Selective Disclosure Associated with Institutional Investors: Evidence Based on Chinese Stock Market[*]

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This paper investigates the phenomenon of selective disclosure associated with institutional investors in Chinese stock market. Based on a unique database that reveals the daily trading and the identities of institutions, we show that institutions on average possess private information regarding public firms' impending non-earnings significant news. More importantly, we show that the information advantage of institutions is associated with their ability to obtain private information from firm management. The findings shed light on the issue of developing fair information disclosure among all market participants.

Key Words: Information environment; Stock market; Selective information disclosure; Institutional investors.

JEL Classification Numbers: G10, G14, G20.

1. INTRODUCTION

This paper examines selective information disclosure associated with institutional investors in China. Selective disclosure presents a severe challenge to the fairness among market participants; therefore, by exploring its existence, this investigation can shed insightful light on the quality of

the information environment in Chinese stock market. Furthermore, a growing literature has been examining the issue of selective disclosure (e.g. El-Gazzar, 1998; Walther, 1997; Jiambalvo et al., 2002) and market manipulation in general (e.g., Jiang, Mahoney and Mei, 2005; Liu, Liu and Qiu, 2013); however, the literature is largely dominated by studies focusing on developed markets and little has been done regarding emerging markets. Our paper fills this gap by providing evidence on China, one of the emerging markets in the world.

We investigate the following questions to explore selective disclosure in China: whether institutional investors have any information advantage and if yes, whether they obtain private information from firm management. Institutions have an incentive to search private information from management to satisfy fiduciary responsibilities and to improve portfolio performance. Due to their large actual and potential stock holdings, institutions have opportunities to communicate with management and to influence management, which provides strong support for their search. At the same time, China's laws and regulations lag far behind in term of penalizing selective information leakage. For example, Li (2008) reports that investors are unable to sue other parties for information leakage, because the current China legislative and juridical system is not ready to handle such cases. The lack of efficient monitoring on fair information disclosure may thus induce firm management in China to privately release predisclosure information to institutions.

We focus on selective disclosure on significant news released by Chinese listed firms, and only consider the news that is not about future earnings. Institutional investors may be able to predict future earnings by technically analyzing the profitability in previous years or the profitability of other firms in the same industry; however, it is relatively hard for them to obtain predisclosure information regarding non-earnings news through their own research efforts. For example, prior occurrence of merger and acquisition does not indicate the reoccurrence of such event in current year. Also, the amount of previous private share offerings is not necessarily associated with the value of subsequent offerings, if any. In order to execute profitable trades, institutions would manage to search for private information about non-earnings news from firm management. Therefore, non-earnings significant news provides a fruitful setting to investigate selective disclosure to institutional investors.

To detect the existence of private information possessed by institutions regarding non-earnings significant news, we follow the methodology in the extant literature (e.g. Ali et al., 2004) and examine whether preannouncement institutional trading is based on the impending news. We capture the actual trades by institutions preceding announcement through a unique database that provides information on the daily trading and the identities

of institutions. With regard to the source of private information, we investigate the relation between the prevalence of information advantage and institutions' stock ownership in firms, because ownership positions represent the ability of institutions to obtain private information from management. The high ownership in firms is associated with increased access to management and greater monitoring influence (Chidambaran and John, 1998). For example, institutions with large stock positions can influence the management by voting against managers' policies at the shareholder meetings, or they can pressure managers by reducing stock holdings in firms. Thus, managers may be more willing to cater the information demand from high-ownership institutions by predisclosing important information.

This study contributes to a better understanding of the information environment in the emerging capital markets. We document that institutional investors in China have private information; and more importantly, we detect that their information advantage is associated with improper predisclosure from firm management. This investigation should be of interest to the regulators who seek to constrain selective information leakage and to develop fair disclosure to all market participants.

Second, this paper addresses the limitation in prior studies that investigate selective disclosure associated with institutional investors. For instance, Pinnuck (2005) finds that mutual funds rebalance their holdings in anticipation of future earnings news. Ke and Petroni (2004) find that transient institutions sell firms in the two quarters prior to a break in a sequence of positive earnings increases. Bushee and Goodman (2007) report that institutional trading is positively correlated with future stock returns. Because of data availability issues, these studies must rely on quarterly data and measure the trades by institutions with the difference between institutional ownership at the beginning and end of the quarter. However, quarter-to-quarter holdings do not tell us when the change actually happens and thus may represent the trades induced by any news during the quarter. That is, quarterly data provide coarse information about the timing and magnitude of institutions' actual trades, which leads to low power in the research design in detecting selective disclosure (Chen, 2007). The use of daily data in this study allows us to accurately identify the trades by institutions immediately preceding announcement of non-earnings significant news. The clean-cut measure of actual trades ensures the power in detecting whether the trades are prompted by predisclosure private information about the news.

The remainder of this paper proceeds as follows. Section 2 discusses sample selection and descriptive statistics, Section 3 presents research design and empirical results, Section 4 describes additional analyses, and Section 5 concludes.

2. SAMPLE AND DESCRIPTIVE STATISTICS

2.1.   Sample selection

Due to the availability of daily institutional trading, our sample is limited to non-earnings significant news announced by firms publicly traded in ShangHai Stock Exchange (SSE). SSE requires that firms should temporarily discontinue the trading of their stocks if they are about to announce events that are expected to significantly affect stock prices. The trading should not be resumed until the announcement. Hence, we obtain the sample of announcements of non-earnings significant news from the trade halt/resumption database in CSMAR. The database includes temporary discontinuation of trading due to various reasons. We read through the reported reason for each halt and exclude the halts due to the following reasons: the release of financial reports or the issuance of management earnings forecasts because this paper focuses on announcement of non-earnings news, abnormal stock price movements or gossip in the market because such halts may not be associated with value-relevant information, and the meetings of shareholders because management is not necessarily able to predict the decisions made during the meetings and thus may not have private information to predisclose. We also exclude halts that are within the 21 days from the latest halt. The remaining halts are those due to the announcement of significant events and form the original sample of announcements of non-earnings significant news.[1] We then collect the date of announcement to merge with institutional trading data.

Daily institutional trading is obtained from the TopView database and the sample period ranges from June 2007 to August 2008.[2] TopView reported daily aggregate holdings by institutions for each stock listed in SSE; thereby, we are able to determine institutional trading immediately preceding the announcement of news. TopView also provided the trading and the identification information of individual institutions if they were ranked as the top10 seller or the top10 buyer on a trading day, which allows us to associate the trades by different institutions with their ability to obtain private information from management. The intersection of the news sample and the trading data leaves us a final sample with 1,351 announcements of non-earnings significant news. The detailed procedure of sample selection is described in Table 1.

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[1]There are only about 10% of the observations that indicate the types of events associated with the halts. The indicated events include private share offerings, merger and acquisition, and asset exchange, etc..

[2]TopView revealed the trading activities of institutional investors and thus made it possible for individual investors to follow their trading. Institutions had been lobbying against TopView from the very beginning, and finally succeeded in discontinuing the disclosure of their trades.

TABLE 1.

Sample Selection

Stock halts from June 2007 to August 2008	7,897
Less:	
Release of financial reports	413
Release of management earnings forecasts	108
Clarification of gossip	49
Abnormal movements of stock prices	211
Meetings of stockholders	1,692
Observations within the 21 days from the latest halt	4,061
Observations with missing data of institutional trading	12
Final sample	1,351

This table describes the selection of the 1,351 announcements of non-earnings significant news used in the empirical analyses.

Other information is collected as follows: stock returns are from CSMAR, institutional characteristics are from WIND or from the websites of institutions, and the characteristics of firms that announce the news are also collected from CSMAR.[3]
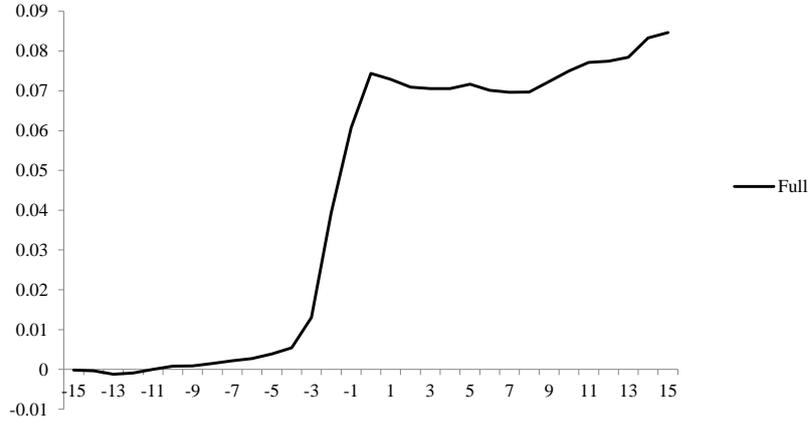
2.2. Descriptive statistics

Prior research (e.g. Atiase, 1987; Cutler et al., 1989) suggests that stock prices of firms will impound the predisclosure private information as investors take trading position based on the information. Therefore, we look into information contents of the targeted announcements based on both predislcosure and postdisclosure stock returns. Table 2 presents cumulative market-adjusted stock returns for the 31-day period from 15 trading days before leading up to 15 trading days after announcement. The cumulative market-adjusted returns, denoted as CAR, are equal to cumulative raw returns adjusted by concurrent market returns. The day of announcement is labeled as day 0, the day that is one trading day preceding announcement is labeled as day -1, the day that is one trading day after announcement is labeled as day 1, and so on. $CAR(t)$ represents cumulative market-adjusted returns from day -15 up to day t. We find that the announcements on average contain value-relevant information to the market because CAR around announcement is significant. Figure 1 presents a visual illustration of information contents of the announcements based on CAR from day -15 up to day 15. To look into information leakage preceding announcement, we compare CAR before the announcement day, $CAR(-1)$, with CAR in the full period, $CAR(15)$. Table 2 shows that

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[3]The information regarding most institutions is collected from WIND. For non-public insurance companies, the related information is collected from their websites.

$CAR(-1)$ accounts for about 70% of $CAR(15)$. The high percentage of $CAR(-1)$, relative to $CAR(15)$, implies the existence of information leakage about significant events. Accordingly, this paper seeks to investigate the role of selective disclosure associated with institutional investors in this phenomenon.

FIG. 1. Information Contents of Non-Earnings Significant News

This figure plots the information contents of 1,351 announcements of non-earnings significant news, based on cumulative market-adjusted stock returns in the 31-day period from the 15th trading day before up to the 15th trading day after announcement, denoted as CAR. CAR is equal to cumulative raw returns adjusted by concurrent market returns.

Summary statistics of main variables are described in Table 3, Panel A. Average (median) institutional trading over the 15 trading days before announcement, $\Delta Inst(-1)$, is 0.091 (0). The 25 percentile of $\Delta Inst(-1)$ is -0.15 and the 75 percentile of $\Delta Inst(-1)$ is 0.54. The evenly distributed $\Delta Inst(-1)$ suggests that institutional investors may take positions based on the impending news, rather than just buy or sell before announcement. The dummy variable for the nature of news (News) has a mean of 0.512, indicating that the sample is almost half-split for good news versus bad news. Regarding other variables, the firms that are making announcement have average total assets (Size) of 8,069 million RMB yuan, an average ratio of book to market value (BM) of 0.219, an average ratio of returns on assets (ROA) of 0.018, an average financial leverage (Lev) of 0.668, and an average percentage of institutional ownership at the beginning of the event period (BegOwn) of 11.75. Institutional investors are among top10 stockholders for about 52% of the sample firms (Relation). Preceding the event quarter, average length for which institutional investors are present

TABLE 2.

Information Contents of Non-Earnings Significant News

$t =$	$CAR(t)$	(t-stat)
−15	−0.001	(−0.21)
−13	−0.001	(−0.73)
−11	0.000	(0.01)
−9	0.001	(0.36)
−7	0.002	(0.76)
−5	0.004	(1.26)
−3	0.013	(3.86)
−1	0.061	(6.68)
0	0.074	(6.87)
1	0.073	(6.63)
3	0.071	(6.19)
5	0.071	(6.15)
7	0.069	(5.91)
9	0.072	(6.11)
11	0.077	(6.45)
13	0.078	(6.46)
15	0.085	(6.79)

This table reports information contents of 1,351 announcements of non-earnings significant news, based on cumulative market-adjusted stock returns around announcement. $CAR(t)$ represents cumulative market-adjusted returns from the 15th trading day before up to the tth trading day relative to the announcement day. Cumulative market-adjusted returns are equal to cumulative raw returns adjusted by concurrent market returns.

in top10 stockholders are about 8 quarters (PRelation). In addition, past cumulative stock returns (PRet) have an average of 0.005. Panel B of Table 3 presents the Pearson correlations among independent variables used in the regression analysis. Most of the correlations do not imply a multi-collinearity problem, except the correlation between BM and Lev, and the correlations among BegOwn, Relation and PRelation. Nonetheless, untabulated analysis shows that this issue does not challenge the conclusion of this study. Detailed definitions of variables are reported in Appendix A.

3. RESEARCH DESIGN AND EMPIRICAL RESULTS

In this section, we empirically investigate the following two questions to test the existence of selective disclosure associated with institutional investors: (1) do institutional investors in China have any predisclosure

TABLE 3.

Descriptive Statistics

Panel A Summary statistics

	Mean	5%	25%	50%	75%	95%	Std. Dev.
			Percentile				
Preannouncement Institutional Trading ($\Delta Inst(-1)$)	0.091	−4.979	−0.150	0	0.540	5.254	3.221
Nature of Non-Earnings Significant News (News)	0.512	0	0	1	1	1	0.5
Firm Size(million RMB yuan) (Size)	8,069	289	905	1,843	3,876	13,728	58,265
Book-to-Market Ratio (BM)	0.219	−0.009	0.119	0.203	0.314	0.529	0.181
Returns on Assets (ROA)	0.018	−0.163	0.006	0.026	0.052	0.125	0.203
Financial Leverage (Lev)	0.668	0.281	0.451	0.579	0.705	1.023	0.736
Beginning Institutional Ownership (BegOwn)	11.75	0	0	1.08	15.58	59.01	19.65
Institution-Firm Relationship (Relation)	0.522	0	0	1	1	1	0.499
Past Institution-Firm Relationship (PRelation)	7.552	0	1	6	14	17	6.297
Past Stock Returns (PRet)	0.005	−0.119	−0.045	0.004	0.050	0.139	0.081

This panel reports summary statistics of main variables for 1,351 announcements of non-earnings significant news. Refer to Appendix A for variable definitions.

TABLE 3—*Continued*

Panel B Correlations among main variables

	News	Size	BM	ROA	Lev	BegOwn	Relation	PRelation
Size	0.021							
ROA	0.023	−0.042						
BM	0.003	0.228	0.056					
Lev	−0.022	−0.285	−0.518	0.359				
BegOwn	0.038	0.117	−0.068	0.293	−0.112			
Relation	0.028	0.083	0.102	0.298	−0.209	0.56		
PRelation	0.058	0.156	0.093	0.256	−0.214	0.57	0.639	
PRet	0.036	−0.016	−0.062	0.006	0.001	0.053	0.038	0.001

This panel reports Pearson correlations among main independent variables. Correlations significant at the level lower than or equal to 0.05 are bolded. Refer to Appendix A for variable definitions.

private information about non-earnings significant news? (2) is information advantage of institutional investors, if it exists, due to their ability to obtain private information from firm management?

3.1.   Information advantage of institutions

Institutions are required to exercise due care in managing their portfolios (O'Brien and Bhushan, 1990). Their career concern, such as personal promotion or compensation, is closely related to portfolio performance. For example, based on a report in 2008 about the compensation of Chinese fund managers, the manager with the best annual performance was paid about three times higher than the average level. The efficient selection

and monitoring of investments involves development of private information (Brous and Kini, 1994). Therefore, institutional investors have an incentive to search for private predisclosure information to improve investment performance and to satisfy their career responsibilities. Meanwhile, the lack of fair disclosure regulation in China and strong financial supports can facilitate private information search of institutions. As a result, institutions in China may possess private information regarding non-earnings significant news in advance of public announcement.

To test this argument, we investigate the relation between predisclosure institutional trading and the nature of the impending news, because institutional investors would likely purchase (sell) stocks in advance if they know that the announcements are about to convey good (bad) news. A variable, denoted as $\Delta Inst$, is constructed to represent institutional trading preceding announcement. Specifically, we first identify two periods: the event window from day -15 up to day -1 relative to the announcement day, and the non-event window of 30 trading days earlier than the event window. $\Delta Inst(t)$ is then calculated as the change of institutional holdings from day -15 up to day t in the event window, minus the corresponding change in the non-event window.[4] The adjustment is made to control for the change that is not driven by predisclosure information.

Table 4, Panel A reports the statistics of $\Delta Inst$. The classification of the Good_News sample and the Bad_News sample is based on cumulative market-adjusted stock returns over the 15 trading days starting from the announcement day.[5] The announcements with positive stock returns are classified as conveying good news and the announcements with negative returns are classified as conveying bad news.[6] Institutional investors start to change their stock positions based on the impending news when it is still quite a few days ahead of the announcement. The trading up to day -1 preceding good-news announcement is totaled as 0.316 (Good_News), and institutions tend to buy more stocks as it is approaching the announcement day. For example, the earlier buying from day -15 to day -7 is only 0.093, while the subsequent buying from day -7 to day -1 is more than twice larger (from 0.093 to 0.316). Therefore, institutional investors seem to be more informed about the impending good news when it is closer to public disclosure. Institutions also tend to trade consistently before

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[4]For instance, $\Delta Inst(-1)$ is equal to the change of institutional holdings from day -15 up to day -1 minus the change from day -45 up to day -31, $\Delta Inst(-2)$ is equal to the change from day -15 up to day -2 minus the change from day -45 up to day -32, and so on.

[5]We perform additional analyses based on alternative windows of cumulative market-adjusted returns, and find consistent results.

[6]To avoid the potential endogeneity issue regarding institutional trading and concurrent stock returns, we do not consider preannouncement stock returns in determining the nature of the impending news.

TABLE 4.

Private Information before Announcement of Non-Earnings Significant News

Panel A Institutional trading before announcement

	Good_News		Bad_News	
$t =$	$\Delta Inst(t)$	(t-stat)	$\Delta Inst(t)$	(t-stat)
-15	-0.009	(-0.49)	-0.020	(-0.97)
-13	0.029	(0.68)	-0.017	(-0.39)
-11	0.041	(0.69)	-0.067	(-1.13)
-9	0.039	(0.51)	-0.095	(-1.28)
-7	0.093	(1.03)	-0.121	(-1.29)
-5	0.159	(1.56)	-0.123	(-1.18)
-3	0.219	(1.99)	-0.124	(-1.25)
-1	0.316	(2.50)	-0.145	(-1.26)

This panel reports institutional trading, denoted as $\Delta Inst(t)$, from the 15th trading day up to the tth trading day preceding 1,351 announcements of non-earnings significant news. The Good_News sample represents the trading before 692 good-news announcements, and the Bad_News sample represents the trading before 659 bad-news announcements. The classifications of Good_News and Bad_News are based on cumulative market-adjusted stock returns over the 15 trading days starting from the announcement day. The cumulative market-adjusted returns are equal to cumulative raw returns adjusted by concurrent market returns. The announcements with positive returns are classified as the Good_News sample, and the announcements with negative returns are classified as the Bad_News sample. Refer to Appendix A for the definition of $\Delta Inst$.

bad-news announcement (Bad_News), and average selling from day -15 to day -1 is -0.145. The preannouncement trades by institutional investors suggest their possession of private information about the forthcoming announcements. Figure 2 presents a visual illustration of institutional trading preceding announcement from day -15 up to day -1.

We then estimate the following model to statistically test the relation between predisclosure institutional trading and the impending news:

$$\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{RM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn}$$
$$+ \beta_7 \text{Relation} + \beta_8 \text{PRelation} + \beta_9 \text{PRet} + \text{Industry Dummies} + \epsilon \quad (1)$$

$\Delta Inst(-1)$ in the equation is institutional trading from day -15 up to day -1 relative to the announcement day. News is the dummy variable for the impending news and the definition of News is based on the sign of cumulative market-adjusted stock returns from day 0 to day 14 relative to

TABLE 4—*Continued*

Panel B Regression analysis

	Model 1		Model 2	
	Coeff.	(t-stat)	Coeff.	(t-stat)
Intercept	−0.149	(−1.29)	−3.595	(−1.89)*
News	0.462	(2.86)***	0.468	(2.96)***
Size			0.166	(1.83)*
BM			−1.426	(−2.36)**
ROA			2.086	(2.29)**
Lev			−0.105	(−0.49)
BegOwn			−0.043	(−8.01)***
Relation			0.164	(1.59)
PRelation			0.426	(1.75)*
PRet			3.267	(3.21)***
Industry Dummies			Yes	
Adjusted Rsq.	0.7%		6.1%	

This panel reports the results by estimating the following model which examines the relation between preannouncement institutional trading and the impending news:

$$\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{RM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn}$$
$$+ \beta_7 \text{Relation} + \beta_8 \text{PRelation} + \beta_9 \text{PRet} + \text{Industry Dummies} + \varepsilon$$

The regression is based on 1,351 announcements of non-earnings significant news. Refer to Appendix A for variable definitions; ***, ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.
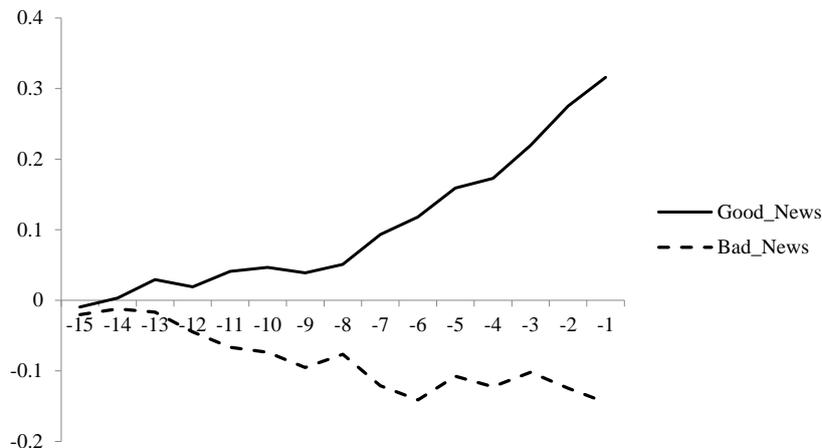
the announcement day.[7] The cumulative market-adjusted stock returns are defined as previously in Section 2.2. News is equal to 1 if postannouncement returns are positive and equal to 0 if postannouncement returns are negative. The coefficient on News is expected to be positive, because institutions are likely to purchase firms with forthcoming good news, but are likely to sell firms with forthcoming bad news.

Firm-specific factors may affect the trading of institutional investors. We control for the impact of firm size (Size) and the book-to-market ratio (BM). Gompers and Metrick (2001) report that institutions tend to own stocks of larger companies and that there is a relation between institutional ownership and book-to-market ratio.[8] Size is total assets of the firm that is about to announce the news, after logarithm transformed, at the end of

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[7]We do not use the magnitude of cumulative market-adjusted stock returns to define News, because information regarding the impending news has likely been leaked in advance. The magnitude of postannouncement stock returns is noisy in capturing the full information contents of the news.

[8]Gompers and Metrick (2001) focus on the level of institutional ownership, whereas we focus on the change in ownership.

FIG. 2. Institutional Trading before Announcement of Non-Earnings Significant News

This figure plots institutional trading, denoted as $\Delta Inst$, from the 15th trading day up to the 1st trading day preceding 1,351 announcements of non-earnings significant news. The Good_News sample represents the trading before 692 good-news announcements, and the Bad_News sample represents the trading before 659 bad-news announcements. The classification of Good_News and Bad_News is based on cumulative market-adjusted stock returns over the 15 trading days starting from the announcement day. The cumulative market-adjusted returns are equal to cumulative raw returns adjusted by concurrent market returns. The announcements inducing positive returns are classified as the Good_News sample, and the announcements inducing negative returns are classified as the Bad_News sample. Refer to Appendix A for the definition of $\Delta Inst$.

previous year, and BM is firm-specific ratio of book value of equity over market value of equity at the end of previous year. ROA, defined as the ratio of net income over total assets from previous year, controls for the profitability preference of institutions in selecting stocks. The financial leverage (Lev) is equal to total liabilities divided by total assets in the previous year, and controls for the potential relation between ownership structure and capital structure.

We also include in equation (1) variables capturing institutional characteristics. BegOwn controls for institutional ownership at the beginning of the 15-day period to measure preannouncement institutional trading. Portfolio theory (Markowitz, 1952) suggests that diversification reduces the risks at financial institutions and thus makes their failure less likely. Diversification prescribes that institutions should allocate funds across securities rather than concentrate on a specific stock. As a result, it is less

likely for institutions to further increase holdings if they already own a high percentage of stocks in a firm, compared to the situation when prior ownership is relatively low. Ke and Petroni (2004) report consistent evidence that prior stock holdings of institutions negatively determine the amount of subsequent trading. Thus, the coefficient on BegOwn is expected to be negative. Relation represents the relationship between institutional investors and firms. Institutions with high ownership tend to have close relationship with management, and Relation is set to equal 1 (0) when institutions are (not) top 10 stockholders at the end of the quarter preceding the event quarter. Closer relationship with firms may help institutions to get predisclosure information, and thus pre-announcement trading of these institutions is likely determined by the impending news. Given this, the coefficient on Relation is not predictable. The coefficient on institutions' prior relationship with firms (PRelation) is also unpredictable, because institutions that were previously connected with firms might still be able to get informed in advance. PRelation is equal to the number of quarters, starting from the first quarter of 2003 up to the second quarter preceding the event quarter, during which institutions are top 10 stockholders.

In addition to firm-specific and institutional characteristics, we control past stock returns (PRet) because institutional trading is documented to be associated with past returns (Grinblatt et al., 1995). PRet is measured as cumulative market-adjusted stock returns in the week prior to the 15-day period of preannouncement institutional trading. Finally, an array of industry dummies are included to control for industry effects on institutional trading.[9]

Table 4, Panel B reports the OLS regression results of equation (1).[10] Model 1 runs the regression without any of the control variables. The positive coefficient on News indicates the tendency of institutions to purchase before good-news announcement and to sell before bad-news announcement, which is supportive for the argument that institutions in China have predisclosure private information on non-earnings significant news. Model 2 runs the regression by including control variables, and the coefficient on News remains positive (t-stat= 2.96). Results on controls are as expected. Institutional trades are positively associated with firm size (Size). Purchases by institutions are decreasing in the level of ownership at the beginning of the event period (BegOwn).

3.2. Private information from management

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[9]In untabulated regressions, we also control for share turnover and stock return volatility (Falkenstein, 1996). Our results are not sensitive to the inclusion of these additional controls.

[10]We run clustering analysis to control for firm and time effects because institutional ownership may vary systematically across firms and time. In addition, outliers are excluded using Cook's (1977) distance statistics. The results are robust.

A potential source of institutions' information advantage regarding the impending non-earnings significant news may be private disclosure from management. We employ stock ownership in firms to represent institutions' ability to obtain private information from management, and then examine whether the prevalence of information advantage is related to stock ownership. Institutions with high ownership have more opportunities to communicate with management. In addition, these institutions play an important role in corporate governance (Xu and Wang, 1999). They can introduce proposals in annual meetings that counter management policies (Hassel and Norman, 1992), or they can pressure managers by substantially decreasing stock holdings. Finally, inefficient monitoring of information disclosure in China reduces managers' legal risk associated with selective disclosure and may thus encourage such behavior. Therefore, when institutions own a large percentage of stocks, they can impose their investment objectives on firms and management is more willing to predisclose important information to them.

We perform two analyses, either by differentiating or not differentiating the trades of individual institutions, to test the relation between stock ownership by institutions and the possession of predisclosure private information on non-earnings significant news. In the no-differentiation analysis, all institutional investors of the firm that is announcing the news are bundled together as one single institution. We identify this institution's stock ownership and predisclosure trading, and then examine the prevalence of informed trading across announcements made by firms with high and low institutional ownership. In the differentiation analysis, we only focus on the news announced by firms with high institutional ownership and identify individual institutions that trade in advance. Different from no-differentiation analysis, we distinguish these institutions based on their ownership in the announcing firm. That is, preceding each announcement, there are institutions with different levels of ownership detected to be trading. In both analyses, we expect to observe that institutions are more likely to trade on the impending news when they have large stock positions.

3.2.1. No-differentiation analysis

We measure institutions' ownership based on whether they are present in top10 stockholders during the quarter preceding the event quarter. The news announced by firms that have institutions among top10 stockholders is classified as the High-Inst news, and the news announced by firms that do not have institutions among top 10 stockholders is classified as the Low-Inst news.[11] The High-Inst news includes 706 announcements of non-earnings

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[11]In no-differentiation analysis, we are only able to determine whether a specific institution is among top 10 stockholders, but do not know the percentage of its stock

significant news and the Low-Inst news includes 645 announcements.

TABLE 5.

Private Information from Management — No-Differentiation Analysis

Panel A Institutional trading before announcement

| | High-Inst News | | | | Low-Inst News | | | |
| | Good_News | | Bad_News | | Good_News | | Bad_News | |
$t =$	$\Delta Inst(t)$	(t-stat)	$\Delta Inst(t)$	(t-stat)	$\Delta Inst(t)$	(t-stat)	$\Delta Inst(t)$	(t-stat)
-15	-0.009	(-0.27)	-0.029	(-0.79)	-0.009	(-0.10)	-0.010	(-0.62)
-13	0.064	(0.81)	-0.043	(-0.54)	-0.011	(-0.68)	0.012	(0.55)
-11	0.066	(0.59)	-0.149	(-1.35)	0.011	(0.53)	0.022	(0.98)
-9	0.055	(0.39)	-0.206	(-1.45)	0.021	(0.77)	0.023	(0.91)
-7	0.136	(0.81)	-0.271	(-1.51)	0.045	(1.48)	0.039	(1.43)
-5	0.234	(1.25)	-0.278	(-1.59)	0.072	(2.06)	0.069	(2.16)
-3	0.335	(1.65)	-0.278	(-1.46)	0.085	(2.23)	0.071	(1.93)
-1	0.459	(1.99)	-0.426	(-1.86)	0.150	(2.82)	0.146	(2.53)
N.	371		335		321		324	

This panel reports institutional trading, ?Inst(t), from the 15$^{\text{th}}$ trading day up to the tth trading day preceding 1,351 announcements of non-earnings significant news. The sample of High-Inst news represents the news announced by firms that have institutions in their top10 stockholders, and the sample of Low-Inst news represents the news announced by firms that do not have institutions in their top10 stockholders. The classifications of Good_News and Bad_News are the same as in Table 4, Panel A. Refer to Appendix A for the definition of $\Delta Inst$.

Table 5, Panel A presents preannouncement institutional trading for the High-Inst news and the Low-Inst news. When the news is announced by firms with high institutional ownership, institutions tend to trade on the news by buying stocks preceding good-news announcement and selling stocks preceding bad-news announcement. The cumulative buying up to day -1 before good news has an average of 0.459, whereas the cumulative selling before bad news is -0.426. Differently, if the news is announced by firms with low institutional ownership, institutions do not seem to take trading position based on the nature of the impending news. The cumulative trading is positive over the period from day -15 to day -1, no matter whether it is preceding good news or preceding bad news. The differential

ownership. To keep consistency with differentiation analysis, we do not either base the sample partition on actual ownership percentage in no-differentiation analysis. Further analysis shows that top 10 stockholders on average have higher ownership, as the percentage of aggregate institutional ownership in the sample of High-Inst news is 21.6 which is almost 30 times larger than the percentage in the sample of Low-Inst news. In addition, we perform additional test for no-differentiation analysis based on actual percentage of institutional ownership. The results are robust.

TABLE 5—*Continued*

Panel B Regression analysis

	High-Inst News		Low-Inst News	
	Coeff.	(t-stat)	Coeff.	(t-stat)
Intercept	−5.722	(−1.73)*	−0.968	(−0.91)
News	0.892	(3.04)***	−0.005	(−0.06)
Size	0.272	(1.59)	0.046	(0.90)
BM	−2.678	(−1.97)**	0.093	(0.35)
ROA	5.152	(1.91)*	0.148	(0.41)
Lev	−0.450	(−0.36)	−0.052	(−0.63)
BegOwn	−0.050	(−6.39)***	−0.271	(−3.85)***
PRelation	0.051	(1.53)	0.019	(1.68)*
PRet	5.848	(3.00)***	0.136	(1.58)
Industry Dummies	Yes		Yes	
Adjusted Rsq.	8.3%		3.8%	

This panel reports the results by separately estimating the following model in the samples of High-Inst news and Low-Inst news. The model examines the relation between preannouncement institutional trading and the impending news.

$$\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{RM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn}$$
$$+ \beta_7 \text{Relation} + \beta_8 \text{PRelation} + \beta_9 \text{PRet} + \text{Industry Dummies} + \varepsilon$$

High-Inst news and Low-Inst news are classified in the same way as in Panel A. High-Inst news includes 706 announcements and Low-Inst news includes 645 announcements. Refer to Appendix A for variable definitions; ***, ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.

trading behavior suggests that institutional investors in China are more likely to possess predisclosure private information if they have large stock ownership in firms.

Table 5, Panel B reports the results by separately estimating equation (1) for the High-Inst news and the Low-Inst news.[12] In the sample of High-Inst news, the coefficient on News is 0.892 and significant at the level of 0.01, supporting the existence of predisclosure private information. Nonetheless, the coefficient in the sample of Low-Inst news is insignificant and thus does not indicate any information advantage of institutions. In brief, the no-differentiation analysis finds that institutions in China possess predisclosure information regarding non-earnings significant news when having

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[12]Relationship between institutions and firms (Relation) is dropped from the equation because the classification of High-Inst news and Low-Inst news is based on this relationship measure. That is, High-Inst sample includes observations with Relation equal to 1, and Low-Inst sample includes those with Relation equal to 0.

large stock ownership. This finding suggests that the source of private information of institutions in Chinese market is from firm management. Regarding controls, institutional trades are positively associated with firm size (Size), although the association is only significant for High-Inst news (based on one-side test). The coefficient on institutional ownership in the beginning (BegOwn) remains negative in both samples.

3.2.2. Differentiation analysis

In the differentiation analysis, we identify individual institutions that trade before the 706 announcements of non-earnings significant news made by firms with high institutional ownership. Institutions that are top10 stockholders of the announcing firm in the quarter preceding announcement quarter are classified as the High-Own institutions, and institutions that are not top 10 stockholders are classified as the Low-Own institutions. There are 1,249 institutions in the High-Own sample and 2,990 institutions in the Low-Own sample. We construct a variable, $\Delta IndInst$, to represent the predisclosure trading of individual institutions. $\Delta IndInst(t)$ is institution-specific trading from day -15 up to day t in the event window, minus the corresponding trading in the non-event window, where daily trading equals daily trade amounts (RMB yuan) divided by total market values of outstanding shares of the announcing firm. The identifications of the event window and the non-event window are the same as that used for $\Delta Inst$ in Section 3.1.

Table 6, Panel A presents the averages of individual institutions' trading preceding announcement. We observe that, regardless of the nature of the impending news, the trades by institutions are negatively associated with their stock ownership at the beginning of the event period. The High-Own institutions tend to sell firms, whereas the Low-Own institutions tend to purchase. When conditional on the impending news, the preannouncement trading of High-Own institutions and of Low-Own institutions exhibits differential relations with the news. Specifically, the selling of High-Own institutions over the 15 trading days before bad-news announcement has an average of -0.0013, but the selling before good-news announcement is significantly lower and its average is only -0.0001. The difference suggests that High-Own institutions may have private information on the impending news. By contrast, regarding Low-Own institutions, the average purchase of 0.0009 before good news does not show substantial difference from the purchase of 0.0008 before bad news. Therefore, when the news is announced by firms with high institutional ownership, it is institutions with large

TABLE 6.

Private Information from Management — Differentiation Analysis

Panel A Institutional trading before announcement

| | High-Own Institutions | | | | Low-Own Institutions | | | |
| | Good_News | | Bad_News | | Good_News | | Bad_News | |
$t =$	$\Delta IndInst(t)$	(t-stat)	$\Delta IndInst(t)$	(t-stat)	$\Delta IndInst(t)$	(t-stat)	$\Delta IndInst(t)$	(t-stat)
−15	−0.0001	(−1.18)	−0.0002	(−3.62)	0.0001	(1.98)	0.0001	(0.98)
−13	−0.0001	(−0.06)	−0.0003	(−3.28)	0.0002	(1.97)	0.0001	(1.28)
−11	−0.0002	(−1.36)	−0.0006	(−4.30)	0.0002	(1.18)	0.0003	(2.32)
−9	−0.0001	(−0.55)	−0.0009	(−5.51)	0.0003	(1.22)	0.0003	(1.89)
−7	−0.0004	(−2.68)	−0.0007	(−3.85)	0.0004	(1.75)	0.0004	(1.89)
−5	−0.0002	(−0.99)	−0.0006	(−2.72)	0.0006	(2.48)	0.0006	(2.33)
−3	−0.0001	(−0.68)	−0.0007	(−2.67)	0.0008	(3.52)	0.0006	(1.89)
−1	−0.0001	(−0.87)	−0.0013	(−4.76)	0.0009	(2.76)	0.0008	(3.07)
N.	671		578		1,537		1,453	

This panel reports the trading of individual institutions, $\Delta IndInst(t)$, from the 15$^{\text{th}}$ trading day up to the tth trading day before the 706 announcements of non-earnings significant news made by firms with high institutional ownership. The sample of High-Own institutions includes institutions that are top 10 stockholders of the announcing firm, and the sample of Low-Own institutions includes institutions that are not top 10 stockholders. The classifications of Good_News and Bad_News are the same as in Table 4, Panel A. Refer to Appendix A for the definition of $\Delta IndInst$.

stock positions, rather than all institutions, that are informed in advance of announcement.

With regard to the regression analysis, we replace the dependent variable in equation (1) with the trading of individual institutions from day −15 up to day −1 before announcement, denoted as $\Delta IndInst(-1)$, and then separately estimate the equation for the High-Own institutions and the Low-Own institutions. We also include two variables in the equation that represent the size and the resources of an institution. InstSize proxies for institutional size, equal to the logarithm transformation of total assets at the end of previous year. InstSource is the dummy variable for the resources of an institution, equal to 1 for institutions whose resources are above the sample median and equal to 0 otherwise. The resources are defined in the following way: we first rank all institutions based on three types of metrics, including revenue, investment, and returns on investment. Then we average the rankings of the three metrics for each institution and use the average to represent institution-specific resources. In addition, we control concurrent aggregate institutional trading to account for the mechanical relation between the trades of institutions as a whole and the trades of individual institutions. Considering the correlations between aggregate trading and

TABLE 6—*Continued*

Panel B Regression analysis

	High-Own Institutions		Low-Own Institutions	
	Coeff.	(t-stat)	Coeff.	(t-stat)
Intercept	0.001	(0.08)	−0.007	(−1.53)
News	0.003	(2.97)***	−0.0001	(−0.45)
Size	0.001	(0.97)	0.0002	(0.21)
BM	−0.01	(−1.38)	−0.001	(−0.06)
ROA	0.009	(0.61)	0.010	(2.11)**
Lev	−0.001	(−1.41)	0.001	(0.78)
BegOwn	−0.0004	(−2.79)***	−0.0002	(−1.32)
PRelation	0.0001	(0.10)	0.0001	(1.23)
PRet	0.010	(1.97)**	0.008	(4.01)***
InstSize	−0.001	(0.35)	0.0002	(1.99)**
InstSource	−0.001	(−0.63)	−0.0001	(−0.43)
Inst_Resid	0.001	(9.90)***	0.001	(7.57)***
Industry Dummies	Yes		Yes	
Adjusted Rsq.	8.8%		3.1%	

This panel reports the results by separately estimating the following model in the samples of High-Own institutions and Low-Own institutions. The model examines the relation between preannouncement trading by individual institutions and the impending news.

$$
\begin{aligned}
\Delta IndInst(-1) \;=\; & \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{BM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn} \\
& + \; \beta_7 \text{PRelation} + \beta_8 \text{PRet} + \beta_9 \text{InstSize} + \beta_{10} \text{InstSource} \\
& + \; \beta_{11} \text{Inst\_Resid} + \text{Industry Dummies} + \varepsilon
\end{aligned}
$$

High-Own institutions and Low-Own institutions are classified in the same way as in Panel A. The sample of High-Own institutions includes 1,249 institutions that trade before the 706 announcements of non-earnings significant news, and the sample of Low-Own institutions includes 2,990 institutions that trade in advance. Refer to Appendix A for variable definitions; *** , ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.

other controls in the regression, we use the residual aggregate trading estimated from equation (1) as a proxy, and the residual trading is denoted as Inst_Resid.

Table 6, Panel B reports the results. We find that, for High-Own institutions, the coefficient on News is 0.003 and is significant at the level of 0.01, suggesting the existence of predisclosure private information. The coefficient on News is insignificant for Low-Own institutions, indicating that these institutions do not have any predisclsoure information. Therefore, the differentiation analysis shows that the association between aggregate institutional trading and the impending news, documented in the sample

of High-Inst news in the no-differentiation analysis, is driven by institutions actually owning a large stake of stocks in firms. This finding further supports the impact of private communication with management on institutions' information advantage, and thus suggests the existence of selective disclosure associated with institutional investors in China.

The coefficient on firm size (Size) is positive but not significant, probably because the trading of individual institutions used in the differentiation analysis does not fully represent institutions' overall trading activities and thus not efficiently capture size preference of institutions.[13] Purchases by individual institutions are decreasing with total institutional ownership at the beginning of the event period (BegOwn). Relative to High-Own institutions, the ownership of Low-Own institutions only accounts for a small proportion in BegOwn; therefore, the relation between BegOwn and subsequent trading is weaker for Low-Own institutions (significant on one-side level).[14]

4. ADDITIONAL ANALYSES

4.1. Sub-period analysis

Chinese stock market experienced substantial increase in 2007 (the first half of our sample period), and then fell significantly in 2008 (the second half). An issue that deserves further analysis is the potential impact of this dramatic change on the main findings in this study. To look into this issue, we analyze the relation between institutional trading and the impending news in the sub-periods of 2007 and 2008 separately. The results are not sensitive to which year is used in the estimation. Institutional investors seem to obtain private information from managers in both the rising and the falling markets. Table 7 tabulates the no-differentiation analysis in the two sub-periods (differentiation analysis is not presented to save space). For the sample of High-Inst news, the coefficient on the news variable, News, is positively significant in both 2007 and 2008. However, the coefficient is significant in neither year for Low-Inst news.

4.2. Clustering analysis

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[13]The positive relation between firm size and institutional trading documented in prior research (e.g. Ke and Petroni, 2004) is based on aggregate trading.

[14]A better proxy may be stock ownership of individual institutions at the beginning of the event period. However, this information is not available and thus we use total institutional ownership as a substitute.

TABLE 7.

Private Information from Management — Sub-Period Analysis

	High-Inst News		Low-Inst News	
	2007	2008	2007	2008
Intercept	−2.652	−5.405	−0.125	−0.236
	(−0.88)	(−1.10)	(−0.16)	(−0.15)
News	0.876	1.135	−0.054	0.119
	$(2.30)^{**}$	$(2.34)^{**}$	(−0.92)	(1.19)
Size	0.202	0.224	0.004	0.006
	(0.92)	(0.87)	(1.10)	(0.09)
BM	−2.326	−4.345	−0.148	0.455
	(−1.23)	(−1.10)	(−0.74)	(0.85)
ROA	5.452	2.385	−0.039	−0.165
	(1.47)	(0.87)	(−0.24)	(−0.78)
Lev	−1.065	−0.026	−0.038	0.001
	(−0.60)	(−0.01)	(−0.64)	(0.01)
BegOwn	−0.061	−0.036	−0.015	−0.031
	$(-6.04)^{***}$	$(-2.51)^{**}$	$(-2.16)^{**}$	$(-1.88)^{*}$
PRelation	0.065	0.059	0.011	0.020
	$(1.67)^{*}$	(1.06)	(1.31)	(1.33)
PRet	6.518	3.215	0.226	0.790
	$(2.70)^{***}$	$(1.98)^{**}$	(1.31)	(1.43)
Industry Dummies	Yes	Yes	Yes	Yes
Adjusted Rsq.	10.0%	4.0%	1.0%	4.1%
N	410	296	372	273

This table reports the results by separately estimating the following model in the samples of High-Inst news and Low-Inst news. We perform the analysis in the two sub-periods of 2007 and 2008.

$$\Delta Inst(-1) = \beta_0 + \beta_1 News + \beta_2 Size + \beta_3 RM + \beta_4 ROA + \beta_5 Lev + \beta_6 BegOwn$$
$$+ \beta_7 Relation + \beta_8 PRelation + \beta_9 PRet + Industry\ Dummies + \varepsilon$$

High-Inst news and Low-Inst news are classified in the same way as in Table 5. Refer to Appendix A for variable definitions; t-stats are parenthesized; ***, ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.

The sample period of this study is coincident with the volatile period in Chinese stock market, and different characteristics associated with different time over this period may raise the concern on potential heterogeneity. Furthermore, multiple observations from the same firm in the regression may lead to the concern on the repeated observations. We employ cluster-

ing analysis to control for the time or firm effect on institutional trading.[15]
Specifically, we rely on time-clustering or firm-clustering adjusted standard
error to calculate t-statistics. The observations falling in the same month
are classified as one time cluster, and the observations related to the same
firm are classified as one firm cluster. The adjusted standard error can cor-
rect the correlation in residuals within the time or the firm cluster. Table
8 presents the no-differentiation analysis, and the main inference remains
unchanged.

TABLE 8.

Private Information from Management — Clustering Analysis

	High-Inst News			Low-Inst News		
		(t-stat)			(t-stat)	
	Coeff.	Time	Firm	Coeff.	Time	Firm
Intercept	−5.722	(−2.03)**	(−1.79)*	−0.968	(−0.89)	(−0.86)
News	0.892	(3.21)***	(2.96)***	−0.005	(−0.06)	(−0.06)
Size	0.272	(1.51)	(1.65)*	0.046	(0.85)	(0.84)
BM	−2.678	(−1.58)	(−2.27)**	0.093	(0.43)	(0.43)
ROA	5.152	(3.39)***	(2.46)**	0.148	(0.56)	(0.51)
Lev	−0.450	(−0.36)	(−0.43)	−0.052	(−1.06)	(−1.14)
BegOwn	−0.050	(−4.10)***	(−6.07)***	−0.271	(−2.62)***	(−2.30)**
PRelation	0.051	(1.76)*	(1.76)*	0.019	(1.80)*	(1.41)
PRet	5.848	(2.93)***	(2.89)***	0.136	(1.47)	(1.54)
Industry Dummies	Yes			Yes		
Adjusted Rsq.	10.9%			6.8%		

This table reports the results by separately estimating the following model in the samples of High-
Inst news and Low-Inst news. We use time-clustering or firm-clustering adjusted standard error to
calculate t-statistics.

$$\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{RM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn}$$
$$+ \beta_7 \text{PRelation} + \beta_8 \text{PRet} + \text{Industry Dummies} + \varepsilon$$

The t-stats in the Time columns are based on time-clustering adjusted standard error, and the time
refers to the month when a stock halt occurs. The t-stats in the Firm columns are based on firm-
clustering adjusted standard error. High-Inst news and Low-Inst news are classified in the same way
as in Table 5. Refer to Appendix A for variable definitions; *** , ** and * refer to significance at the
0.01, 0.05 and 0.1 level, respectively.

4.3. Percentage of institutional ownership

In the no-differentiation analysis, we rely on the presence of institutions
among top10 stockholders to represent their ownership in firms that are

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[15]For clustered standard errors, see e.g. Petersen, 2009, and Thompson, 2011. For
more advanced techniques dealing with heterogeneity among subgroups, see e.g. Xiao,
2011.

TABLE 9.

Private Information from Management — Percentage of Institutional Ownership

	High-Inst News		Low-Inst News	
	Coeff.	(t-stat)	Coeff.	(t-stat)
Intercept	−6.529	(−1.92)*	−0.965	(−0.73)
News	1.080	(3.62)***	−0.128	(−0.96)
Size	0.292	(1.65)*	0.054	(0.86)
BM	−3.061	(−2.21)**	0.159	(0.45)
ROA	4.776	(1.75)*	0.368	(0.79)
Lev	−0.292	(−0.25)	−0.216	(−1.63)*
BegOwn	−0.046	(−5.80)***	0.010	(0.04)
PRelation	0.075	(1.52)	0.002	(0.17)
PRet	5.415	(2.80)***	0.436	(1.50)
Industry Dummies	Yes		Yes	
Adjusted Rsq.	9.3%		4.7%	

This table reports the results by separately estimating the following model in the samples of High-Inst news and Low-Inst news.

$$\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{RM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn}$$
$$+ \beta_7 \text{PRelation} + \beta_8 \text{PRet} + \text{Industry Dummies} + \varepsilon$$

High-Inst news includes 675 announcements of non-earnings significant news made by firms whose institutional ownership is above the sample median, and Low-Inst news includes 676 announcements made by firms whose institutional ownership is below or equal to the sample median. Refer to Appendix A for variable definitions; *** , ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.

announcing the news, which presumes that top 10 stockholders own a large percentage of stocks. This presumption is reasonable in most cases except in the situation of de-centralized ownership where the stock rights of top 10 stockholders may not be large. That is, top10 stockholders may not necessarily have sufficient impacts on management to induce information predisclosure. Although this issue works against us in finding supportive evidence, for robustness check, we base on actual percentage of ownership to classify the samples of High-Inst news and Low-Inst news.[16] Specifically, the news is classified into the High-Inst sample if it is announced by firms whose institutional holdings at the beginning of the event period are above the sample median, and the news is classified into the Low-Inst sample if it is announced by firms whose institutional holdings are below or equal to the sample median. We analyze the relation between institutional trading and

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[16]We do not run this additional analysis for the differentiation analysis, because actual ownership percentage of individual institutions is not available.

TABLE 10.

Alternative Windows for the Impending News

	$CAR(0,4)$		$CAR(0,9)$	
	Coeff.	(t-stat)	Coeff.	(t-stat)
Intercept	−3.176	(−1.63)	−3.133	(−1.60)
News	0.556	(3.25)***	0.336	(1.96)**
Size	0.148	(1.59)	0.151	(1.60)
BM	−1.575	(−2.50)**	−1.573	(−2.37)**
ROA	0.923	(1.88)*	0.932	(1.89)*
Lev	−0.231	(−1.45)	−0.317	(−1.36)
BegOwn	−0.046	(−7.84)**	−0.046	(−7.85)***
Relation	0.205	(1.06)	0.224	(1.53)
PRelation	0.051	(2.41)**	0.051	(2.38)**
PRet	3.221	(3.02)***	3.382	(3.16)***
Industry Dummies	Yes		Yes	
Adjusted Rsq.	5.9%		5.4%	

This table reports the results by estimating the following model based on 1,351 announcements of non-earnings significant news.

$$\Delta Inst(-1) = \beta_0 + \beta_1 News + \beta_2 Size + \beta_3 RM + \beta_4 ROA + \beta_5 Lev + \beta_6 BegOwn$$
$$+ \beta_7 Relation + \beta_8 PRelation + \beta_9 PRet + Industry~Dummies + \varepsilon$$

$CAR(0,4)$ reports results when News is based on cumulative market-adjusted returns from the announcement day up to the 4th trading day afterwards, and $CAR(0,9)$ reports results based on cumulative market-adjusted returns from the announcement day up to the 9th trading day afterwards. The cumulative market-adjusted returns equal cumulative raw returns minus concurrent market returns. Refer to Appendix A for variable definitions; ***, ** and * refer to significance at the 0.01, 0.05 and 0.1 level, respectively.

the impending news based on this alternative classification. The results are robust (Table 9) as the coefficient on News is positive and significant only in the sample of High-Inst news.[17]

4.4.   Nature of the impending news

We repeat the analyses by determining the nature of the impending news with stock returns from shorter postannouncement windows. The results do not change no matter when based on cumulative returns from day 0 to day 4 relative to the announcement day, denoted as $CAR(0,4)$, or when based on returns from day 0 to day 9, denoted as $CAR(0,9)$. For parsimony, we

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[17]Under this alternate sample partition, beginning stock ownership (BegOwn) in Low-Inst news has a low variance which may lead to the loss of significance of its coefficient. Further analysis shows that BegOwn reverts to be significant if we expand the Low-Inst sample slightly and thus increase the variance of BegOwn.

only tabulate in Table 10 the results on the existence of private information possessed by institutions in China.

5. CONCLUSIONS

We find that institutions in China tend to have predisclosure private information on non-earnings significant news. Furthermore, we show that institutional investors obtain private information on the impending news from firm management. In conclusion, selective disclosure to specific investors, rather than a fair disclosure to all investors, is prevalent in Chinese capital market. The documented information leakage from management to institutions calls for more efforts in building up an efficient monitoring on information disclosure in stock market. The findings in this study may provide implications for other emerging markets. In addition, the use of daily data addresses the limitation regarding the research power issue in the literature of selective disclosure.

APPENDIX: A: VARIABLE DEFINITIONS

Variables of interest

$\Delta Inst =$ institutional trading in advance of announcement of non-earnings significant news. We first identify two periods: the event window from the 15th trading day ahead of the announcement day, denoted as day -15, up to the 1st trading day ahead, denoted as day -1, and the non-event window that is 30 trading days earlier than the event window. ?Inst(t) is calculated as the change of institutional holdings from day -15 up to day t in the event window, minus the corresponding change in the non-event window.

$\Delta IndInst =$ trading of individual institutions in advance of announcement of non-earnings significant news. $\Delta IndInst(t)$ is institution-specific trading from day -15 up to day t in the event window, minus the corresponding trading in the non-event window, where daily trading equals daily trade amounts (RMB yuan) divided by total market values of outstanding shares of the announcing firm. The identifications of the event window and the non-event window are the same as that used for $\Delta Inst$.

$News =$ dummy variable for the nature of the impending news. It is based on the sign of cumulative market-adjusted stock returns from day 0 to day 14, where day 0 refers to the announcement day and day 14 refers to the 14th trading day after the announcement day. The cumulative market-

adjusted returns equal cumulative raw returns adjusted by concurrent market returns. News is equal to 1 if cumulative market-adjusted returns are positive and equal to 0 if cumulative returns are negative.

Variables of firm characteristics

$Size$ = firm size, equal to the logarithm transformation of total assets at the end of previous year.

BM = book-to-market ratio, equal to the ratio of book value of equity over market value of equity at the end of previous year.

ROA = firm performance, equal to the ratio of net income over total assets from previous year.

Lev = financial leverage, equal to the ratio of total liabilities over total assets in the previous year.

Variables of institutional characteristics

$BegOwn$ = beginning institutional ownership, equal to the percentage of institutional ownership at the beginning of the event period, i.e. the 15-day period to measure preannouncement institutional trading.

$Relation$ = relationship between institutional investors and firms, proxied for by the presence of institutions among firms?top10 stockholders. It is equal to 1 when institutions are top10 stockholders at the end of the quarter preceding the event quarter, and equal to 0 otherwise.

$PRelation$ = past relationship between institutional investors and firms, equal to the number of quarters, starting from the first quarter of 2003 up to the second quarter preceding the event quarter, during which institutions are top10 stockholders.

$InstSize$ = institution size, equal to the logarithm transformation of total assets of an institution in previous year.

$InstSource$ = dummy variable for the resources of an institution, equal to 1 for institutions whose resources are above the sample median and equal to 0 otherwise. The resources are measured in the following way: all institutions are ranked based on three types of metrics, including revenue, investment, and returns on investment; then the rankings of the three metrics for each institution are averaged and the average is employed to represent institution-specific resources.

Other controls

$PRet$ = past stock returns, equal to cumulative market-adjusted stock returns in the week prior to the event period, i.e. the 15-day period to measure preannouncement institutional trading.

$Inst\_Resid$ = residual value of preannouncement institutional trading, $\Delta Inst(-1)$. It is estimated from the following equation: $\Delta Inst(-1) = \beta_0 + \beta_1 \text{News} + \beta_2 \text{Size} + \beta_3 \text{BM} + \beta_4 \text{ROA} + \beta_5 \text{Lev} + \beta_6 \text{BegOwn} + \beta_7 \text{Relation} + \beta_8 \text{PRelation} + \beta_9 \text{PRet} + \text{Industry Dummies} + \varepsilon$

$Industry\ Dummies$ = dummy variables for industry classification.

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