What Do Outside Directors Learn around Annual Meetings? Evidence from Insider Trading*

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Abstract

This paper analyzes the distribution and performance of outside directors' trades around annual shareholder meetings. Unlike other insider groups, outside directors increase their purchases substantially after the annual meetings. The abnormal returns to outside directors' purchases are positive around the meetings, and significantly higher for the trades that are initiated after the meeting as compared to before. Overall trading performance of outside directors is similar to that of their executive counterparts. However, their timing is different: Informative trades of outside directors take place after the annual meetings, whereas those of executives are condensed in a window before the meetings. Unlike the executives, outside directors do not earn positive abnormal returns when they sell their company's stock around annual meetings. Overall, the results suggest that annual shareholder (and accompanying board) meetings are important for outside directors' information acquisition, at least in good times.

Journal of Economic Literature Classification Numbers: D8, G3, G14, G34, K22.

Keywords: Annual Shareholder Meetings, Insider Trading, Outside Directors, Corporate Governance.

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1 Introduction

Over the last decade, outside directors have been at the focus of a debate on their monitoring and advising roles both in the corporate and the academic world. An outside director is a director who has never worked at the company or at any of its subsidiaries. On the one hand, outside directors are better positioned for their duties related to monitoring the executives as their incentives are better aligned with those of the shareholders. On the other hand, since they are less informed about the firm's daily activities with respect to their executive counterparts, they have a disadvantage in performing their advising duties. Moreover, the information they obtain on the firm is provided mainly by the CEO and other executives, hence might be biased towards those individuals' interests. The question that follows from this argument is: Do the outside directors know enough about their firms so as to perform their duties satisfactorily? One way to deal with this question is to analyze how well they get informed around the annual shareholder meetings. This paper is a first attempt to evaluate the informational content of annual meetings (and accompanying events) for outside directors by analyzing their trades around the meeting dates.

State corporate law and stock exchange listing standards require all public companies to hold shareholder meetings *annually*. Shareholder meetings are important corporate events for several reasons. First, there are certain decisions that can only be approved by the shareholders during the annual meetings. Specifically, ratification of financial statements, election of the board of directors, and approval of executive and board remuneration take place during annual meetings. Second, prior to an annual meeting, relevant information will be collected by the executives in preparation for the meeting (Hagberg 2011; Shaw 2011). Moreover, the company executives and directors are required to analyze this information thoroughly since answering shareholder questions during the annual meetings is part of their duty. Shaw (2011) notes that "the senior management team -and all the directors too- really should be required to stand up in front of the shareholder every year, give an accounting as to their stewardship, and answer reasonable, business-related questions from share owners. The deep thinking and heavy prepping that most officers and directors do to prepare for this event actually is one of the best *good governance assurers* one can think of." (p. 26). Third, during the annual meetings, managers are likely to provide information that is not available in annual reports or previous company announcements, including qualitative information on future prospects of the company (Brickley 1986; Garcia Blandon, Martinez Blasco, and Sabate 2012; Olibe 2002). Fourth, the majority of the large public companies require all board directors to be present at the annual shareholder meet-

ings.[1] Companies also organize social events to enhance the networking of the attendees of the annual meetings.[2] As a result, annual meetings constitute an excellent venue for the directors to meet and exchange ideas and views. Finally, and perhaps most importantly, companies tend to schedule a *board meeting* to coincide with the shareholder meeting since the majority of the directors are already present at the company on that day. According to a survey conducted by Shaw (2011), 88% of the companies schedule a board meeting that accompanies the annual shareholder meeting.[3] This suggests that directors obtain information from the company executives and take important decisions during the board meeting that takes place on (or around) the annual shareholder meeting date. The analysis makes clear that annual meetings are important informational events not only for the shareholders, but also for the company management. If company executives and directors act on the *information gathered around annual shareholder meetings and accompanying board meetings*, one would expect to observe them trading extensively both shortly before and after these events.

Directors, officers and large stockholders (beneficial owners of more than 10% of any class of firm equity) are considered as *insiders* and are required to file their trading activity with the Securities and Exchange Commission (SEC). Using this data, along with the annual shareholder meeting dates of 3,042 distinct firms obtained from Riskmetrics database, we find that the overall level of insider trading hikes on the day of the meeting and the day following it. What is more interesting is the trading behavior of the outside directors as compared to that of the executives. Executives purchase frequently both prior and posterior to the meetings, whereas outside directors significantly increase their purchases right after the annual meetings. This is consistent with the view that executives trade on the information they collect before the annual meetings whereas outside directors trade on the information acquired during the meetings. Not surprisingly, no significant pattern is observed regarding purchases of insiders who do not contribute to the annual meetings.

An interesting question arises from the previous analysis. Are annual meetings useful in bridg-

[1] According to a study by Corporate Executive Board presented in 2007, 91% of the companies with revenues over $1 billion require or expect board member attendance during the annual meetings. Similarly, a survey conducted by Shaw (2011) reveals that 78% of the companies (of which 36% have revenues over $1 billion) require the board members to attend the annual shareholder meetings; and that 95% of the companies secured attendance by the majority of the board members.

[2] 42% of the companies that took part in Shaw (2011)'s survey stated that social events were organized for further interaction of board members and shareholders.

[3] The sample of firms in Shaw (2011)'s study includes public and private companies with various size. One might expect this ratio to be significantly higher for large public firms since their directors tend to be located dispersedly (Alam, Chen, Ciccotello, and Harley E. Ryan (Forthcoming)), and these are the firms that form the sample in this study.

ing the information gap between the inside and outside members of the management? Without constraining to the period around annual shareholder meetings, Ravina and Sapienza (2010) indirectly measure the information level of independent directors by comparing the market-adjusted returns associated with their trades to those associated with executives' trades.[4] They find that independent directors earn positive abnormal returns when they purchase their company stock, and that the difference from the same firm's executives is relatively small. They conclude that independent directors have enough information to monitor the company executives, and relate this phenomenon to the incentives of independent directors for collecting relevant information while serving on the firm's board. This study contributes to this view by focusing directly on the information they gather around the annual meetings; at a period when the incentives of board directors for collecting information tend to be relatively strong (due to their accountability at annual shareholder meetings).

Analyzing the trading performance of insiders with respect to the date of the annual meetings provides interesting results. First of all, outside directors earn substantial abnormal returns from their open market *purchases* around the annual meetings at most horizons.[5] This effect is robust to the inclusion of firm fixed effects and controlling for transaction size and individual's holdings. This finding is consistent with the previous studies which, without constraining to specific periods, demonstrate the profitability of insider trades (Finnerty 1976; Jaffe 1974; Jeng, Metrick, and Zeckhauser 2003; Lakonishok and Lee 2001; Lin and Howe 1990; Marin and Olivier 2008; Ravina and Sapienza 2010; Rozeff and Zaman 1988; Seyhun 1986, 1998). Second, outside directors earn higher returns when their trade is initiated after the annual meetings as compared to when it is initiated before attending the meetings. This provides evidence on that annual meetings constitute an important source of information for outside directors. Moreover, when we compare the trading performance of outside directors vis-*à*-vis their firm's executives, we find that directors earn significantly higher market adjusted returns in the subsample of purchases initiated after the annual meetings. This does not hold for the subsample of purchases prior to the annual meetings. Overall, informative trades of outside directors (executives) take place mostly after (before) the meetings. This finding suggests that outside directors are adequately informed about the firm during the annual meetings; an observation that underlines meetings' importance for directors' information acquisition.

In contrast to purchases, outside directors do not earn abnormal returns from their open

[4] According to Ravina and Sapienza (2010)'s classification, independent directors are outside directors that are not large stockholders.

[5] Following Ravina and Sapienza (2010), we consider positions mimicking that of the insiders trades and holding it for 0, 30, 60, 90 and 180 trading days.

market *sales* around annual meetings. This is consistent with the literature which documents that unlike purchases, sales can be driven by diversification or liquidity reasons, thus, are not necessarily information driven (Jeng et al. 2003; Lakonishok and Lee 2001; Ravina and Sapienza 2010). Moreover, analyzing a period around the annual meetings introduces further noise since awards and grants are more likely to be transferred to insiders during the annual shareholder meetings, which may result in an increased selling pressure around meeting dates. This, indeed, is probably the reason for why both the executives and the outside directors significantly increase their sales after the annual meetings. Interestingly, executives earn significantly positive abnormal returns at short horizons when they sell their company's stock around the meeting dates. This suggests that during bad times, the information gathered by the executives in preparation to the annual shareholder meetings is valuable; however outside directors cannot access, or at least benefit from, it.

One concern is that the results may be driven by the changing behavior of outside directors around annual shareholder meetings. It might, for example, be the case that directors are advised to purchase company stock in relation to their directorship nominations. Even though this might result in an increase in outside directors' purchases after the meetings, it cannot explain why their trading performance is better after the meetings as compared to their executive counterparts. The fact that increase in purchases is accompanied by better trading performance suggests that information is likely to play a role in outside directors' trades around meeting dates.

This paper contributes to the literature on the board of directors by supporting a positive attitude towards outside directors. Weisbach (1988), Byrd and Hickman (1992) and Cotter, Shivdasani, and Zenner (1997) demonstrate evidence on the monitoring role of outside directors. Nevertheless, many early studies regarding the composition of board of directors do not find a significant effect of outside directors on firm's performance (Bhagat and Black 2001; Hermalin and Weisbach 1991; Klein 1998). However, Hermalin and Weisbach (1998) note that endogeneity of board composition may be playing a role in failing to find a relationship.[6] Recent literature provides theoretical background (Adams and Ferreira 2007; Harris and Raviv 2008) and empirical evidence (Boone, Field, Karpoff, and Raheja 2007; Coles, Daniel, and Naveen 2008; Duchin, Matsusaka, and Ozbas 2010; Linck, Netter, and Yang 2008) on that the boards of directors are endogeneously determined according to the firm's monitoring and advising needs. This study contributes to this literature by showing that annual meetings of large firms tend to diminish informational disadvantage of outside directors, enhancing their advising capabilities. It would be interesting to further analyze the relationship between the board characteristics of the firms

[6] Hermalin and Weisbach (2003) provide an excellent review of the literature on boards of directors.

and performance of their directors' trades.

This paper further contributes to the literature by identifying information driven insider trading through focusing on the period around the annual meetings. A number of recent studies aim at uncovering the informativeness of insider trades. For example, Scott Jr. and Xu (2004), by using a variable for shares traded as a percentage of insiders' holdings, separates information driven sales from sales driven by liquidity or diversification motives. They find that large insider sales that also account for large percentages of insiders' holdings have significant predictive power whereas small sales do not. Similarly, Jenter (2005) controls for recent changes in manager's equity holdings to sort out diversification or rebalancing driven insider trading. Most recently, Cohen, Malloy, and Pomorski (2012) show that there is predictable, identifiable routine insider trading that is not informative. By filtering out routine trades, they can attribute all available abnormal returns solely to the remaining transactions, those of which they call opportunistic trades. However, these studies uncover informativeness of insiders' trades by using proxies for the motives behind trading that sort out the non-information driven insider trading. On the contrary, this study focuses directly on information driven trades since the exact date of the informational event, the annual meeting date, is observable. In that, this paper is more related to Damodaran and Liu (1993) who analyze insider trading around reappraisals of real estate investment trusts and demonstrate the information contained in these events.

The paper is organized as follows. Section 2 explains the data and offers descriptive statistics. Distribution of insider trading around annual meetings is reported in Section 3. Section 4 analyzes the trading performance of insiders transactions. Section 5 concludes.

2 Data and Descriptive Statistics

Corporate insiders are defined broadly to include all individuals "that have access to non-public material, insider information", and these individuals are required to report their trading activity with the SEC. TFN Insider Filing database covers all insider trading information reported on SEC Forms 3, 4 and 5. Form 4 is the most important insider document as it reports any change in an insider's ownership position. It could be a purchase, sale, option grant, option exercise , gift, etc. Form 3 is the initial statement of beneficial ownership for all officers. Form 5 is the annual statement of change in beneficial ownership which contains activity for exempt transactions not required on a Form 4. TFN Insider Filing database provides the name of the insider, the position she holds with respect to the firm (CEO, chairman of the board, director,

large shareholder, etc.), transaction date and price, shares bought/sold, and shares held by the insider as a result of the transaction. Following the literature (Lakonishok and Lee 2001; Ravina and Sapienza 2010), I only analyze open market purchases and sales of insiders with a minimum of 100 shares traded to focus on meaningful events.[7]

The insiders include company executives, directors, large shareholders (who own at least 10% of the company shares), affiliates, controllers, etc. The focus of this study is on *outside directors*, who are defined as nonexecutive directors. However, following Ravina and Sapienza (2010), we also divide this group into two: *independent directors* who are outside directors that are not large shareholders, and *outside blockholders* who are outside directors that also own a minimum of 10% share in the company. Due to their large ownership, outside blockholders may have different incentives and better information regarding the firm than the independent directors, hence it would be interesting to analyze their trades separately. *Executives* are the biggest group of insiders, and note that they include directors who also hold executive positions in the firm. All the remaining insiders will be classified as *other insiders* throughout the study.

Our source of board of directors data is Riskmetrics Directors database. This database covers mainly S&P 1500 companies from the year 1996 onwards and provides data on the identity and characteristics of board directors. Riskmetrics obtains information from the proxy filings on annual shareholder meetings of companies, and the relevant date of the annual meeting is provided in the data set. The directors data consists of 3,374 distinct firms, 34,044 distinct individuals, and spans the period from 1996 to 2010. We merge the insider trading data with this database. A total of 3,265 firms, which is 96.8% of the whole sample, have some of their insiders trading in the period 1996-2010 with the data being available in the TFN Insider Filing database.

To capture the trading that is driven by information released around the annual meetings, we focus on open market purchases and sales transactions that take place within one month window of the annual meeting date. To be more precise, we consider all trades executed between 15 days before and 14 after the annual meeting date [D-15,D+14], where D denotes the day of the annual shareholder meeting. The choice of the window follows from Mishraa, Rowe, Prakash, and Ghosh (2009) who analyze the bidask spread around board meeting dates in the same manner. It is important to include days prior to the meeting dates, because the directors

[7] As advised in Thomson Reuters Insider Trading overview, observations with cleanse code S or A are excluded from the analysis. The data with a cleanse code of S have a different security from the one they have been entered under. Cleanse code A flags cases where several of the data elements are invalid or missing.

typically receive company financial reports prior to the annual meetings. Even though the period of communicating company information to the directors will show variety for companies, 15 days window will most probably capture all the information released to directors prior to the meetings. The analysis in this paper will draw its conclusions by analyzing the change in trading behavior and performance of outside directors after the annual meeting dates [D,D+14] as compared to those before [D-15,D-1] to sort out the value of the information acquired by the outside directors during annual meetings.

The final sample consists of 145,298 transactions in the period 1996-2010, which covers insider trading within one month window of a total of 17,163 annual meetings of 3,042 distinct firms. Table 1 reports the distribution of the annual shareholder meetings with respect to meeting months and years. It is important to note that annual shareholder meetings almost always take place in the same month of every year for each company.

[Insert Table 1: Distribution of Annual Shareholder Meetings]

Restricting attention to insider transactions around annual meetings of large public companies covered in Riskmetrics database induces some sample characteristics in the data. To demonstrate its effects clearly, Table 2 presents the distribution of the transactions of each insider group for various data samples. We start by analyzing the whole insider trading sample for the period 1996-2010 obtained from TFN Insider Filing database. Panel A reports a total of 659,982 purchases which is almost equally shared across groups of executives, outside directors and other insiders.[8] Sales show a different pattern in the sense that out of 2,344,548 transactions, almost half of them (1,506,708) are executed by the executives.

[Insert Table 2: Insider Trading Samples by Transaction and Insider Type]

Panel B of Table 2 compares this whole TFN Insider Filing sample with the subsample of transactions that belong to the firms covered in the Riskmetrics database. Note that these are large public firms. This sample contains 224,962 purchases (around one third of the whole sample) with a distribution among the insider types very similar to that of the whole sample. 1,508,315 sale transactions in this sample exhibit a similar pattern, with even a higher ratio of

[8] Following the literature, in panels A and B, observations where share price is less than 2 dollars are excluded to have a meaningful comparison.

executive sales. Overall, the sample covered in Riskmetrics is a good representation of the whole sample.

Panel C of Table 2 reports the characteristics of the final sample, where only the transactions executed within 15 days of the annual meetings are considered. In contrast to the previous samples, the biggest portion of 11,971 insider sales pertain to outside directors, followed by executives, and other insiders. Nevertheless, insider sales show a similar pattern to the whole sample since the majority of a total of 134,277 insider sales have been initiated by the executives.

3 Distribution of Insider Trading Around Annual Meetings

In this section, we analyze the distribution of insider transactions with respect to the annual shareholder meeting dates. Shareholder meetings are important events for not only the decisions taken during them, but also for the substantial information gathering taking place in advance of and during the meeting. If firm executives and directors act on this information, one would expect to see insider trading both prior and posterior to the annual meetings.

Figure 1 presents the distribution of open market purchase transactions of the insiders around the annual meeting dates. More specifically, the meeting date is considered as point 0 on the x-axis. All transactions to the left of this point has been executed before the annual meeting took place. These purchases may be driven by the data collected in preparation of the meeting and its communication to directors and other insiders. All purchases on the meeting date and after that are more likely to be driven by the information provided at the annual meetings, along with the new decisions taken regarding firm's future actions, if any.

[Insert Figure 1: Distribution of Insiders' Purchases Around Annual Meetings]

An interesting picture emerges from analyzing the behavior of various insider groups in Figure 1. First of all, notice that the overall level of insider trading hikes at the day of the annual meeting and the day following it. Executives trade heavily within 10 days window around the annual meetings, with no significant difference in their behavior prior vs. posterior to the meeting. However, the outside directors significantly increase their trades right after the annual meetings. This is consistent with the idea that executives trade on the information they collect before the

annual meetings whereas outside directors get informed around the annual meeting dates and use this information in trading. Consistent with the significance of annual shareholder meetings in information acquisition, there is no increase in the trading of other insiders who are not necessarily part of the shareholder meetings; if any, there is a slight decrease.

Complementing the previous analysis, Figure 2 presents the distribution of open market sale transactions of the insiders around the annual meeting dates. Unlike insider purchases, insider sales do not exhibit a clear pattern. Outside directors trade more frequently after the annual meetings but the difference with respect to those before the meetings is not substantial. This is consistent with the idea that unlike purchases, sales can be driven by portfolio rebalancing needs, hence are not necessarily information driven. Moreover, analyzing a period around the annual meetings introduces further noise since awards and grants tend to be transferred to insiders during the annual shareholder meetings and as a result selling pressure may increase.

[Insert Figure 2: Distribution of Insiders' Sales Around Annual Meetings]

Table 3 provides a numerical representation of the distribution of the sale and purchase transactions of insider groups with respect to annual meeting dates. Panel A splits the transactions into two categories as before or after the meeting date. Independent directors increase their purchase (sale) transactions by 115% (28%) from 1,696 to 3,647 as compared to the executives who only increase by 17% (20%) from 1,771 to 2,074 after the annual meetings. For a better comparison, we compute the differences in mean number of transactions for each group. On average, a firm's independent directors together execute 1.64 purchase transactions after the annual meetings. This compares to an average of 0.76 before the meetings. The difference, which is 0.88 transactions, is statistically significant at 1% level. Even though the cumulative sales are not so different among prior vs. posterior periods, a similar difference (0.81 transactions) is reported for the average number of sales with the same significance level. In contrast, we do not observe a significant change in the trades of executives after the annual meetings. Average sales are significantly higher but the difference is negligible.

[Insert Table 3: Distribution of Insiders' Transactions in Annual Meetings Sample]

Panel B of Table 3 presents the distribution of the transactions on each day with respect to the annual meeting date. The hike of executives and independent directors transactions on and after the annual meeting date is very clear in this table. What can be also seen in the analysis

is that the majority of the purchases are attributed to the independent directors whereas their sales constitute only a small portion of the total sales.

4 Performance of Insider Trading Around Annual Meetings

We have seen that outside directors significantly increase their trades after the annual meetings. This is evidence in favor of that the outside directors trade on the information they obtain at the annual meetings. However, this does not necessarily imply that the information they obtain is accurate or valuable. Indeed, Harris and Raviv (2008) note that "when outsiders control the board, insiders may not provide full or completely accurate information" (p. 1798). One way to understand whether the information obtained during annual meetings is valuable or not is to analyze the trading performance of outside directors.

In analyzing trading performance, we first separate the trades into purchases and sales. This is important because, as mentioned before, purchases are more likely to be information driven whereas sales can be driven by liquidity or portfolio rebalancing motives. Therefore, purchases will be the main focus of the analysis. The whole analysis will be based on the final sample where only trades within one month window of the annual meeting dates are considered [D−15,D+14]. This sample will be split into two 15-day periods based on the meeting date: Trades prior to the meeting date [D−15,D−1] and trades posterior to the meeting date [D,D+14]. We will address two questions: 1. Is there a difference between the performance of trades executed before and those after the annual meetings? 2. Is there a difference between the performance of trades executed by the outside directors with respect to those by other insider groups?

4.1 Market Adjusted Returns for Insiders' Purchases

In this section, we analyze whether outside directors profit when they purchase their company's stock around the annual meetings by using a regression analysis. Following Ravina and Sapienza (2010), for each transaction made by an outside director, we calculate the market adjusted returns of holding the position for 30, 60, 90 and 180 trading days. 180 days case is particularly interesting because insiders are required to surrender any profit made in transactions

that are offset within six months.[9] We also report the results of 0 days holding period for demonstrative motives, however we will not be considering those cases in performance evaluation. As in most of the previous literature, market adjusted returns are computed by compounding the daily returns of a portfolio that goes long 1 dollar in the company stock mimicking the insider's purchase and short 1 dollar in the value weighted market index. In the regressions, we control for firm fixed effects to account for time-invariant firm specific characteristics. This also allows me to compare outside directors and executives belonging to the same firm.

In the basic specification, we consider outside directors' purchases and we regress the return on a dummy taking value one if the trade is initiated after the annual meeting. Table 4 reports the results of this exercise. The positive and significant intercept (in columns 1 to 5) is consistent with the literature, demonstrating that outside directors earn abnormal returns from their purchases. On average, mimicking the outside directors' buys yields a market adjusted return of 1.77% in 30 days, 1.75% in 60 days and 3.2% in 90 days, with 1% significance level. This effect is robust to controlling for the transaction size and the directors' holdings (in columns 6 to 10) to account for individuals' incentives and constraints. For a horizon of 180 days, the return is a significant 2.4%, however the significance does not persist after introducing the controls.

[Insert Table 4: Market Adjusted Returns for Outside Directors' Purchases]

In order to see if there is a difference between the trading performance of positions taken before and those after the annual meetings, we analyze the coefficient on the dummy variable. Table 4 demonstrates that in most specifications, the dummy variable has a significantly positive coefficient. This suggests that outside directors earn higher returns when they trade after attending the annual meetings. The coefficient on the dummy variable is higher and more significant in the specifications with control variables, and the results get stronger as we increase the holding period. For 90 days holding period, the outside directors earn an additional 2.79% when they initiate the trade after the annual meeting date, with the effect being significant at 5% level. For a horizon of 180 days, the outside directors do not gain significant returns for the trades initiated before the meetings in contrast to a significant 4.34% abnormal return for purchases after the meetings. These results are consistent with the view that outside directors obtain valuable information during annual meetings.

Next, we analyze the trading performance of outside directors as compared to other insider groups. The main question is how outside directors perform vis-à-vis their executive counterparts.

[9] Please see the "short-swing" rule at Section 16(b) of the Securities and Exchange Act of 1934.

If we find that outside directors have significantly worse trading performance than the executives, the evidence would be in favor of the argument that outside directors are kept in the dark by the executives of their firms. The analysis in this paper is especially important since we are focusing on a period around the annual meetings, which constitute the basic means of bridging the informational gap between outside and inside members of the board. If the outsiders are not kept in the dark, we would expect them to perform at least as well as their executive counterparts after the annual meetings.

Table 5 reports the results of this exercise, where we consider purchases of all insiders: executives, outside directors, and other insiders. We regress the return on a dummy taking value one if the trade is initiated by an outside director, and another dummy taking value one if the trade is initiated by a nonexecutive non-director (other) insider. The executives' coefficient is therefore captured by the intercept. In Panel A, we consider all transactions within one month window around the meeting dates. When transaction size and holdings are controlled for, executives on average earn 5.53% return in 180 days and the outside directors in the same firm obtain an amount 1.56% less over the same horizon, but the difference is not significant. Interestingly, over shorter horizons, outside directors earn higher market adjusted returns than those of the executives. However, the difference is not significant, except for the holding period of 90 days where mimicking the buys of the outside directors yields 1.84% higher return than that of the executives.

[Insert Table 5: Market Adjusted Returns for Insiders' Purchases]

A deeper analysis where we split the sample into two subperiods with respect to the annual meeting date reveals the reasons behind outperformance of the outside directors' buys. In the subperiod where only purchases prior to the meetings are considered (reported in Panel B), outside directors do not earn significantly different returns than their executive counterparts. However, the picture is altered when we constrain ourselves to trades initiated after the annual meetings. Panel C reports the results in this subsample. Interestingly, executives do not earn significant market adjusted returns whereas outside directors do, with the exception of 180 days horizon. For instance, on average, an executive earns an insignificant 0.2% market adjusted return from her purchases whereas an outside director earns a significant 4.03% for 90 days horizon. For 180 days holding period, both insider groups obtain positive abnormal returns. These results suggest that abnormal returns of outside directors are due to the information they obtain during annual meetings. Therefore, annual meetings help reducing the informational asymmetries between inside and outside board members.

So far we have focused on outside directors as a group. Ravina and Sapienza (2010) note that outside blockholders (nonexecutive directors who own more than 10% of the equity) should be distinguished from the rest of the outside directors that constitutes the independent directors group. Their reasoning is that outside blockholders "might have better access to information or more incentives to trade optimally, given their large stake in the company" (p. 966). In order to replicate the regressions in Ravina and Sapienza (2010), we consider only the purchases of executives and outside directors, and we use dummies to identify those of independent directors and outside blockholders.

Table 6 demonstrates the results obtained from replicating the regressions in Ravina and Sapienza (2010) with the sample around the annual meeting dates. As can be seen, the results are very similar to those reported in Table 5. The reason is that the trades made by large outside blockholders are very few with respect to other insider groups. Consistent with the previous analysis, independent directors obtain higher market adjusted returns than the executives of the same firm. The difference is not significant in the overall sample, but is significant for the subsample of purchases posterior to the annual meeting date. This contradicts the findings of Ravina and Sapienza (2010) where independent directors obtain significantly less market adjusted returns than the executives. The result is driven by the outperformance of mimicking the independent directors' purchases initiated after the annual meetings. This suggests that when we constrain ourselves to a more informative period (i.e., around annual meetings), the independent directors do not perform worse than their executives counterparts.

[Insert Table 6: Market Adjusted Returns for Executives and Outside Directors' Purchases]

As a final robustness check, we re-run the regressions of market adjusted returns for insiders' purchases excluding the firm fixed effects. Even though introducing firm fixed effects is important in capturing firm specific characteristics, there is one caveat. Insiders are shown in the literature to be contrarian investors (Jenter 2005; Lakonishok and Lee 2001; Ravina and Sapienza 2010). Using firm fixed effects may inflate abnormal returns if outside directors trade after price declines and price run-ups; the level of the returns may not be positive whereas the difference with respect to an average firm is. To account for this, Table 7 reports the results of the specifications where firm fixed effects are not introduced. As can be seen, the results are similar to the basic case where fixed effects are included. Mimicking buys of outside directors executed after the annual meetings continue yielding higher market adjusted returns as compared to the executives when transaction size and holdings are controlled for. The effect is significant for most horizons.

Overall, results indicate that outside directors learn a lot about their firms around the annual meetings, and this effect is robust to many specifications.

[Insert Table 7: Market Adjusted Returns for Insiders' Purchases: Without Firm Fixed Effects]

4.2 Market Adjusted Returns for Insiders' Sales

In this section, we analyze whether outside directors profit when they sell their company's stock around the annual meetings. In line with the previous section, market adjusted returns are computed by compounding the daily returns of a portfolio that goes short 1 dollar in the company stock mimicking the insider's sale and long 1 dollar in the value weighted market index. One thing to note is that sales can be driven by diversification or liquidity motives rather than information. On top of this, awards and grants are often transferred to insiders during the annual meetings and this results in an increased selling pressure. Therefore, the findings of this section should be interpreted with caution.

In the basic specification, we consider outside directors' sales and regress the return on a dummy taking value one if the trade is initiated after the annual meeting. Table 8 reports the results of this exercise. The negative and significant intercepts are consistent with Ravina and Sapienza (2010) who document that insiders obtain significantly negative abnormal returns from their sales. On average, mimicking the outside directors' sells yields a market adjusted return of -0.75% in 30 days, -1.50% in 60 days and -2.07% in 90 days and -6.09% in 180 days; all with high statistical significance (in columns 1 to 5). This effect is robust to controlling for the transaction size and the directors' holdings (in columns 6 to 10) to account for individuals' incentives and constraints. Nevertheless, the fact that the sale is executed after the annual meetings changes the sign of the abnormal returns to positive. Indeed, for 90 days horizon, mimicking outside directors' sells initiated after the meetings yields a significant 0.82% market adjusted return when controls are included. This provides evidence in favor of the informativeness of the outside directors' sales when it is initiated after the annual meeting.

[Insert Table 8: Market Adjusted Returns for Outside Directors' Sales]

Finally, we analyze the trading performance of outside directors' sales vis-*à*-vis their executive counterparts. Considering sales transactions of all insiders, we regress the return on a dummy

taking value one if the trade is initiated by an outside director, and another dummy taking value one if the trade is initiated by other insider. The executives' coefficient is therefore captured by the intercept. No matter the trade is initiated before or after the meeting, executives always obtain significantly positive market adjusted returns from their sales transactions, except for 180 days horizon. This is in contradiction with Ravina and Sapienza (2010) where they are shown to obtain negative abnormal returns. This suggests that around the annual meetings, executives' sales are informative. This may be due to the fact that executives gather information around the annual meetings, hence their sales in these periods are more likely to be information driven. On the contrary, outside directors obtain significantly lower returns than their firms' executives, even after the annual meetings. One might argue that outside directors are informed adequately in good times, but not in bad times. However, an equally plausible argument is the increased selling pressure from the compensation granted to the directors during the annual meetings.

[Insert Table 9: Market Adjusted Returns for Insiders' Sales]

Overall, the findings in this section is consistent with the literature which documents that sales may be driven by diversification or liquidity motives rather than information (Jeng et al. 2003; Lakonishok and Lee 2001; Ravina and Sapienza 2010). This seems to be the case especially for outside directors. Interestingly enough, executives earn positive abnormal returns from their trading around meeting dates. This suggests that annual shareholder meetings are important informational events, at least from the point of view of the company executives.

5 Concluding Remarks

This paper analyzes the information content of the annual shareholder meetings from the point of view of the outside directors. We focus on insider purchases, since these trades have proven to be information driven in the literature. The first finding is that insider trading significantly increases around annual meetings. The executives trade extensively shortly before and after the annual meetings, whereas outside directors increase their trading frequency significantly after the meetings. Consistent with the literature, abnormal returns to outside directors' purchases are positive around the annual meetings. Interestingly, outside directors earn significantly higher returns when they trade after acquiring information around the annual meetings. As compared to the performance of their executive counterparts, outside directors who purchase company stock before the annual meetings do not perform better, however those who trade after

the meetings gain significantly higher abnormal returns. Overall, the evidence presented in this paper suggests that annual meetings are important in outside directors' information acquisition: Outsiders do learn a lot about their firms during annual shareholder meetings.

Many interesting extensions of this study are available. First of all, as in the rest of the literature, this paper fails to associate insider sales with consistently well trading performance. One reason could be the awards and grants granted during the annual meetings. If one could classify the individuals as those who receive awards and options, and those who don't, transactions of the non-receivers might provide relevant information on the future of the firm. This is open to investigation since the TFN Insider Filing database provides this information. Second, one can try to understand information content of annual meetings during bad times for the company. It might be possible that in such a period, the outside directors do not use the information for their own (insider) trading; but share it with outsiders to be used in their trading. This subject deserves attention. Finally, we have only focused on reported insider trading around the annual meeting dates to evaluate the information content of the meetings. There are other manners to explore this subject, such as analyzing trading volume or bidask spread of company stocks around the annual meeting dates.

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Table 1: Distribution of Annual Shareholder Meetings

This table presents the distribution of the annual shareholder meetings with respect to meeting month and year. The sample consists of 17,163 annual meetings of 3,042 distinct firms in the period 1996-2010.

	Meeting Month												
Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1996	32	30	36	326	361	69	25	18	31	46	38	14	1,026
1997	39	43	34	313	440	66	36	33	26	51	48	11	1,140
1998	51	49	41	347	509	95	37	31	28	46	53	11	1,298
1999	45	55	42	313	517	90	38	28	40	42	48	21	1,279
2000	41	52	35	283	493	115	34	28	35	44	50	19	1,229
2001	43	44	37	258	566	122	38	33	31	36	52	23	1,283
2002	38	48	32	259	457	85	29	20	24	29	45	10	1,076
2003	29	31	29	239	434	102	32	23	30	38	48	18	1,053
2004	36	44	48	260	457	94	28	28	30	38	44	19	1,126
2005	34	49	39	247	463	104	26	34	28	31	46	22	1,123
2006	38	40	31	229	498	87	23	31	33	38	39	12	1,099
2007	33	37	36	228	565	101	33	38	19	36	40	17	1,183
2008	36	30	32	232	532	117	30	27	24	34	26	13	1,133
2009	31	30	30	198	442	117	23	33	23	26	32	18	1,003
2010	34	35	37	221	556	133	19	23	11	13	22	8	1,112
Total	560	617	539	3,953	7,290	1,497	451	428	413	548	631	236	17,163

Table 2: Insider Trading Samples by Transaction and Insider Type

This table presents the distribution of the insider trading data. The insiders include company executives, directors, large shareholders (who own at least 10% of the company shares), affiliates, controllers, etc. The first group consists of *executives* who hold executive positions in the firm along with possible directorship positions. The second group denotes the *outside directors* who are nonexecutive directors of the firm. This group consists of two subgroups: *independent directors* who are outside directors that are not large shareholders, and *outside blockholders* who are outside directors that own a minimum of 10% share in the company. All the remaining insiders are classified as *other insiders*. Panel A presents the whole insider trading sample that contains all open market purchases and sales of insiders for the period 1996-2010. Panel B presents the sample obtained by merging the whole sample by Riskmetrics database, which basically consists of S&P 1500 companies. Panel C presents the final sample that contains all insider trades executed between 15 days before and 14 after the annual shareholder meeting dates obtained from Riskmetrics database. The statistics regarding transaction values are calculated over the total transactions by each insider group, whereas those regarding number of transactions are calculated by individual, firm, and year.

	Panel A: TFN Insider Filing Sample					
	Min.	Max.	Mean	Median	Std. Dev.	Total
	Purchases: Transaction in Numbers					
Executives	1	958	2.97	1	8.92	214,198
Independent Directors	1	705	2.68	1	6.31	206,556
Outside Blockholders	1	776	7.67	2	30.42	24,546
Other Insiders	1	5,664	14.82	2	98.06	214,682
	Purchases: Value in Dollars					
Executives	200	2,221,536 mil.	18,434,479	12,000	5,005 mil.	3,936,996 mil.
Independent Directors	200	4,500,000 mil.	22,040,118	13,870	9,916 mil.	4,538,700 mil.
Outside Blockholders	200	41,666 mil.	2,639,277	14,625	269 mil.	64,559 mil.
Other Insiders	200	624,099 mil.	6,928,614	21,093	1,647 mil.	1,483,361 mil.
	Sales: Transaction in Numbers					
Executives	1	11,833	8.97	2	64.09	1,506,708
Independent Directors	1	2,031	7.09	2	34.08	460,894
Outside Blockholders	1	6,064	20.26	2	165.97	82,691
Other Insiders	1	5,677	12.15	2	81.56	294,255
	Sales: Value in Dollars					
Executives	200	414,011 mil.	663,062	35,640	338 mil.	998,728 mil.
Independent Directors	200	7,350 mil.	578,258	35,062	14 mil.	266,386 mil.
Outside Blockholders	200	14,000 mil.	1,936,922	27,479	55 mil.	160,067 mil.
Other Insiders	200	807,142 mil.	5,343,762	41,900	1,489 mil.	1,570,676 mil.

	Panel B: TFN Insider Filing - Riskmetrics Merged Sample					
	Min.	Max.	Mean	Median	Std. Dev.	Total
	Purchases: Transaction in Numbers					
Executives	1	958	2.81	1	11.16	67,222
Independent Directors	1	705	2.57	1	7.30	66,938
Outside Blockholders	1	509	9.39	2	33.67	4,966
Other Insiders	1	5664	25.37	3.00	191.06	85,836
	Purchases: Value in Dollars					
Executives	204	884 mil.	210,025	21,845	5 mil.	14,104 mil.
Independent Directors	200	836 mil.	214,618	23,760	4 mil.	14,360 mil.
Outside Blockholders	217	375 mil.	1,114,587	30,095	11 mil.	5,521 mil.
Other Insiders	200	26,511 mil.	1,823,527	20,730	110 mil.	156,480 mil.
	Sales: Transaction in Numbers					
Executives	1	11,833	9.58	2	75.02	1,023,294
Independent Directors	1	1,612	7.41	2	32.73	271,899
Outside Blockholders	1	6,064	34.31	3	258.14	52,328
Other Insiders	1	5,677	17.59	2	124.72	160,794
	Sales: Value in Dollars					
Executives	203	10,443 mil.	415,393	48,600	16 mil.	425,015 mil.
Independent Directors	202	7,350 mil.	642,813	53,434	16 mil.	174,743 mil.
Outside Blockholders	500	14,000 mil.	2,021,599	41,232	67 mil.	105,780 mil.
Other Insiders	216	6,188 mil.	2,598,982	50,490	42 mil.	417,851

	Panel C: Final Sample - Insider Trading Around Annual Meetings					
	Min.	Max.	Mean	Median	Std. Dev.	Total
	Purchases: Transaction in Numbers					
Executives	1	116	2.09	1	5.08	3,845
Independent Directors	1	114	1.76	1	3.46	5,343
Outside Blockholders	1	20	3.81	2.50	4.20	99
Other Insiders	1	1,028	10.44	2	65.80	2,684
	Purchases: Value in Dollars					
Executives	125	10 mil.	161,347	30,856	0.518 mil.	620 mil.
Independent Directors	382	91 mil.	192,106	27,074	1.584 mil.	1,026 mil.
Outside Blockholders	1,540	34 mil.	1,075,551	66,960	4.967 mil.	106 mil.
Other Insiders	594	7,044 mil.	5,850,077	16,345	190 mil.	15,701 mil.
	Sales: Transaction in Numbers					
Executives	1	1,706	5.51	2	24.79	92,888
Independent Directors	1	414	4.85	2	14.96	25,552
Outside Blockholders	1	1,396	22.47	3	116.09	3,573
Other Insiders	1	692	13.59	2	53.14	12,314
	Sales: Value in Dollars					
Executives	198	773 mil.	418,867	54,264	5 mil.	38,907 mil.
Independent Directors	478	378 mil.	606,685	64,218	6 mil.	15,502 mil.
Outside Blockholders	1,146	897 mil.	970,564	63,138	17 mil.	3,466 mil.
Other Insiders	414	1,479 mil.	1,522,729	59,555	21 mil.	18,750 mil.

Table 3: Distribution of Insiders' Transactions in Annual Meetings Sample

This table presents the distribution of the insider trading data in the final sample that contains all trades executed between 15 days before and 14 after the annual shareholder meeting dates obtained from Riskmetrics database. The insiders include company executives, directors, large shareholders (who own at least 10% of the company shares), affiliates, controllers, etc. The first group consists of *executives* who hold executive positions in the firm along with possible directorship positions. The second group denotes the *outside directors* who are nonexecutive directors of the firm. This group consists of two subgroups: *independent directors* who are outside directors that are not large shareholders, and *outside blockholders* who are outside directors that own a minimum of 10% share in the company. All the remaining insiders are classified as *other insiders*. Panel A splits the transactions into two categories as before and after the meeting date (D) and reports the total number of transactions for each insider group along with the percentages in parenthesis. Difference in means is calculated by comparing the mean number of transactions executed after the meetings (averaged over all annual meetings) vs. that for transactions executed before. The p-values for t-tests are reported in parenthesis. The symbols ***, **, and * denote statistical significance of differences at the 1%, 5%, and 10% levels, respectively. Panel B presents the distribution of the transactions on each day with respect to the annual meeting date.

Panel A: Insiders Transactions Before and After the Meeting Date

	Insiders' Purchases					Insiders' Sales				
	Executives	Ind. Directors	Out. Blockh.	Oth. Insiders	Total	Executives	Ind. Directors	Out. Blockh.	Oth. Insiders	Total
Before D	1,771	1,696	60	1,509	5,056	42,138	11,209	1,227	4,387	58,961
	(46.1%)	(31.7%)	(60.6%)	(56.2%)	(42.1%)	(45.4%)	(43.9%)	(34.3%)	(35.6%)	(43.9%)
After D	2,074	3,647	39	1,175	6,935	50,750	14,343	2,346	7,927	75,366
	(53.9%)	(68.3%)	(39.4%)	(43.8%)	(57.9%)	(54.6%)	(56.1%)	(65.7%)	(64.4%)	(56.1%)
Diff. in	0.23	0.88***	-0.91	-1.83	1.13**	0.57**	0.81***	7.88	5.44**	1.73***
Means	(0.16)	(0.00)	(0.41)	(0.66)	(0.01)	(0.01)	(0.00)	(0.43)	(0.01)	(0.00)

Panel B: Insiders Transactions on Days Around the Meeting Date

Days	Insiders' Purchases					Insiders' Sales				
w.r.t. D	Executives	Ind. Directors	Out. Blockh.	Oth. Insiders	Total	Executives	Ind. Directors	Out. Blockh.	Oth. Insiders	Total
-15	112	116	2	122	352	2,356	705	123	337	3,521
-14	152	123	3	144	422	2,859	791	83	336	4,069
-13	106	118	2	162	388	2,623	675	59	328	3,685
-12	59	65	3	61	188	1,483	362	21	262	2,128
-11	68	67	29	69	233	1,318	312	12	135	1,777
-10	58	83	2	102	245	2,046	594	97	176	2,913
-9	70	127	2	142	341	3,643	635	76	211	4,565
-8	138	182	6	105	431	4,587	1,053	60	355	6,055
-7	181	178	0	147	506	4,156	1,045	78	389	5,668
-6	201	159	2	77	439	3,211	1,192	98	411	4,912
-5	112	78	2	33	225	2,247	773	84	329	3,433
-4	111	78	0	56	245	1,721	398	71	238	2,428
-3	67	75	0	84	226	2,297	524	117	155	3,093
-2	127	79	5	93	304	3,297	809	68	182	4,356
-1	209	168	2	112	491	4,294	1,341	180	543	6,358
0	**194**	**330**	**2**	**106**	**632**	**3,935**	**1,183**	**108**	**750**	**5,976**
1	249	458	1	156	864	4,523	1,313	231	706	6,773
2	126	343	4	37	510	2,655	1,095	247	545	4,542
3	132	271	0	33	436	2,414	664	120	491	3,689
4	86	166	0	87	339	2,413	821	285	591	4,110
5	129	262	4	72	467	3,403	868	89	505	4,865
6	201	329	1	108	639	4,634	1,361	68	501	6,564
7	187	281	3	94	565	4,621	1,315	195	550	6,681
8	166	242	5	79	492	4,354	1,170	183	702	6,409
9	107	167	3	45	322	2,956	821	100	377	4,254
10	97	71	3	25	196	1,776	625	108	447	2,956
11	61	85	3	69	218	1,938	429	118	137	2,622
12	91	192	2	102	387	3,065	746	169	395	4,375
13	124	219	5	112	460	3,863	822	154	615	5,454
14	124	231	3	50	408	4,200	1,110	171	615	6,096
Total	3,845	5,343	99	2,684	11,971	92,888	25,552	3,573	12,314	134,327

Table 4: Market Adjusted Returns for Outside Directors' Purchases

This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for outside directors' purchases around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes long 1 dollar in the company stock mimicking the outside director's purchase and short 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. After meeting is a dummy taking value 1 if the trade is initiated after the annual meeting, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Firm fixed effects are included in the regressions. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.427**	1.770***	1.751***	3.176***	2.439*	0.136	1.252***	1.288*	1.682**	0.625
	(2.56)	(3.56)	(2.78)	(4.07)	(1.75)	(1.22)	(2.80)	(1.85)	(2.09)	(0.51)
After Meeting	–0.506**	0.313	1.691*	1.624	4.380**	–0.284*	0.947	2.536***	2.791**	4.344**
	(–2.12)	(0.44)	(1.93)	(1.49)	(2.21)	(–1.81)	(1.47)	(2.60)	(2.47)	(2.46)
Transaction						0.008	–0.039	–0.032	–0.053	–0.038
						(0.92)	(–1.27)	(–0.61)	(–1.26)	(–0.71)
Holdings						0.011	–0.056	0.049	0.111**	0.256**
						(1.62)	(–1.62)	(0.86)	(2.05)	(2.35)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.004	0.000	0.002	0.001	0.004	0.003	0.002	0.004	0.004	0.005
Observations	5282	5282	5282	5282	5282	3228	3228	3228	3228	3228

Table 5: Market Adjusted Returns for Insiders' Purchases

This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for insiders' purchases around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes long 1 dollar in the company stock mimicking the insider's purchase and short 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. The insiders consist of executives, outside directors, beneficial owners, affiliates, controllers, etc. Outside director is a dummy taking value 1 if the trade is initiated by an outside director, and 0 otherwise. Other insider is a dummy taking value 1 if the trade is initiated by a nonexecutive non-director insider, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Panel A reports the results for one month window (-15 days to +14 days) around the annual meeting date (D) whereas panels B and C split this period into two as prior vs. posterior to the annual meeting. Firm fixed effects are included in the regressions. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Panel A: Purchases Around the Annual Meetings [D−15,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.260***	1.716***	0.924	1.842**	8.806***	0.093	1.572***	2.668***	2.117***	5.533***
	(2.76)	(4.90)	(1.37)	(2.45)	(5.59)	(1.07)	(4.36)	(4.59)	(3.02)	(5.62)
Out. Director (a)	–0.132	0.846	0.439	1.226	–3.176**	–0.098	0.807	0.424	1.845*	–1.561
	(–0.96)	(1.63)	(0.49)	(1.26)	(–1.98)	(–0.81)	(1.64)	(0.54)	(1.93)	(–1.19)
Oth. Insider (b)	–0.025	–0.885	–4.093**	–4.981***	–11.230**	–0.096	–1.093	–2.787	–4.728*	–7.797**
	(–0.12)	(–1.11)	(–2.21)	(–2.61)	(–2.50)	(–0.39)	(–0.91)	(–1.35)	(–1.96)	(–2.45)
Transaction						0.009	0.002	–0.011	0.112*	0.217**
						(0.55)	(0.03)	(–0.13)	(1.76)	(2.00)
Holdings						–0.001	0.115*	0.071	0.040	0.060
						(–0.22)	(1.93)	(0.79)	(0.45)	(0.54)
Transaction × (a)						–0.006	–0.038	–0.008	–0.150**	–0.247**
						(–0.36)	(–0.69)	(–0.08)	(–2.05)	(–2.09)
Holdings × (a)						0.003	–0.131**	–0.057	–0.009	0.050
						(0.46)	(–2.15)	(–0.58)	(–0.09)	(0.33)

Transaction × (b)						–0.011	–0.020	0.023	–0.112*	–0.220**
						(–0.70)	(–0.41)	(0.27)	(–1.75)	(–2.02)
Holdings × (b)						0.002	–0.120**	–0.076	–0.028	–0.045
						(0.35)	(–2.00)	(–0.84)	(–0.31)	(–0.40)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.000	0.001	0.003	0.003	0.004	0.001	0.005	0.002	0.004	0.003
Observations	11628	11628	11628	11628	11628	5603	5603	5603	5603	5603
	Panel B: Purchases Prior to the Annual Meetings [D−15,D−1]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.276	3.552***	–0.040	–1.049	0.539	0.074	3.088***	4.842***	3.865***	4.571***
	(1.60)	(6.29)	(–0.03)	(–0.86)	(0.38)	(0.50)	(4.64)	(4.67)	(3.17)	(2.99)
Out. Director (a)	0.193	–0.547	0.297	1.412	0.867	0.026	–0.703	–1.318	0.108	–0.864
	(0.82)	(–0.63)	(0.21)	(1.04)	(0.38)	(0.12)	(–0.85)	(–1.17)	(0.09)	(–0.39)
Oth. Insider (b)	0.049	–2.041*	–4.888	–2.887	–3.923	–0.201	–1.938	–6.960	–4.811	–3.346
	(0.14)	(–1.75)	(–1.45)	(–0.96)	(–1.59)	(–0.51)	(–0.85)	(–1.54)	(–0.90)	(–0.85)
Transaction						0.084*	–0.102	0.212	0.361	–0.522
						(1.88)	(–0.44)	(0.90)	(1.21)	(–1.30)
Holdings						–0.004	0.130**	0.047	0.045	0.065
						(–0.88)	(2.06)	(0.59)	(0.65)	(0.67)
Transaction × (a)						–0.062	0.017	–0.326	–0.596*	0.314
						(–1.35)	(0.07)	(–1.22)	(–1.86)	(0.74)
Holdings × (a)						0.003	–0.146**	–0.055	0.029	0.034
						(0.41)	(–2.18)	(–0.52)	(0.28)	(0.19)
Transaction × (b)						–0.074	0.092	–0.260	–0.485	0.410
						(–1.57)	(0.39)	(–1.04)	(–1.57)	(1.00)
Holdings × (b)						0.009**	–0.142**	–0.036	–0.028	–0.076
						(2.01)	(–2.24)	(–0.44)	(–0.37)	(–0.77)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.000	0.001	0.005	0.002	0.001	0.006	0.012	0.012	0.014	0.006
Observations	4879	4879	4879	4879	4879	2158	2158	2158	2158	2158

	Panel C: Purchases Posterior to the Annual Meetings [D,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.221*	0.246	1.284	3.093***	13.958***	0.036	0.557	0.801	0.207	5.010***
	(1.78)	(0.52)	(1.50)	(3.43)	(6.64)	(0.30)	(1.25)	(1.12)	(0.23)	(4.02)
Out. Director (a)	–0.267	2.065***	1.331	2.102*	–4.401**	–0.082	1.864***	2.315**	4.033***	0.254
	(–1.40)	(3.05)	(1.08)	(1.70)	(–2.23)	(–0.51)	(3.09)	(2.37)	(3.28)	(0.16)
Oth. Insider (b)	–0.028	–0.255	–3.637*	–5.764**	–18.043**	–0.351	–0.781	–0.330	–4.449*	–12.181**
	(–0.12)	(–0.24)	(–1.84)	(–2.31)	(–2.27)	(–1.06)	(–0.67)	(–0.16)	(–1.68)	(–2.20)
Transaction						–0.009	–0.011	–0.062	0.072**	0.221**
						(–0.85)	(–0.30)	(–0.87)	(1.99)	(2.27)
Holdings						0.005	0.092	0.169	0.094	0.124
						(0.29)	(0.82)	(0.96)	(0.44)	(0.56)
Transaction × (a)						0.004	–0.004	0.067	–0.073*	–0.214**
						(0.27)	(–0.09)	(0.85)	(–1.74)	(–2.14)
Holdings × (a)						0.002	–0.117	–0.134	–0.030	0.077
						(0.13)	(–1.05)	(–0.76)	(–0.14)	(0.32)
Transaction × (b)						0.007	–0.014	0.076	–0.067*	–0.223**
						(0.64)	(–0.36)	(1.08)	(–1.85)	(–2.29)
Holdings × (b)						0.011	–0.099	–0.157	–0.045	0.054
						(0.70)	(–0.88)	(–0.88)	(–0.20)	(0.22)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.001	0.005	0.003	0.006	0.008	0.001	0.008	0.005	0.009	0.006
Observations	6749	6749	6749	6749	6749	3445	3445	3445	3445	3445

Table 6: Market Adjusted Returns for Executives and Outside Directors' Purchases

This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for insiders' purchases around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes long 1 dollar in the company stock mimicking the insider's purchase and short 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. The individuals consist of executives and outside directors (independent directors and blockholders). Independent director is a dummy taking value 1 if the trade is initiated by an independent director, and 0 otherwise. Outside blockholder is a dummy taking value 1 if the trade is initiated by a nonexecutive director that owns a minimum of 10% of the company stock, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Panel A reports the results for one month window (-15 days to +14 days) around the annual meeting date (D) whereas panels B and C split this period into two as prior vs. posterior to the annual meeting. Firm fixed effects are included in the regressions. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Panel A: Purchases Around the Annual Meetings [D−15,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.211**	2.281***	3.320***	3.511***	7.295***	0.083	1.357***	2.614***	1.806***	4.614***
	(2.45)	(6.83)	(5.71)	(5.45)	(6.84)	(0.98)	(3.88)	(4.81)	(2.78)	(4.87)
Ind. Director (a)	–0.154	0.777	0.368	1.218	–2.511	–0.059	0.736	0.284	1.903**	–1.504
	(–1.09)	(1.46)	(0.41)	(1.23)	(–1.61)	(–0.48)	(1.48)	(0.36)	(1.98)	(–1.14)
Out. Blockholder (b)	0.724	–5.411	–4.869	–4.972	–23.727***	0.133	–1.410	–4.029	–4.999	–16.786
	(1.31)	(–1.60)	(–1.00)	(–1.10)	(–2.74)	(0.15)	(–0.26)	(–0.46)	(–0.62)	(–1.41)
Transaction						0.009	0.007	–0.008	0.119*	0.225**
						(0.55)	(0.14)	(–0.09)	(1.82)	(2.04)
Holdings						–0.001	0.123*	0.072	0.039	0.062
						(–0.20)	(1.94)	(0.78)	(0.43)	(0.54)
Transaction × (a)						–0.026	–0.014	0.112	–0.031	–0.076
						(–0.95)	(–0.21)	(1.01)	(–0.31)	(–0.51)
Holdings × (a)						0.012	–0.142**	–0.001	0.118	0.290*
						(1.41)	(–2.18)	(–0.01)	(1.16)	(1.91)

Transaction × (b)						0.001	–0.051	–0.033	–0.172**	–0.249*
						(0.05)	(–0.87)	(–0.35)	(–2.11)	(–1.95)
Holdings × (b)						–0.003	–0.107	–0.068	–0.074	–0.035
						(–0.17)	(–0.90)	(–0.51)	(–0.51)	(–0.16)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.001	0.002	0.001	0.001	0.004	0.001	0.004	0.002	0.003	0.004
Observations	8979	8979	8979	8979	8979	5073	5073	5073	5073	5073
Panel B: Purchases Prior to the Annual Meetings [D−15,D−1]										
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.173	4.152***	3.350***	1.659**	1.321	0.100	3.210***	4.727***	3.954***	4.706***
	(1.31)	(8.74)	(4.54)	(2.04)	(0.94)	(0.71)	(5.44)	(6.36)	(4.68)	(3.23)
Ind. Director (a)	0.233	–0.891	–0.016	1.207	1.738	0.073	–1.048	–1.369	0.304	–0.667
	(0.95)	(–0.96)	(–0.01)	(0.88)	(0.73)	(0.32)	(–1.25)	(–1.27)	(0.26)	(–0.29)
Out. Blockholder (b)	0.184	–5.902	–12.191	–15.700**	–25.395**	0.447	–9.552	–15.910	–24.649*	–21.393
	(0.19)	(–1.09)	(–1.30)	(–2.11)	(–2.07)	(0.26)	(–0.88)	(–0.88)	(–1.72)	(–1.16)
Transaction						0.082*	–0.045	0.279	0.436	–0.469
						(1.85)	(–0.19)	(1.18)	(1.47)	(–1.15)
Holdings						–0.004	0.131**	0.041	0.037	0.053
						(–0.92)	(2.05)	(0.51)	(0.54)	(0.56)
Transaction × (a)						–0.063	–0.003	–0.308	–0.626*	0.461
						(–1.36)	(–0.01)	(–1.23)	(–1.84)	(1.10)
Holdings × (a)						0.013	–0.182**	0.098	0.262**	0.467**
						(1.07)	(–2.28)	(0.66)	(2.26)	(2.46)
Transaction × (b)						–0.049	–0.086	–0.410	–0.756**	0.243
						(–1.02)	(–0.31)	(–1.23)	(–2.26)	(0.52)
Holdings × (b)						–0.045	0.056	–0.033	0.722	–0.396
						(–0.69)	(0.13)	(–0.05)	(1.33)	(–0.36)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.001	0.002	0.004	0.006	0.007	0.007	0.018	0.015	0.027	0.014
Observations	3390	3390	3390	3390	3390	1878	1878	1878	1878	1878

	Panel C: Purchases Posterior to the Annual Meetings [D,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.217*	0.906*	2.906***	4.101***	10.492***	0.013	0.200	0.646	–0.404	3.468***
	(1.69)	(1.94)	(3.41)	(4.92)	(8.49)	(0.11)	(0.44)	(0.89)	(–0.45)	(2.87)
Ind. Director (a)	–0.304	1.944***	1.284	2.208*	–3.814**	–0.040	1.749***	2.022**	4.044***	0.198
	(–1.54)	(2.84)	(1.02)	(1.77)	(–2.12)	(–0.24)	(2.88)	(2.06)	(3.27)	(0.12)
Out. Blockholder (b)	1.077*	–4.726	–3.416	–0.849	–23.063**	–0.737	7.692	10.675	11.681	–4.136
	(1.71)	(–0.96)	(–0.62)	(–0.16)	(–2.09)	(–0.48)	(1.16)	(0.90)	(1.05)	(–0.28)
Transaction						–0.008	–0.011	–0.061	0.075**	0.223**
						(–0.82)	(–0.28)	(–0.86)	(2.03)	(2.28)
Holdings						0.004	0.106	0.174	0.091	0.107
						(0.20)	(0.87)	(0.93)	(0.40)	(0.45)
Transaction × (a)						–0.041	0.057	0.244**	0.049	–0.124
						(–1.10)	(0.80)	(2.25)	(0.47)	(–0.79)
Holdings × (a)						0.002	–0.114	–0.106	0.028	0.189
						(0.11)	(–0.94)	(–0.56)	(0.12)	(0.71)
Transaction × (b)						–0.026	–0.059	0.152	0.008	–0.038
						(–1.45)	(–0.89)	(1.35)	(0.09)	(–0.25)
Holdings × (b)						2.211***	1.340	–7.875**	–6.628**	–8.753*
						(2.69)	(0.63)	(–2.38)	(–2.25)	(–1.83)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.002	0.006	0.001	0.002	0.004	0.004	0.006	0.006	0.007	0.003
Observations	5589	5589	5589	5589	5589	3195	3195	3195	3195	3195

Table 7: Market Adjusted Returns for Insiders' Purchases: Without Firm Fixed Effects

This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for insiders' purchases around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes long 1 dollar in the company stock mimicking the insider's purchase and short 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. The insiders consist of executives, outside directors, beneficial owners, affiliates, controllers, etc. Outside director is a dummy taking value 1 if the trade is initiated by an outside director, and 0 otherwise. Other insider is a dummy taking value 1 if the trade is initiated by a nonexecutive non-director insider, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Panel A reports the results for one month window (-15 days to +14 days) around the annual meeting date (D) whereas panels B and C split this period into two as prior vs. posterior to the annual meeting. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Panel A: Purchases Around the Annual Meetings [D−15,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.194*	3.654***	4.317***	4.001*	5.858*	0.180**	1.830***	2.758***	2.745***	4.817***
	(1.93)	(3.47)	(3.43)	(1.75)	(1.87)	(2.04)	(3.64)	(3.96)	(3.06)	(3.89)
Out. Director (a)	–0.108	–1.673	–1.426	0.270	–0.466	–0.251**	0.104	0.222	0.654	–1.189
	(–0.76)	(–1.47)	(–1.00)	(0.11)	(–0.12)	(–2.38)	(0.17)	(0.27)	(0.62)	(–0.75)
Oth. Insider (b)	0.217	–4.372**	–15.268***	–12.554***	–3.693	–0.431**	1.197	–1.827	–3.349	0.627
	(1.05)	(–2.34)	(–3.25)	(–3.05)	(–0.82)	(–2.32)	(0.74)	(–0.72)	(–1.40)	(0.16)
Transaction						0.000	0.047	0.050	0.050	0.030
						(0.04)	(1.18)	(0.75)	(1.03)	(0.34)
Holdings						0.001	0.057**	–0.043*	–0.167***	–0.175***
						(0.21)	(2.09)	(–1.93)	(–5.79)	(–4.25)
Transaction × (a)						0.036***	–0.144**	–0.119	–0.068	–0.144
						(2.62)	(–2.30)	(–0.99)	(–0.64)	(–1.12)
Holdings × (a)						–0.018**	–0.074*	0.156***	0.407***	0.424***
						(–2.09)	(–1.75)	(3.13)	(4.93)	(4.96)

Transaction × (b)						0.006	–0.060	–0.060	–0.052	–0.029
						(0.56)	(–1.50)	(–0.88)	(–1.08)	(–0.33)
Holdings × (b)						0.001	–0.084***	0.036	0.163***	0.149***
						(0.26)	(–2.70)	(1.22)	(4.33)	(3.07)
Fixed Effects	No	No	No	No	No	No	No	No	No	No
R-squared	0.002	0.010	0.069	0.035	0.001	0.011	0.004	0.002	0.006	0.002
Observations	11628	11628	11628	11628	11628	5603	5603	5603	5603	5603
Panel B: Purchases Prior to the Annual Meetings [D−15,D−1]										
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.285	5.740***	3.608*	0.211	0.264	0.225	2.913***	4.541***	5.477***	6.855***
	(1.63)	(2.95)	(1.78)	(0.07)	(0.08)	(1.56)	(3.43)	(4.18)	(3.64)	(3.34)
Out. Director (a)	0.012	–4.196**	–0.950	3.471	2.876	–0.125	–0.846	–1.516	–2.331	–4.109*
	(0.05)	(–2.07)	(–0.44)	(1.12)	(0.75)	(–0.71)	(–0.84)	(–1.16)	(–1.37)	(–1.68)
Oth. Insider (b)	0.229	–4.996*	–15.402***	–9.392**	–5.342	–0.540*	–0.891	–5.925**	–8.478***	–9.162**
	(0.88)	(–1.77)	(–3.25)	(–2.27)	(–1.06)	(–1.83)	(–0.48)	(–2.39)	(–2.92)	(–2.31)
Transaction						0.066**	0.215	0.671***	0.446*	–0.249
						(2.53)	(0.96)	(3.04)	(1.82)	(–0.70)
Holdings						0.004	0.093***	–0.084**	–0.229***	–0.232***
						(1.40)	(3.01)	(–2.27)	(–5.57)	(–6.29)
Transaction × (a)						–0.028	–0.356	–0.761***	–0.575**	0.024
						(–1.02)	(–1.54)	(–3.18)	(–2.15)	(0.06)
Holdings × (a)						–0.033***	–0.062	0.217***	0.421***	0.379***
						(–4.26)	(–1.54)	(2.70)	(3.72)	(2.68)
Transaction × (b)						–0.068**	–0.247	–0.707***	–0.482*	0.234
						(–2.57)	(–1.09)	(–3.20)	(–1.96)	(0.65)
Holdings × (b)						–0.002	–0.102***	0.091**	0.231***	0.225***
						(–0.55)	(–3.20)	(2.33)	(5.23)	(5.51)
Fixed Effects	No	No	No	No	No	No	No	No	No	No
R-squared	0.001	0.017	0.092	0.042	0.007	0.012	0.010	0.024	0.022	0.007
Observations	4879	4879	4879	4879	4879	2158	2158	2158	2158	2158

	Panel C: Purchases Posterior to the Annual Meetings [D,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	0.119	1.936***	4.901***	7.123***	10.468***	0.095	0.896*	0.847	0.278	3.444**
	(0.93)	(2.72)	(3.85)	(2.85)	(2.78)	(0.86)	(1.66)	(1.08)	(0.30)	(2.38)
Out. Director (a)	–0.135	0.256	–1.897	–2.568	–3.988	–0.251*	0.976	2.113**	3.249***	0.622
	(–0.79)	(0.28)	(–1.21)	(–0.96)	(–0.80)	(–1.93)	(1.47)	(2.19)	(2.75)	(0.31)
Oth. Insider (b)	0.160	–4.529*	–14.770***	–14.869***	0.996	–0.355*	4.423**	3.287	1.615	10.578
	(0.56)	(–1.81)	(–2.86)	(–3.00)	(0.17)	(–1.65)	(2.34)	(0.94)	(0.48)	(1.56)
Transaction						–0.009	0.027	–0.035	–0.000	0.075
						(–1.13)	(1.21)	(–1.15)	(–0.01)	(0.92)
Holdings						–0.005	–0.008	0.019	–0.073	–0.089
						(–0.90)	(–0.24)	(0.32)	(–0.95)	(–0.81)
Transaction × (a)						0.045***	–0.105	–0.025	0.030	–0.141
						(3.01)	(–1.38)	(–0.17)	(0.20)	(–1.09)
Holdings × (a)						–0.002	–0.051	0.077	0.396***	0.486***
						(–0.21)	(–1.13)	(1.12)	(2.87)	(3.67)
Transaction × (b)						0.016*	–0.037	0.027	–0.003	–0.080
						(1.74)	(–1.61)	(0.85)	(–0.06)	(–0.95)
Holdings × (b)						0.027**	–0.170**	–0.093	0.122	0.073
						(2.23)	(–2.46)	(–0.84)	(0.70)	(0.36)
Fixed Effects	No	No	No	No	No	No	No	No	No	No
R-squared	0.001	0.014	0.049	0.030	0.002	0.017	0.008	0.003	0.007	0.005
Observations	6749	6749	6749	6749	6749	3445	3445	3445	3445	3445

Table 8: Market Adjusted Returns for Outside Directors' Sales

This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for outside directors' sales around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes short 1 dollar in the company stock mimicking the outside director's sale and long 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. After meeting is a dummy taking value 1 if the trade is initiated after the annual meeting, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Firm fixed effects are included in the regressions. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	–0.055	–0.753**	–1.507***	–2.073***	–6.099***	–0.178***	–0.015	–0.707*	–0.777*	–2.974***
	(–1.00)	(–2.57)	(–4.44)	(–4.05)	(–8.31)	(–3.64)	(–0.06)	(–1.94)	(–1.82)	(–5.04)
After Meeting	–0.142*	0.003	0.019	1.729**	1.074	–0.137*	0.425	0.634	1.591**	0.269
	(–1.66)	(0.01)	(0.04)	(2.23)	(0.97)	(–1.76)	(1.13)	(1.12)	(2.40)	(0.31)
Transaction						0.004***	0.003	0.003	0.005	–0.004
						(3.08)	(0.74)	(0.44)	(0.83)	(–0.62)
Holdings						–0.000	–0.001*	0.005***	0.007***	0.011***
						(–0.03)	(–1.79)	(5.32)	(4.37)	(4.00)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.001	0.000	0.000	0.002	0.000	0.003	0.001	0.003	0.006	0.007
Observations	28965	28965	28965	28965	28965	6062	6062	6062	6062	6062

Table 9: Market Adjusted Returns for Insiders' Sales

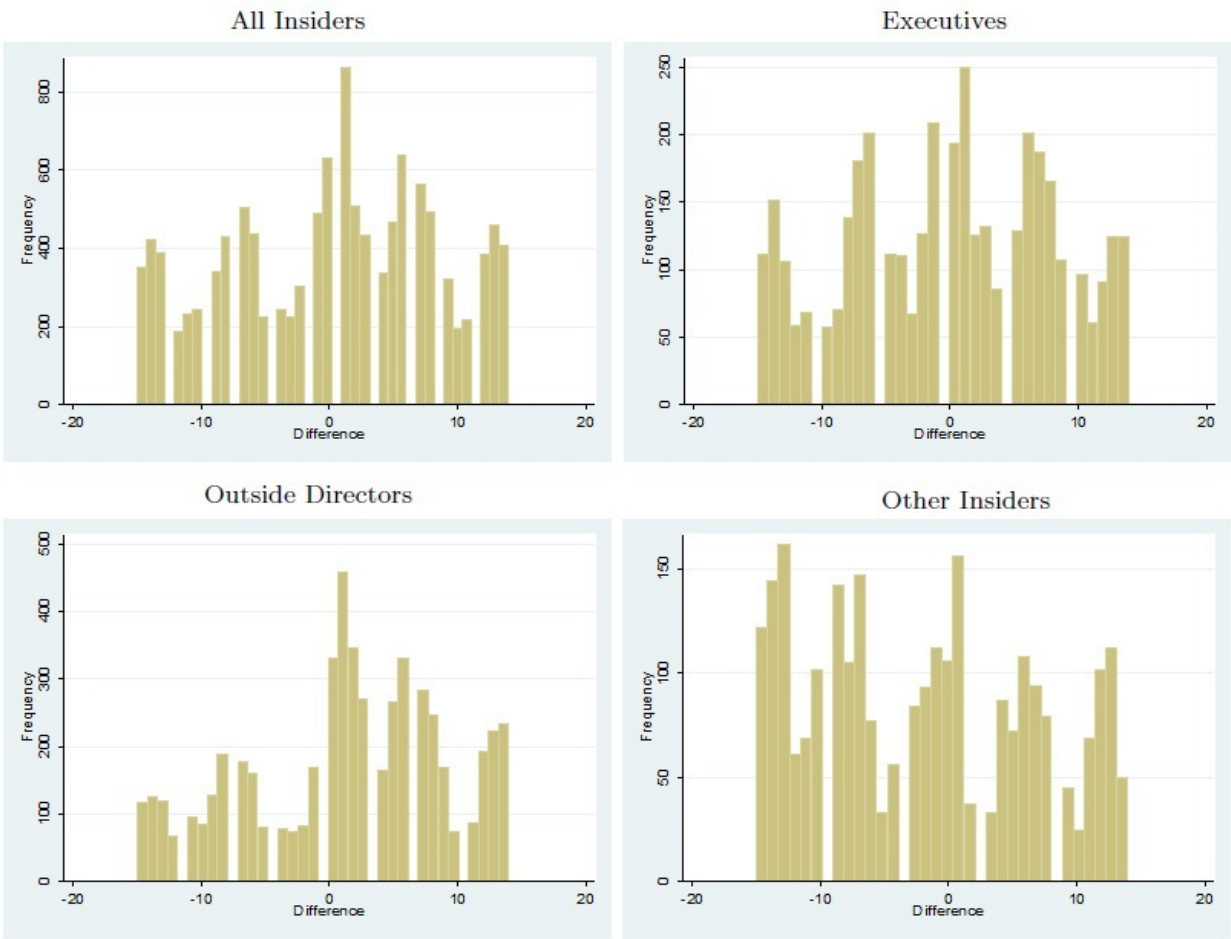
This table presents the coefficient estimates of the regressions where the dependent variable is the market adjusted returns for insiders' sales around annual meetings. Market adjusted returns are computed by compounding the daily returns of a portfolio that goes short 1 dollar in the company stock mimicking the insider's sale and long 1 dollar in the value weighted market index, holding the position for 0, 30, 60, 90 and 180 days in respective columns. Returns are multiplied by 100 to make the coefficients in percentage form. The insiders consist of executives, outside directors, beneficial owners, affiliates, controllers, etc. Outside director is a dummy taking value 1 if the trade is initiated by an outside director, and 0 otherwise. Other insider is a dummy taking value 1 if the trade is initiated by a nonexecutive non-director insider, and 0 otherwise. Transaction is the size of the transaction as a fraction of market capitalization (measured in $00,000). Holding is the value of the individual's holdings scaled by $10 million. Panel A reports the results for one month window (-15 days to +14 days) around the annual meeting date (D) whereas panels B and C split this period into two as prior vs. posterior to the annual meeting. Firm fixed effects are included in the regressions. The t-statistics in parentheses are estimated using standard errors adjusted for the clustering of individuals. The symbols ***, **, and * denote statistical significance of coefficients at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Panel A: Sales Around the Annual Meetings [D−15,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	–0.150***	0.081	0.169	0.776***	–3.184***	–0.418***	0.712***	0.848***	1.358***	–0.907***
	(–5.53)	(0.63)	(0.81)	(3.05)	(–10.40)	(–22.26)	(8.19)	(5.81)	(7.60)	(–3.55)
Out. Director (a)	0.045	–0.366	–0.586	–0.807	–1.220	0.175***	–0.600***	–1.091***	–0.948**	–2.003***
	(0.63)	(–1.15)	(–0.94)	(–1.11)	(–1.35)	(4.16)	(–2.92)	(–3.22)	(–2.26)	(–3.31)
Oth. Insider (b)	–0.068	–1.235	–1.981*	–3.306**	–1.787	0.217**	–0.905**	–2.190***	–3.414***	–4.235**
	(–0.55)	(–1.47)	(–1.89)	(–2.43)	(–1.30)	(2.33)	(–1.99)	(–2.65)	(–3.34)	(–2.46)
Transaction						0.001	–0.006**	–0.007	0.001	–0.000
						(1.33)	(–2.17)	(–1.18)	(0.09)	(–0.00)
Holdings						0.000***	–0.000	0.000	0.001	0.001
						(3.60)	(–0.06)	(0.40)	(0.44)	(0.40)
Transaction × (a)						0.002	–0.002	–0.006	–0.017	–0.018
						(1.32)	(–0.38)	(–0.70)	(–1.35)	(–1.43)
Holdings × (a)						–0.000**	–0.001**	0.002***	0.003**	0.005***
						(–2.17)	(–2.18)	(3.04)	(2.57)	(4.22)

Transaction × (b)						–0.001	0.005	0.003	–0.008	–0.008
						(–0.94)	(1.55)	(0.44)	(–0.87)	(–0.76)
Holdings × (b)						–0.000**	0.002	0.006**	0.006**	0.016***
						(–2.39)	(1.54)	(2.36)	(2.15)	(3.37)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.000	0.001	0.001	0.001	0.000	0.002	0.001	0.002	0.002	0.003
Observations	133199	133199	133199	133199	133199	25713	25713	25713	25713	25713
Panel B: Sales Prior to the Annual Meetings [D−15,D−1]										
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	–0.050	–0.279*	0.017	0.751**	–3.173***	–0.389***	0.692***	0.834***	1.522***	–0.014
	(–1.13)	(–1.80)	(0.07)	(2.41)	(–7.78)	(–13.71)	(5.43)	(3.93)	(5.87)	(–0.04)
Out. Director (a)	0.037	0.042	0.267	–0.128	–1.842	0.088	–0.630**	–0.847*	–0.911	–2.771***
	(0.30)	(0.09)	(0.31)	(–0.12)	(–1.41)	(1.32)	(–2.08)	(–1.71)	(–1.43)	(–3.33)
Oth. Insider (b)	0.128	0.148	–0.094	–0.208	–2.672	0.361**	–0.461	–1.818	–2.294	–6.898***
	(0.80)	(0.15)	(–0.07)	(–0.13)	(–1.29)	(2.46)	(–0.57)	(–1.30)	(–1.35)	(–2.79)
Transaction						0.000	–0.007	–0.005	0.012	0.020
						(0.24)	(–1.32)	(–0.53)	(1.00)	(1.40)
Holdings						0.000***	0.001*	0.001	0.000	0.001
						(2.79)	(1.77)	(0.86)	(0.24)	(0.77)
Transaction × (a)						0.004	–0.001	–0.002	–0.018	–0.028
						(1.59)	(–0.08)	(–0.18)	(–1.09)	(–1.46)
Holdings × (a)						–0.000	–0.000	0.003***	0.003***	0.005***
						(–0.78)	(–1.15)	(4.41)	(4.48)	(5.23)
Transaction × (b)						0.001	–0.000	–0.001	–0.024*	–0.043
						(0.50)	(–0.01)	(–0.06)	(–1.70)	(–1.57)
Holdings × (b)						–0.001***	0.001	0.002	0.002	0.007*
						(–4.03)	(0.33)	(1.43)	(0.68)	(1.70)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.000	0.000	0.000	0.000	0.001	0.002	0.001	0.002	0.001	0.004
Observations	58376	58376	58376	58376	58376	11410	11410	11410	11410	11410

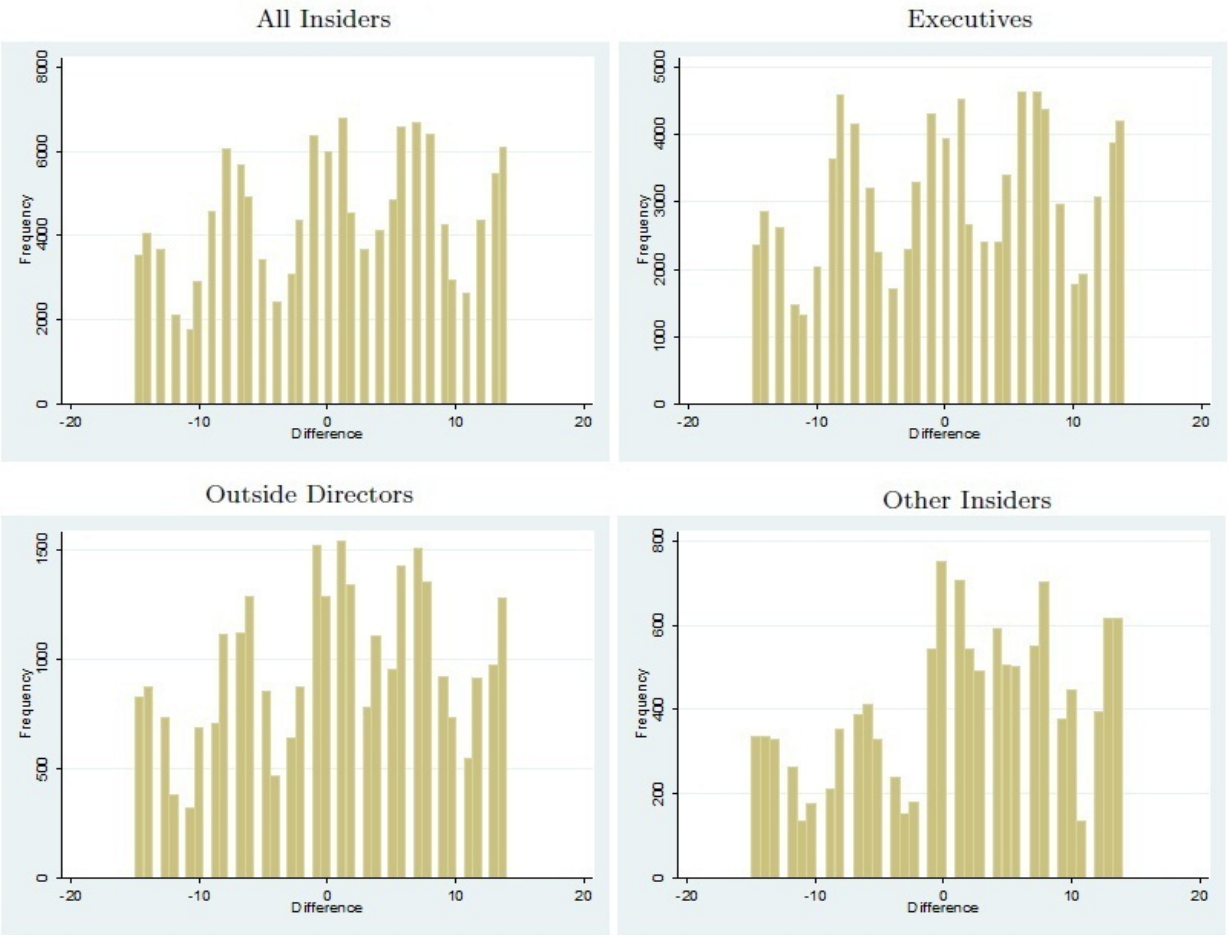
	Panel C: Sales Posterior to the Annual Meetings [D,D+14]									
	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)	RET(t)	RET(t+30)	RET(t+60)	RET(t+90)	RET(t+180)
Intercept	–0.252***	0.239	0.099	0.611*	–3.499***	–0.434***	0.724***	0.860***	1.161***	–1.684***
	(–8.71)	(1.59)	(0.41)	(1.96)	(–9.80)	(–18.39)	(6.92)	(5.22)	(5.65)	(–5.34)
Out. Director (a)	0.049	–0.522	–0.821	–1.093	0.137	0.211***	–0.566**	–1.269***	–0.960*	–1.202
	(0.68)	(–1.43)	(–1.37)	(–1.52)	(0.14)	(4.08)	(–2.22)	(–3.15)	(–1.93)	(–1.63)
Oth. Insider (b)	0.050	–1.129	–2.066*	–3.710**	–0.279	0.110	–1.294**	–2.548***	–2.993***	–1.720
	(0.46)	(–1.47)	(–1.85)	(–2.36)	(–0.19)	(0.88)	(–2.48)	(–2.76)	(–2.64)	(–0.91)
Transaction						0.002	–0.008	–0.014**	–0.015***	–0.018***
						(1.32)	(–1.64)	(–2.46)	(–2.95)	(–2.65)
Holdings						0.000***	–0.001*	0.000	0.002	0.001
						(2.60)	(–1.69)	(0.26)	(0.62)	(0.20)
Transaction × (a)						–0.001	0.002	–0.006	–0.008	–0.015
						(–0.33)	(0.35)	(–0.42)	(–0.57)	(–0.73)
Holdings × (a)						–0.000***	–0.001	0.002*	0.002	0.004**
						(–3.66)	(–1.02)	(1.82)	(1.10)	(2.05)
Transaction × (b)						–0.002	0.007	0.005	0.001	0.001
						(–1.58)	(1.43)	(0.98)	(0.16)	(0.19)
Holdings × (b)						0.000	0.004**	0.009***	0.009**	0.023***
						(0.01)	(2.56)	(2.98)	(2.49)	(4.34)
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.000	0.001	0.001	0.002	0.000	0.002	0.002	0.003	0.002	0.002
Observations	74823	74823	74823	74823	74823	14303	14303	14303	14303	14303

Figure 1: Distribution of Insiders' Purchases Around Meetings



This figure presents the distribution of open market purchase transactions of all insiders, executives, outside directors and other insiders, respectively, around the annual meeting dates. *All insiders* are classified into three groups: *executives*, *outside directors* who are nonexecutive directors, and *other insiders*. *Difference* refers to days with respect to the date of the annual shareholder meeting obtained from Riskmetrics database, and takes value between -15 to +14. The sample period is 1996-2010.

Figure 2: Distribution of Insiders' Sales Around Annual Meetings



This figure presents the distribution of open market sale transactions of all insiders, executives, outside directors and other insiders, respectively, around the annual meeting dates. *All insiders* are classified into three groups: *executives*, *outside directors* who are nonexecutive directors, and *other insiders*. *Difference* refers to days with respect to the date of the annual shareholder meeting obtained from Riskmetrics database, and takes the value between -15 to +14. The sample period is 1996-2010.