for 5% level, and *c* for 10% level.

The results in Models 1 through 4 in Table 6 show a positive relation between buying and trading by institutions and voting turnout. Most institutions view voting as part of their fiduciary duty or as an asset that is dissipated if not exercised. We find no relations between net buying or selling and voting turnout. Accounting performance, leverage, and momentum are positively related to voting turnout.

Models 5 through 8 in Table 6 report cross-sectional regression results of voting support of mergers on institutional-investor record-date trading. The results indicate that net buying and buying around record dates are negatively related to investor support for merger proposals, a finding that is consistent with results presented by Christoffersen et al. (2007) for the equity-loan market. To check the robustness of the results in Table 6, we test whether announcement-date trading is related to voting. In unreported results, we find that unlike record-date trading, announcement-date trading is not related to shareholder voting. This result is consistent with our earlier finding that record-date trading is not a simple continuation of announcement-date trading.

As discussed above, because our data do not let us identify specific institutions' trading and voting behaviors, we cannot definitively attribute causality among trading, voting turnout, and shareholder support for merger proposals. As such, several interpretations of the observed relations are possible. For example, certain deals, such as those that are contentious and hence likely to receive lower shareholder support, may generate more vote solicitations than less controversial deals. Solicitations may result in unusually active markets in voting rights and higher than average voting turnouts. Consistent with this interpretation, we find evidence in Table 5 that the market for shareholder voting rights is more active in contentious deals.

Alternatively, institutions that have substantial financial stakes in both bidding and target firms may have incentives to buy bidder shares around record dates if it maximizes their overall gains from mergers. Previous work shows that merger and acquisition announcements are associated with negative or insignificant returns for acquirers and large premiums for targets (Bradley et al., 1988; Moeller et al., 2004; Travlos, 1987). Harford et al. (2007) argue that diversified shareholders that hold equity stakes in both bidders and targets want to maximize a weighted average of bidder and target equity values. Shareholders with concentrated stakes only in bidders focus on bidder equity value. Similarly Matvos and Ostrovsky (2008) argue that investor cross-holdings may explain the low and often negative returns to acquiring firms in takeovers. The authors suggest that bidder shareholders with large cross-holdings may not mind overpaying for targets and may not try to block bad takeover deals.

Table 5
Determinants of institutional trading around record dates

	Model 1								Model 2							
	Net buying		Trade		Buy		Sell		Net buying		Trade		Buy		Sell	
	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	<i>t-stat</i>	
Intercept	0.293	0.19	0.167	0.20	0.329	0.24	-0.185	-0.23	0.358	0.26	-0.083	-0.10	0.460	0.34	0.064	0.08
ACAR	-0.490	-0.47	0.452	0.78	0.222	0.23	0.545	0.98	0.228	0.24	0.659	1.18	0.289	0.30	0.746	1.36
Log(Value)	-0.060	-0.70	-0.019	-0.40	-0.048	-0.63	0.013	0.29	-0.053	-0.69	0.006	0.14	-0.061	-0.78	-0.004	-0.08
Rel. Size	-0.164	-0.46	0.155	0.79	0.075	0.23	0.247	1.32	0.153	0.45	0.268	1.35	0.187	0.55	0.316	1.61
Stock%	-0.003	-0.43	0.007	1.58	0.005	0.72	0.009 ^b	2.07	0.005	0.70	0.008 ^c	1.87	0.006	0.76	0.009 ^b	2.06
Attitude	0.696	0.59	-0.584	-0.90	-0.245	-0.23	-0.784	-1.27	-0.290	-0.27	-0.749	-1.20	-0.349	-0.33	-0.833	-1.36
Compete	0.407	0.64	0.039	0.11	0.244	0.42	-0.136	-0.41	0.221	0.38	-0.160	-0.48	0.181	0.31	-0.218	-0.66
Tender	-0.302	-0.42	0.017	0.04	-0.132	-0.20	0.109	0.29	-0.149	-0.23	0.122	0.32	-0.169	-0.26	0.093	0.25
Alock	-0.228	-0.71	-0.072	-0.41	-0.185	-0.63	0.043	0.25	-0.197	-0.67	0.035	0.20	-0.171	-0.58	0.072	0.43
Diversify	0.482	1.62	0.149	0.91	0.390	1.45	-0.109	-0.70	0.392	1.45	-0.097	-0.61	0.408	1.51	-0.074	-0.48
Regulated	-0.080	-0.25	-0.134	-0.77	-0.174	-0.61	-0.090	-0.55	-0.171	-0.60	-0.085	-0.51	-0.250	-0.85	-0.198	-1.17
Inst Own	0.070	0.10	-0.066	-0.18	-0.056	-0.09	-0.031	-0.09	-0.025	-0.04	-0.133	-0.37	0.123	0.19	0.078	0.22
MV/BV	0.043	0.60	-0.024	-0.60	-0.003	-0.05	-0.042	-1.09	0.000	0.00	-0.043	-1.12	-0.006	-0.09	-0.052	-1.35
ROA	-0.437	-0.47	0.000	0.00	-0.206	-0.25	0.230	0.48	-0.210	-0.25	0.171	0.35	-0.135	-0.16	0.279	0.58
Leverage	-0.140	-0.48	0.021	0.13	-0.050	-0.19	0.086	0.56	-0.067	-0.25	0.079	0.51	-0.098	-0.36	0.036	0.23
Momentum	3.470	1.45	1.507	1.14	3.267	1.50	-0.250	-0.20	3.340	1.53	-0.076	-0.06	3.111	1.42	-0.401	-0.32
Ann. Net Buying	-0.013	-0.60														
Ann. Trade			-0.017	-0.76												
Ann. Buy					-0.011	-0.54										
Ann. Sell							-0.084 ^c	-1.92								
T Net Buying B								0.004	0.17	-0.001	-0.09	0.006	0.23	0.001	0.05	
T Net Buying A								0.025	0.74	0.014	0.72	0.024	0.71	0.013	0.68	
Short Interest												-0.045	-1.10	-0.064 ^c	-1.73	
Adj-R ²		0.04		0.05		0.04		0.06		0.04		0.05		0.05		0.08
N		320		320		320		320		318		318		236		236

The table reports cross-sectional regression results of institutional trading activities on deal and bidding-firm characteristics. The trading activities are the average daily net buying, trade, buy, and sell relative to shares outstanding in the five-day period before and including the record date (-4, 0). See Table 3 for definitions of the record-date trading variables. Deal characteristics variables include those shown in Table 2. Bidder attribute variables include the market-to-book ratio, MV/BV, defined as the ratio of the market value of assets to the book value of assets. ROA is the ratio of operating income to total assets. Leverage is the sum of long-term and short-term debts divided by book value of assets. Stock price momentum is the buy-and-hold return in the one-year period before the merger announcement, adjusted by 25 size and book-to-market portfolio returns. Model 1 includes Net Buying, Trade, Buy and Sell in bidder shares around announcement dates as explanatory variables. The four announcement trading activity variables are calculated based on net buy, total trade, buy, and sell and correspond to record-day trading variables. See Table 4 for definitions of the announcement-date trading variables. *T Net Buying B* (*T Net Buying A*) is average daily net buying of target stock relative to shares outstanding in the five-day period before (after) merger announcements. *Short Interest* is the ratio of shares shorted relative to shares outstanding for bidder stocks in the month preceding merger announcements. Heteroskedasticity-consistent *t*-statistics are reported in italics. Statistical significance is indicated by *a* for 1% level, *b* for 5% level, and *c* for 10% level.

Extending this logic, investors with cross-holdings may have incentives to buy additional voting rights by purchasing bidder shares at post-announcement depressed prices. They then have incentives to vote for merger proposals, thereby increasing the probability that proposals pass and they gain on target shares. Shareholder support overall, however, may be low, because not all bidder shareholders hold target shares, causing them to vote against merger proposals.

Institutions may also have incentives to buy shares of bidding firms for which they either manage or would like to manage pension-fund accounts (Black, 1998; Romano, 2000). Buying shares would allow them to support management by voting for merger proposals. Consistent with this argument, Cohen and Schmidt (2008) find that mutual funds overweight in their portfolios the shares of firms with which they have 401(k)-related business, and Ashraf et al. (2008) find that mutual funds with pension-related business ties are more likely to vote with management on shareholder executive-compensation proposals. Because our data do not allow us to observe the relations between individual institutions' trading activities and either pension-related business or votes on merger proposals, it is difficult for us to test this conflicts-of-interest hypothesis directly. We can, however, provide some indirect evidence. If institutions preferentially buy bidder shares when mergers are contentious (and thus shareholder support is low overall), then buying bidder shares and being overweighted in bidder shares should be negatively related to shareholder support for merger proposals. If institutions buy shares irrespective of shareholder sentiment, the relations should be positive. We also expect that if institutions buy shares to support managers' merger proposals, they would sell shares after record dates. Holding shares longer could be related to other forms of managerial support, such as providing price support for shares or support for management on other issues.

Finally, institutions may buy shares around record dates because they are bullish on firms' long-term prospects. If merger announcements do not alter investors' views enough to change their desire to buy shares, they may buy additional shares, but vote against merger proposals if they think they are misguided (Bethel and Gillan, 2002; Burch et al., 2004). They may also vote against mergers to window dress; that is, appear vigilant or perhaps even activist. Doing so is not very costly: Neither Christoffersen et al. (2007) nor we, as shown in Fig. 2, find abnormal returns around record dates. It appears shareholders do not pay much for voting rights. Given institutions generally have an obligation to vote shares, it would also appear that voting against merger proposals

Table 6
Institutional trading around record dates, voting turnout, and voting support

	Voting turnout								Voting support							
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8	
	<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat		<i>t</i> -stat	
Intercept	0.880 ^a	9.40	0.881 ^a	9.42	0.881 ^a	9.42	0.879 ^a	9.40	0.748 ^a	4.74	0.750 ^a	4.70	0.746 ^a	4.71	0.759 ^a	4.73
Net Buying	0.002	1.26							-0.016 ^b	-2.30						
Trade			0.005 ^c	1.75							-0.016	-1.37				
Buy					0.003 ^c	1.69							-0.015 ^b	-2.04		
Sell							0.003	1.41							0.010	0.73
ACAR	-0.037	-0.53	-0.041	-0.59	-0.038	-0.55	-0.043	-0.61	0.057	0.49	0.085	0.73	0.074	0.63	0.071	0.60
Log(Value)	-0.010 ^c	-1.96	-0.010 ^c	-1.98	-0.010 ^c	-1.96	-0.010 ^b	-2.01	0.011	1.35	0.012	1.46	0.012	1.41	0.012	1.44
Rel. Size	0.007	0.36	0.006	0.27	0.006	0.31	0.006	0.29	-0.020	-0.60	-0.014	-0.40	-0.015	-0.44	-0.022	-0.63
Stock%	0.000	0.20	0.000	0.08	0.000	0.13	0.000	0.13	0.000	-0.49	0.000	-0.27	0.000	-0.29	-0.001	-0.61
Attitude	-0.078	-1.36	-0.075	-1.31	-0.077	-1.34	-0.075	-1.30	0.152	1.56	0.135	1.38	0.141	1.45	0.145	1.47
Compete	0.000	0.00	0.004	0.11	0.002	0.06	0.003	0.07	-0.141 ^b	-2.10	-0.155 ^b	-2.27	-0.154 ^b	-2.27	-0.133 ^c	-1.92
Tender	0.067	1.17	0.064	1.12	0.066	1.16	0.063	1.10	0.081	0.84	0.102	1.05	0.093	0.97	0.092	0.94
Alock	0.009	0.38	0.009	0.37	0.009	0.38	0.008	0.35	0.041	1.02	0.045	1.10	0.043	1.07	0.044	1.06
Diversify	0.013	0.69	0.014	0.71	0.013	0.67	0.016	0.82	-0.036	-1.09	-0.046	-1.39	-0.039	-1.20	-0.048	-1.45
Regulated	-0.004	-0.17	-0.002	-0.10	-0.003	-0.13	-0.003	-0.15	-0.053	-1.45	-0.055	-1.49	-0.056	-1.53	-0.047	-1.27
Inst Own	-0.035	-0.85	-0.033	-0.80	-0.034	-0.83	-0.034	-0.80	0.093	1.32	0.085	1.19	0.086	1.23	0.096	1.33
MV/BV	0.022	0.85	0.023	0.88	0.022	0.84	0.025	0.96	-0.033	-0.75	-0.044	-0.99	-0.037	-0.85	-0.045	-1.02
ROA	0.125 ^b	2.31	0.126 ^b	2.34	0.126 ^b	2.33	0.124 ^b	2.30	-0.149	-1.63	-0.147	-1.59	-0.151	-1.65	-0.135	-1.46
Leverage	0.041 ^b	2.28	0.040 ^b	2.28	0.041 ^b	2.29	0.040 ^b	2.23	-0.013	-0.45	-0.009	-0.29	-0.011	-0.38	-0.009	-0.29
Momentum	0.903 ^a	4.04	0.885 ^a	3.94	0.887 ^a	3.94	0.913 ^a	4.13	0.044	0.12	0.008	0.02	0.064	0.17	-0.120	-0.32
Adj-R ²	0.29		0.30		0.30		0.29		0.19		0.17		0.18		0.16	
N	156		156		156		156		156		156		156		156	

The table reports cross-sectional regression results of voting turnout and support on institutional trading activities around record dates. The dependent variable *Voting Turnout* is measured as the percentage of shares voted ("For", "Against" and "Abstain" votes) relative to shares outstanding. The dependent variable *Voting Support* is defined as the percentage of shares voted "For" relative to all shares voted ("For", "Against" and "Abstain" votes). The trading activities are the average daily net buying, trade, buy, and sell relative to shares outstanding in five-day period before and including the record date (-4, 0). See Table 3 for definitions of the record-date trading variables. Deal characteristics variables include those shown in Table 2, whereas bidder attribute variables are defined in Table 5. Heteroskedasticity-consistent *t*-statistics are reported in italics. Statistical significance is indicated by *a* for 1% level, *b* for 5% level, and *c* for 10% level.

should not impose many additional costs. One important implication of these two interpretations is that institutions should continue to hold shares after record dates.

In Table 7 we examine the relations between record-date trading in bidder shares, relative portfolio weights, and cross-holdings. The table reports the results of Logit regressions that examine the effect of institutions' accumulated trades in bidders and targets over the previous year on their buying behavior before and on record dates. The unit of observation is an institution/merger combination, and the sample includes all institution/merger combinations with any trading during the sample period. In Panel A, the dependent variable, *Net Buyer before Record Date*, is a dummy variable that equals one if the institution is a net buyer of the bidder in the five-day (-4, 0) period before and including the record date, and zero otherwise. *ACAR* is the five-day cumulative abnormal return of the bidder measured using the market model. *Institution Size* is the logarithm of the average monthly dollar trading volume of the institution. *Log(Transaction Value)* is the logarithm of the total value of consideration paid by the bidder, excluding fees and expenses.

We compute *Overweighted Acquirer* as follows: For each institution and each stock, we accumulate the institution's trades in the stock during the one-year period before merger announcement to estimate the institution's net position in the stock.²¹ We assign a value of zero if the accumulated net position is negative. Once we have the net position of each stock, we calculate W_i , the weight of each stock in the institution's portfolio. For these stocks in the institution's portfolio, we also calculate M_i , a portfolio weight based on the market value of the stocks. M_i is not the raw market weight; it is the market value of stock i divided by the sum of market values of all stocks in the institution's portfolio. *Overweighted Acquirer* is a dummy variable that equals one if $W_i > M_i$, and zero otherwise. In other words, *Overweighted Acquirer* is equal to one if the bidder's stock has a higher weight than its market weight in the institution's portfolio. Standard errors are computed by clustering on the merger level. The results indicate that institutions that are overweighted in bidder shares are more likely to become net buyers of shares (and hence votes) before record dates. These results do not depend on deal quality, as measured by acquiring firms' announcement returns, although we find larger institutions are more likely to buy shares, and large deals have active buying before record dates.

We also examine the relation between investors' cross holdings and record-date trading. *Cross-Holding* is a dummy variable that equals one if the net gain of an institution on its holdings in a bidder and target is greater than 0, and zero otherwise. Specifically, if $(\text{Price} * W_{\text{Target}} * \text{CAR}_{\text{Target}}) + (\text{Price} * W_{\text{Acquirer}} * \text{CAR}_{\text{Acquirer}}) > 0$, then *Cross-holding* = 1; otherwise *Cross-holding* = 0. In Panel A of

²¹ In related analyses, we verify the robustness of this proxy. We re-estimate the Logit regressions in Table 7 using accumulated trading starting from the beginning of our trading data sample period until the merger announcement to compute *Overweighted Acquirer* and *Cross-Holding*. The results are similar to those reported in Table 7.

Table 7
Portfolio weights and institutional trading around record dates

	Model 1			Model 2		
		<i>Chi-square</i>	<i>p-value</i>		<i>Chi-square</i>	<i>p-value</i>
Panel A. Net buyer before record date						
Intercept	-1.400 ^a	21.147	0.000	-1.354 ^a	19.946	0.000
ACAR	0.869 ^b	4.229	0.040	0.843 ^c	3.523	0.061
Institution Size	0.077 ^a	23.041	0.000	0.080 ^a	24.658	0.000
Log(Transaction Value)	0.002	0.004	0.950	-0.002	0.003	0.954
Overweighted Acquirer	0.192 ^a	27.979	0.000			
Cross-holding				0.006	0.003	0.955
N		33,735			33,735	
	Model 1			Model 2		
		<i>Chi-square</i>	<i>p-value</i>		<i>Chi-square</i>	<i>p-value</i>
Panel B. Net seller after record date						
Intercept	-2.466 ^a	41.843	0.000	-2.472 ^a	42.114	0.000
ACAR	0.471	1.024	0.312	0.663	1.880	0.170
Institution Size	0.121 ^a	43.132	0.000	0.121 ^a	42.860	0.000
Log(Transaction Value)	0.075 ^a	7.350	0.007	0.076 ^a	7.595	0.006
Net Buyer before Record Date	-1.667 ^a	292.973	0.000	-1.671 ^a	295.245	0.000
Overweighted Acquirer	-0.119 ^a	10.343	0.001			
Cross-holding				-0.253 ^b	5.110	0.024
N		33,735			33,735	

The table reports Logit regression results of institutional trading before and after record dates on relative portfolio weights, *Cross-holding*, and other variables. The unit of observation is an institution/merger combination. The sample includes all institution/merger combinations with any trading during the sample period. In Panel A, the dependent variable *Net Buyer before Record Date* is a dummy variable that equals one if the institution is a net buyer of the bidder in the five-day period before and including the record date (-4, 0), and zero otherwise. In Panel B, the dependent variable *Net Seller after Record Date* is a dummy variable that equals one if the institution is a net seller of the bidder in the five-day period after the record date (+1, +5), and zero otherwise. *ACAR* is the five-day cumulative abnormal return of the bidder measured using the market model. *Institution Size* is the logarithm of the average monthly dollar trading volume of the institution. *Log (Transaction Value)* is the logarithm of the value of the merger deal. *Overweighted Acquirer* is computed as follows. For each institution and each stock, we accumulate the institution's trades in the stock during the one-year period before merger announcement to estimate the institution's net position in the stock. We assign a value of zero if the accumulated net position (PW) is negative. Once we have the net position of each stock, we calculate W_i , the weight of each stock in the institution's portfolio. For these stocks in the institution's portfolio, we also calculate M_i , a portfolio weight based on the market value of the stocks. M_i is not the raw market weight; it is the market value of stock i divided by the sum of market values of all stocks in the institution's portfolio. *Overweighted Acquirer* is a dummy variable that equals one if $W_i > M_i$, and zero otherwise. *Cross-holding* is a dummy variable that equals one if the net gain of an institution on their holdings in a bidder and target is greater than zero, and zero otherwise. Chi-squares and p-values are reported in *italics*. Statistical significance is indicated by *a* for 1% level, *b* for 5% level, and *c* for 10% level.

Table 7, we find no relation between investors' cross-holdings and buying behavior before record dates. In Panel B, however, the results indicate institutions that lose in aggregate trading in bidder and target shares are less likely to become sellers after record dates. Despite having losses, institutions retain their economic exposure, perhaps because most of their losses are already realized.

In Panel B of Table 7, we examine whether institutions sell shares after record dates. The dependent variable, *Net Seller after Record Date*, is a dummy variable that equals one if the institution is a net seller of the bidder in the five-day (+1, +5) period after the record date, and zero otherwise. We find a negative relation between an institution being a net buyer before a record date and the probability of being a net seller afterwards. Similarly, we find a negative relation between being overweighted in bidder shares and the probability of being a net seller afterwards. In Table 5 we find no relation between buying behavior before record dates and short interest in bidder shares. Institutions that buy votes and are overweighted in bidder shares retain their economic exposures after record dates.

Overall we document a market for shareholder voting rights in the spot market with investors paying holding costs. Institutions that are net buyers of shares before record dates and institutions that are overweighted in bidder shares retain their economic exposures after record dates. We also find institutions that lose in aggregate bidder and target trading are less likely to become sellers after record dates. Retaining cash flow rights after record dates is at odds with results from Hu and Black (2007), which document "empty voting" by hedge funds in certain contested mergers and acquisitions. As noted earlier, hedge funds are a small, but increasingly important category of institutions—one that we are not able to identify given our data constraints.

5. Conclusion

Previous work in the area suggests that institutions typically exercise one of two options, they either vote with their feet by selling shares or vote with their hands for management. The results of this paper highlight yet another option that can be chosen by institutions: They can acquire voting rights around merger record dates by buying shares. Our findings suggest institutional investors on average value both voting and cash-flow rights. At the same time, we find a negative relation between institutional buying around record dates and shareholder support for merger proposals. The results in this paper raise as many questions as they answer as to the motives of institutional investors. We leave these unanswered questions to future research.

Related to these questions is an open issue as to whether shareholders should have additional voting power. *Bebchuk (2005)*, for example, argues that shareholders should be given more voting rights to intervene in takeover decisions. Others suggest that the SEC should expand shareholders' participation in nominating directors.²² The counterargument is that shareholders have sufficient power, and additional power may have adverse consequences. All of these views, however, depend on the willingness of shareholders to intervene in value-enhancing ways. Evidence indicating that institutions are more than passive bystanders makes this debate even more salient.

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²² See File No. S7-19-03: Proposed Rule: Security Holder Director Nominations, available at: <http://www.sec.gov/rules/proposed/34-48626.htm>.

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