Cover Page

Title: Chinese Block Transactions and the Market Reaction

Authors:

Jiangze Bian: Assistant Professor, School of Banking and Finance, University of International Business and Economics; mailing address: 908 Boxue Building, #10. HuixinDongjie, Chaoyang Dist, Beijing, China, 100029; email: jiangzebian@uibe.edu.cn; phone: 011-86-10-64492635 (office),

Jun Wang: Associate Professor, Department of Economics and Finance, Zicklin School of Business, Baruch College, City University of New York; mailing address: One Bernard Baruch Way, Box B10-225, New York, NY 10010; email: jun.wang@baruch.cuny.edu; phone: Phone: (646) 312-3507 (office),

Ge Zhang: Assistant Professor, School of Business, Public Administration and Information Sciences, Long Island University; mailing address:1 University Plaza, H700, Brooklyn, NY 11201, email: ge.zhang@liu.edu; phone: (718) 488-1138

Each author is willing to serve as a session chair and / or discussant

Please consider this paper for publication in European Financial Management

Chinese Block Transactions and the Market Reaction*

Jiangze Bian
University of International Business and Economics

Jun Wang
City University of New York, Baruch College

Ge Zhang
Long Island University

* Bian is from University of International Business and Economics, email: jiangzebian@uibe.edu.cn. Wang is from Department of Economics and Finance, Zicklin School of Business, Baruch College, email: jun.wang@baruch.cuny.edu. Zhang is from Long Island University, email: ge.zhang@liu.edu. This research is supported by UIBE grant No. 07QD036.

Chinese Block Transactions and the Market Reaction

ABSTRACT

This paper examines block transactions in the Chinese equity market. We find that most of the block transactions are traded at prices at or below the closing price of the regular continuous auction market, and more than half are traded at or below the lowest price of the day. While the block transactions appear to be seller-initiated according to price, the market reaction is positive. The positive reaction is consistent with the buyer-certification hypothesis, that is, the fact that rational institutional buyers enter block trade indicates the buyers' assessment of undervaluation. This effect is stronger after April 20, 2008, when a new regulation is imposed to force large shareholders to use block trading platforms to dispose large quantity of shares.

Key words: Block Trading, China, Buyer-certification Hypothesis, Market Reaction.

1. **Introduction**

Trading is at the heart of financial markets and an important topic in financial economics. Block trading, the trading of a large number of securities, has also attracted much attention because of the large size of the block and its great impact on the market.[1] In this paper we study block trading in China. Two features make Chinese block transactions unique and interesting. First, block transactions in China do not have dealers or market makers to act as the middle man. Block transactions in China are typically negotiated between the seller and the buyer directly and later reported to the exchanges for documentation. Without dealers as the middle men in block transactions, the typical benefit of block trading such as accessing hidden liquidity (Grossman 1992), certification of liquidity trades by the upstairs dealer (Seppi, 1990), does not apply in China. Second, everyday after the market close and after additional 30 minutes for block transaction reporting, the two Chinese exchanges, Shanghai Stock Exchange and Shenzhen Stock Exchange, publish all the block transactions on their websites. From these websites, investors can find the stock, the transaction price, volume, and the branch offices of the buyer and seller's brokerage firms. Although the identity of the buyer and seller is not disclosed, investors may infer the identity or at least the category of the buyer and/or seller from the branch office information.

Given the lack of middle man in Chinese block transactions and the fact that only institutional investors are allowed for block transactions, it is not clear what information content block trades convey. On one hand, the sellers of block transactions are large shareholders of the company and they have better information about the company than everyone else in the market. The fact that they are selling their shares through block trade

may imply that they know some negative information in advance and they are trying to dump their shares at whatever price. We call this effect the seller-private-information hypothesis. On the other hand, the buyers of block transactions are not noise traders. They are institutional investors and they should be able to take into consideration the sellers' motive to dump shares ahead of negative news. The fact that these rational buyers are willing to buy the stock implies that these rational buyers consider the stock undervalued. In this case, the block transaction can be an endorsement by the buyers and hence send a good signal to the market. We call this effect the buyer-certification hypothesis.

To differentiate the two hypotheses is an empirical matter. The reporting and publication of block transactions make this a clear-cut study. Given that block transactions are disseminated to the public in a timely fashion on the exchanges' web site and routinely reported in Chinese business news outlets, we can study the market reaction to these block transactions to see which hypothesis dominates. If the market reaction is general negative, then the seller-private-information effect dominates. If the market reaction is overall positive, then the buyer-certification effect holds more weight.

We find that most of the block transactions are traded at prices at or below the closing price of the regular continuous auction market, and more than half are traded at or below the lowest price of the day. From the price pattern, it appears that most block transactions are initiated by the sellers. While the conventional wisdom would support the seller-private-information hypothesis, the market reaction to Chinese block transaction is generally positive. The positive reaction is consistent with the buyer-certification hypothesis. This result depends highly on the fact that the buyers in Chinese

block market are rational institutional buyers and their action indicates the buyers' assessment of undervaluation. This effect does not exist before April 20, 2008, when a new regulation is imposed to force large shareholders to use block trading platforms to dispose large quantity of shares. After the new regulation, the certification effect is quite apparent.

We also identify one brokerage branch, Hua Hai Zhong Road Branch of China International Capital Corporation (CICC), where many foreign institutional investors have accounts. We show that much of the positive market reaction for block transactions is related to this brokerage branch. This result provides more evidence in support of the buyer-certification hypothesis.

Our research contributes to the literature on block trading in two fronts. On one hand, we provide the first systematic study on Chinese block trading and its market reaction. Our study is also the first to find evidence for this buyer-certification hypothesis in Chinese block market. On the other hand, our paper complements the block trade literature by studying a trading environment where the buyer and the seller negotiate directly. We document a scenario that the buyers are able to extract large concession from the sellers by setting low purchase prices, but at the same time the market reacts not to low prices, but to the fact that there are buyers for the stock. These is some anecdotal evidence of such buyer-certification effect in the U.S. market. For example, the market reacts positively to Warren Buffet's investment in Goldman Sachs and other companies, although Buffet gets much preferable terms than ordinary investors. The Chinese block trading environment provides an ideal setting for testing this effect.

This paper is organized as follows: Section 2 describes the Chinese block trading environment. Section 3 presents the data and results, and Section 4 concludes the paper.

2. Block trading in China

There are two security exchanges in China, Shanghai Stock Exchange and Shenzhen Stock Exchange. The main trading mechanism on both exchanges is the order-driven continuous auction. For a long time, there is no separate method to transact large quantity of securities. On February 25, 2002, the first block trade appeared on Shenzhen Stock Exchange. This transaction marks the beginning of block trade on Chinese security exchanges. In January, 2003, Shanghai Stock Exchange published the rules that govern block transactions and later established the electronic platform for block transactions. Since then, block trades have appeared on both exchanges.

The minimum threshold for block trading is 500,000 shares or 3,000,000 Yuans (1 U.S. dollar is equal to somewhere from 6.5 Yuan to 8.5 Yuan from 2003 to 2008). Unlike the continuous auction where buyers and sellers trade against the limit order book anonymously, block trading in China is typically negotiated directly between the buyer and the seller outside the exchanges. Both the buyer and the seller are required to be qualified investors, i.e., member firms of the exchanges or large institutional investors. After an agreement is reached, the two parties inform the exchanges' block trading platform that a block transaction has completed.[2] The exchanges then log the stock, the buyer and the seller, transaction price and quantity. There are two reasons for the parties to inform the exchange about the transaction. The first and foremost reason is to make the transaction official. Because all stocks are held at a centralized clearing house, only after

the transaction is logged by the exchange, will the clearing house transfer ownership of the stocks from the seller to the buyer. The second reason is to save on exchange fees. Both exchanges charge a lower fee for the block trading system than they do for the continuous auction market.

Block transactions can be reported during the hours when the market is open (9:30am-11:30am, 1:00pm-3:00pm) and the half hour after the close (3:00pm-3:30pm). Most of the block transactions are reported after the market close. The price of a block transaction is required to stay within the upper and lower limit of the stock. The upper (lower) limit of a stock is 10% above (below) the closing price in the previous trading day. After a block transaction is registered at the exchange, the exchange counts the volume in the corresponding stock volume of the day, but does not count the price in index calculation. Later in the day, after 5pm, the exchange publishes the block transaction on its website for all investors to check. The published information includes the stock, the transaction price, volume, and the branch offices of the buyer and seller's brokerage firms. The identity of the buyer and seller is not disclosed, but sometimes it is possible for investors to guess from the branch offices the identity or the type of transacting parties.

3. Data and results

We get all the block transactions between January 1, 2003 and September 30, 2008 from the public websites of Shanghai Stock Exchange and Shenzhen Stock Exchange. Our stock price data is from Resset Database in Beijing, China.

There are altogether 825 block transactions of the Chinese A share stocks.[3] About half of the transactions appear after April 19, 2008. From 2003 to April 2008, the block trading platform is one of the avenues for two institutional investors to transact directly. Because the stringent reporting environment, it is not widely used by institutional investors. There are 400 A share transactions over the four year span. On April 19, 2008, China Securities Regulatory Commission issued a new regulation on the sale of restricted-turned-tradable shares of public companies, and the new regulation has a profound effect on block transactions.

In 2006 and 2007, a major reform in Chinese stock market was to convert many restricted shares to publicly tradable shares. Before the reform, most Chinese public companies only had a small percentage of the shares that are allowed to be traded, while the majority of the shares are restricted shares and can not be traded in the exchanges. These restricted shares are typically owned by government agencies, parent companies or other large institutional investors. The goal of the reform is to convert these restricted shares into public tradable shares. The typical conversion includes compensating the existing tradable share holders with warrants or stock dividends, and setting a time table for the restricted shares to become publicly tradable. Since the Chinese stock market peaked in October, 2007, the index in April 2008 was about a half of its high of just above 6,000. One of the reasons for this fall is the sale of restricted-turned-tradable shares. The new regulation by China Securities Regulatory Commission is adopted with the objective to curtail the sale of these restricted-turned-tradable shares.

The regulation requires that, if its sale of restricted-turned-tradable shares in a month exceeds one percent of all shares outstanding, the seller must use the block trading

platforms to sell these restricted-turned-tradable shares. As a direct result of the regulation, block transactions become much more frequent after April 19, 2008. During the five month period in our sample after the regulation, there are 425 block transactions, more than the total number of transactions in the previous four years.

<Insert Table 1 Here>

Table 1 reports the summary statistics of the block transactions in the full sample and in the subsample after the regulation is adopted. The average trading volume of a block transaction is over three million shares and the average dollar volume is over 30 million yuan. We also compare the price of the block transactions with prices from the continuous auction. Most of the block transactions are traded at or below the closing price in the continuous auction market which ends at 3pm. About 12% of all block trades are at the closing price, while 72% of all block trades are below the closing price. When comparing to the lowest price of the day, more than half of all block trades are either at or blow the lowest price. Given the lowest price allowed for any block transaction is the lower bound of the stock price allowed in the day, i.e., 10% below the closing price of the previous day, about 9% of all block transactions are traded at this lower bound. This number gets higher to over 14% when we just consider the block transactions after the new regulation.

Since most of the block transactions are traded at prices blow the closing price and even below the lowest price of the day, it appears that buyers in these block transactions have the upper hand in the negotiations with sellers in these block transactions. This result is especially consistent with the fact that block trading platform is the only outlet for sellers who want to dispose large number of restricted-turned-

tradable shares after the new regulation. On the other hand, buyers can always choose between buying stocks in the continuous auction market or in the block market. This imbalance gives buyers a lot of bargaining power. Interestingly, although the buyers appear to extract a little more concession in price from the sellers after April 20, 2008, the prices of block transactions are low even before then.

Next we study the market reaction to these block transactions. As noted earlier, both Shanghai Stock Exchange and Shenzhen Stock Exchange publish all the block transactions on their websites after market close on the same day. From these websites, investors can find the stock, the transaction price, volume, and the branch offices of the buyer and seller's brokerage firms. Although the identity of the buyer and seller is not disclosed, investors still learn that 1) a block transaction has occurred, 2) the seller is a large shareholder of the company, and 3) the buyer is also an institutional investor and sometimes one may infer the identify or at least the category of the buyer from the branch office information.

Given the unique information disclosure environment in Chinese block trading, it is interesting to detect how the market perceives the information contents of these transactions. On one hand, the sellers of block transactions are large shareholders of the company and they have better information about the company then everyone else in the market. The fact that they are selling their shares through block trade may imply that they know some negative information in advance and they are trying to dump their shares at whatever price. We call this the seller-private-information hypothesis. In this case, the market should treat the block transaction as a bad signal and react negatively to the announcement. On the other hand, the buyers of block transactions are not noise traders.

They are institutional investors and they should be able to take into consideration the sellers' motive to dump shares ahead of negative news. The fact that these rational buyers are willing to buy the stock implies that these rational buyers consider the stock undervalued. We call this the buyer-certification hypothesis. In this case, the block transaction can be an endorsement by the buyers and hence send a good signal to the market. To differentiate which effect dominates, we study the announcement effect around the block transaction.

We study market reaction from several angles. First we check the volume and volatility on the day after the block transaction. For volume, we calculate the adjusted volume as the volume on the day after the block transaction divided by the average volume of 50 days before the block transaction day, i.e., the average volume from day -50 to day -1. We exclude the volume on the day of block transaction from the average because its volume includes the block transaction. For volatility, first we calculate the daily range-based volatility, that is, the difference between the high price and low price of the day divided by the closing price in the previous day.[4] Then we make the same adjustment as we do for volume, that is, we divide the range-based volatility on the day after the block transaction by the average 50 day volatility before the block transaction day. To center the adjusted volume and volatility on zero, we also subtract one from each variable.

<Insert Table 2 Here>

Table 2 reports the adjusted volume and volatility on the day after block transaction for the whole sample. The mean of the adjusted volume is significantly positive, indicating trading volume is higher in the continuous auction market after the

block transaction. This result is not surprising given the block transaction is typically covered by business news outlet right after the exchanges publish it on their web sites. The high volume on the day after shows the market is reacting to block transactions. Contrary to volume, the volatility does not show any perceptible difference on the day after block transaction.

The main measure of market reaction is certainly the return after the information becomes public. Table 2 reports three measures of the market return. The first is the raw return (RET) of the stock. The second is the raw return minus the return on the corresponding exchange index on the same day (EXRET1), and the third is the raw return minus the expected return based on CAPM model (EXRET2). We run CAPM regression using one year of daily data up to two month before the block transaction and we use the parameters from the regression to predict expected returns.

On the day after block transaction, the means of the raw return and the two forms of abnormal return are all positive. However, the raw return is not significant, the abnormal return using index return as expected return is significant at 10% level, and the abnormal return using CAPM as expected return is significant at 5% level. Overall the results are more consistent with the buyer certification hypothesis, i.e., the rational buyer's purchase action certifies that the stock is undervalued, but the evidence is not conclusive.

While the return on the day right after the block transaction measures the market reaction, it is not an indication on whether investors can earn abnormal returns after learning the information. The return on the day right after the block transaction is the return from the close of transaction day to the close of the next day. Because block

transactions are submitted to the exchanges after the close and are broadcasted to the public even later, investors do not have the information on block transaction at the close of the particular day. In this case, investors can not capture the return on the day after the block transaction. To access whether investor can profit by trading on the block transaction news, we study the return the second day after the block transaction. If the investors trade on the news, this return is what they can earn. From Table 2, we see that none of the three returns on the second day after is significantly different from zero. Thus, if an investor tries to trade on the block transaction news, he can not earn any excess return.

The new regulation by China Securities Regulatory Commission has the effect of forcing large sellers to use block trading platforms. Given our preliminary evidence of buyer certification effect, the effect should be even stronger after the new regulation as sellers are more likely to enter block transaction for liquidity reason. We study the two sub-samples before and after the new regulation. The results are reported in Table 3. As expected, the market reaction is stronger and significantly positive on the day after block transactions after the new regulation. This result shows that the buyer certification effect is the main effect recently. As to the returns on the second day after block transactions, all three returns are positive but only one (EXRET1) is significant. Thus, the evidence on whether investors can profit from the public block transaction news is still inconclusive. Finally, all the positive market reaction in the whole sample appears to come from the later period, i.e., the period after the new regulation. In the period from January 2003 to April 2008, there does not appear to be any market reaction to block transactions.

<Insert Table 3 Here>

We also regress the market reaction on various variables such as the discount of block transaction versus the normal market, the volume of block trade, whether the block transaction is traded below close or below the lowest price, but we do not find any significant relation between market reaction and any of these factors. Overall, the most significant effect is from the fact that these rational buyers are stepping into the market, rather than from the detailed manner.

To further investigate this buyer-certification hypothesis, we identify one specific brokerage branch. Note that the public information about the block transactions includes the brokerage branches that represent the buyer and seller respectively. One branch of China International Capital Corporation Limited (CICC), Hua Hai Zhong Road Branch, is widely regarded as one branch where many Qualified Foreign Institutional Investors (QFII) set up their accounts. Hence, when the buyer branch of a block transaction is Hua Hai Zhong Road Branch, CICC, it is usually reported in the Chinese business news as QFII buying. In our sample, we identify 38 firm-days that the buyer's brokerage branch is Hua Hai Zhong Road Branch, CICC. Then we run regressions of the six market reaction variables studies above on the dummy variable for this branch and a constant. Table 4 reports the results of these regressions.

<Insert Table 4 Here>

Table 4 shows that the dummy coefficients are significantly positive for first day returns. For raw returns, the dummy coefficient for the block transactions whose buyer brokerage branch is Hua Hai Zhong Road Branch, CICC, is 2.45%. This average is significantly positive at 1% level. In addition, the intercept of this regression is -0.14%, which indicates that the positive reaction to block transactions disappears if we exclude

those transactions with the specific buyer brokerage branch. The other two regressions show similar results, albeit the dummy coefficients are positive and significant at 10% level.

For second day returns after block transactions, there is no special effect for the dummy variable. This result shows that the market reacts to the perceived purchase by QFII very quickly and it is difficult to investors to trade on this information one day after these block transactions.

4. Conclusion

In this paper, we study block transactions in Chinese equity market. We find that most of the block transactions are traded at prices at or below the closing price of regular continuous auction market, and more than half are traded at or below the lowest price of the day. From the price pattern, it appears that most block transactions are initiated by the sellers. Given the sellers are large shareholders, the block sale may indicate their negative perception of the future performance, and thus send a negative signal to the market. Interestingly, the market reaction to Chinese block transaction is positive. The positive reaction is consistent with the buyer-certification hypothesis, that is, the fact that rational institutional buyers enter block trade indicates the buyers' assessment of undervaluation. This effect does not exist before April 20, 2008, when a new regulation is imposed to force large shareholders to use block trading platforms to dispose large quantity of shares. After the new regulation, the certification effect is quite apparent. Future research needs to further dissect which types of buyers generate the most significant market reaction and

for what reason. Another useful research is to study the link between block transaction and the regular continuous auction market.

Notes

1, For early seminal works on trading, see Glosten and Milgrom (1985), Kyle (1985). For theoretical works on block trading, see Seppi (1990), Grossman (1992), Foster, Gervais, and Ramaswamy (2007). For empirical works on block trading, see Bessembinder and Venkataraman (2004), Keim and Madhavan (1996), Madhavan and Cheng (1997), etc.

2, Technically, the potential buyer (seller) can register his or her intention to buy (sell) a certain quantity of stocks at a price and the exchanges would publish this intention to the public without disclosing the identity of the buyer (seller). This is called registration of intention. Since the direction of trading is disclosed, this form of registration is almost never used. Since 2003, there is only one such incidence.

3, The block trading platforms in both exchanges also allow trading of Chinese B shares, mutual funds, and bonds. These transactions are very few since 2003. In this paper, we only focus on block trading of Chinese A shares.

4, For details of range-based volatility, see Alizadeh, Brandt, and Diebold (2002), Chou and Liu (2008), etc.

References

Admati, A. R., and P. Pfleiderer, 1988, "A Theory of Intraday Patterns: Volume and Price Variability." *Review of Financial Studies* 1, 3-40.

Alizadeh, S, M. W. Brandt, and F X. Diebold. 2002. "Range-based Estimation of Stochastic Volatility Models." *Journal of Finance* 57 (June):1047–92.

Barclay, M. and J. Warner, 1993. "Stealth Trading and Volatility: Which Trades Move Prices?" *Journal of Financial Economics* 34, no.3: 281–306.

Bessembinder, H., and K. Venkataraman, 2004, "Does an Electronic Stock Exchange need an Upstairs Market?" *Journal of Financial Economics*, 73, no.1:. 3-36.

Chou, R. and N. Liu, 2008, "The Economic Value of Volatility Timing Using a Range-based Volatility Model," *Working Paper*, National Chiao Tung University.

Foster, D., S. Gervais and K. Ramaswamy, 2007. "The Benefits of Volume-Conditional Order-Crossing," *Working Paper,* University of Pennsylvania.

Glosten, L. R., and P. R. Milgrom, 1985, "Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders," *Journal of Financial Economics*, 14, no.1: 71-100.

Grossman, S., 1992. "The Informational Role of Upstairs and Downstairs Markets." *Journal of Business* 65, 509–529.

Hansch, O., N.Y. Naik, and S. Viswanathan, S., 1999. "Best Execution, Internalization Preferencing, and Dealer Profits." *Journal of Finance* 53, 1623–1656.

Keim, D. and A. Madhavan, 1996. "The Upstairs Market for Large Block Transactions: Analysis and Measurement of Price Effects." *Review of Financial Studies* 9, 1–36.

Kyle, A. S., 1985, "Continuous Auctions and Insider Trading." *Econometrica*, 53, 1315-1335.

Madhavan, A., and M. Cheng., 1997. "In Search of Liquidity: Block Trades in the Upstairs and Downstairs Market." *Review of Financial Studies* 10, 175–203.

Parlour, C. and D. Seppi, 2003. "Liquidity-based Competition for Order Flow." *Review of Financial Studies* 16,301–343.

Rhodes-Kropf, M., 2002. "Price Improvement in Dealership Markets." *Working Paper*, Columbia University.

Saar, G., 2001. "Price Impact Symmetry of Block Trades: An Institutional Trading Explanation." *Review of Financial Studies* 14, 1153–1181.

Seppi, D., 1990. "Equilibrium Block Trading and Asymmetric Information." *Journal of Finance* 45, 73–94.

Vishwanathan, S. and W. Jiang. 2002. "Market architecture: limit-order books versus dealershipmarkets." *Journal of Financial Markets* 5, 127–168.

Zhu, X., 2004, "The Evolution of Block Trades in Chinese Stock Exchanges," *Financial Science*, 203, 41-45 (in Chinese).

Table 1 Summary statistics of Chinese block transactions.

	1/1/2003-9/30/2008			4/20/2008-9/30/2008		
	Shanghai Stock Exchange	Shenzhen Stock Exchange	All	Shanghai Stock Exchange	Shenzhen Stock Exchange	All
Number of transactions	472	353	825	209	216	425
Average trading volume (million shares)	3.54	2.53	3.11	4.22	2.86	3.53
Average dollar volume (million yuan)	39.44	23.04	32.43	51.14	24.09	37.40
Transactions where the price equals the closing price	14.62%	9.92%	12.61%	6.7%	4.63%	5.65%
Transactions where the price is less than the closing price	68.64%	78.19%	72.73%	74.64%	82.41%	78.59%
Transactions where the price equals the low price	43.22%	24.65%	35.27%	37.8%	19.44%	28.47%
Transactions where the price is less than the low price	10.17%	37.39%	21.82%	22.97%	50%	36.71%
Transactions where the price equals the lower bound price	8.05%	11.05%	9.3%	15.31%	13.43%	14.35%

Table 2 Market reaction to block transactions

This table reports the market reaction to block transactions from January 1, 2003 to September 30, 2008. VOLUME and RVOL are the adjusted volume and volatility of the day after the block transaction. Let the day of the block transaction be t. VOLUME is calculated as the ratio between volume at t+1 and the average 50 day volume from t-50 to t-1. RVOL is the ratio between range volatility at t+1 and the average 50 day volatility from t-50 to t-1. Range volatility is the high price minus the low price over the close price of the previous trading day. RET_1, $EXRET1_1$, $EXRET2_1$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+1. RET_2, $EXRET1_2$, $EXRET2_2$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+2. All returns are in percentages.

	Mean	Std. Dev.	P value (t test)	Median	P value (sign test)
VOLUME	0.361	1.415	0.000	-0.08	0.122
RVOL	0.03	0.58	0.209	-0.09	0.024
RET_1	0.233	4.029	0.157	0.00	0.633
$EXRET1_1$	0.203	2.878	0.084	-0.28	0.771
$EXRET2_1$	0.264	3.084	0.036	-0.22	0.955
RET_2	-0.07	3.697	0.623	-0.14	0.413
$EXRET1_2$	0.285	4.581	0.121	-0.11	0.583
$EXRET2_2$	0.007	2.94	0.950	-0.32	0.052

Table 3 Market reaction to block transactions in subperiods

This table reports the market reaction to block transactions in two periods, before April 20, 2008, and after. VOLUME and RVOL are the adjusted volume and volatility of the day after the block transaction. Let the day of the block transaction be t. VOLUME is calculated as the ratio between volume at t+1 and the average 50 day volume from t-50 to t-1. RVOL is the ratio between range volatility at t+1 and the average 50 day volatility from t-50 to t-1. Range volatility is the high price minus the low price over the close price of the previous trading day. RET_1, $EXRET1_1$, $EXRET2_1$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+1. RET_2, $EXRET1_2$, $EXRET2_2$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+2. All returns are in percentages

	Mean	Std. Dev.	P value (t test)	Median	P value (sign test)
April 20, 2008 – September 30, 2008					
VOLUME	0.398	1.546	0.000	-0.09	0.269
RVOL	0.039	0.624	0.233	-0.08	0.043
RET_1	0.513	3.908	0.013	-0.00	0.216
$EXRET1_1$	0.482	2.829	0.001	-0.10	0.119
$EXRET2_1$	0.524	3.174	0.002	-0.12	0.212
RET_2	0.174	3.606	0.362	-0.15	0.752
$EXRET1_2$	0.773	4.435	0.001	-0.03	0.077
$EXRET2_2$	0.242	2.98	0.124	-0.04	0.918
January 1, 2003 – April 19, 2008					
VOLUME	0.306	1.191	0.000	-0.08	0.300
RVOL	0.015	0.505	0.639	-0.09	0.285
RET_1	-0.19	4.177	0.480	0.00	0.448
$EXRET1_1$	-0.22	2.907	0.245	-0.46	0.017
$EXRET2_1$	-0.12	2.909	0.522	-0.32	0.102
RET_2	-0.43	3.805	0.075	-0.14	0.066
$EXRET1_2$	-0.43	4.705	0.152	-0.47	0.002
$EXRET2_2$	-0.34	2.85	0.064	-0.56	0.001

Table 4 Regression of market reaction on smart investor dummy

This table reports the regression results of market reaction on a dummy variable for the buyer from Hua Hai Zhong Road Branch of CICC. RET_1, $EXRET1_1$, $EXRET2_1$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+1. RET_2, $EXRET1_2$, $EXRET2_2$ are raw return, raw return subtracting the index return, raw return subtracting the expected return from CAPM model, at t+2. The t-statistics are in parentheses. ***, **, and * indicate significance at 99%, 95%, and 90% level, respectively.

Dependent Variable	Intercept	Dummy	R^2
Dret1	-0.14 (-0.82)	2.45 (3.55)***	0.020
Ehpr1	0.05 (0.44)	0.96 (1.93)*	0.006
Exret1	0.02 (0.16)	0.87 (1.68)*	0.0047
Dret2	-0.27 (-1.66)*	-1.12 (-1.72)*	0.0048
Ehpr2	0.04 (0.21)	0.76 (0.97)	0.0015
Exret2	-0.10 (-0.85)	0.006 (0.01)	0.001