THE TRADING BEHAVIOR OF INSTITUTIONS AND INDIVIDUALS IN CHINESE EQUITY MARKETS
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Outline

Why It is Important?

- The Chinese equity markets are dominated by individuals.
  - Compared to developed equity markets where a form of polarization between individual and institutional investors is evident.
  - 99.5% individuals, just 0.5% are institutional.
    (Chinese Securities Depository & Clearing Co. Ltd, 2002).
- Chinese markets were only established in the early 90s.
- Short-selling & margin trading are not allowed in China, like in Iran.
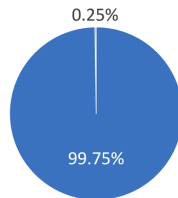
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The Main Data

- A Sample of trade-level data executed on the SHSE[1]
    - Time frame: April 2001-August 2002
    - Similar in-sample distribution of individual and institutional accounts to those of the whole market
    - The final sub-sample used consists of $4.72M$ individual and $11.6K$ institutional accounts.

77M Trades

32% of Total Market Turnover

0.25%

99.75%

Composition of Final Sub-Sample Used

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[1]The Shanghai Stock Exchange

Table 1: Aggregate Statistics for Each Group

	Institutional	Individual Investors Grouped by Trade Value		
		Largest	Middle Group	Smallest
No. of Accounts	11,586	319,675	1,767,112	2,636,871
	(0.24%)	(6.75%)	(37.32%)	(55.69%)
No. of Trades (M)	0.24	5.12	29.73	38.84
	(0.33%)	(6.93%)	(40.21%)	(52.53%)
Value of Trades (B)	98.12	687.08	584.46	223.54
	(6.16%)	(43.13%)	(36.68%)	(14.04%)

Table 2: Statistics by Type of Trading Activity

| | Institutional | | Individual investors grouped by trade value | | | | | |
| | | | Largest | | Middle group | | Smallest | |
	Buy	Sell	Buy	Sell	Buy	Sell	Buy	Sell
No. of Trades (M)	0.12	0.12	2.61	2.51	15.65	14.07	20.57	18.27
No. of Shares Traded (B)	14.03	12.8	43.18	42.77	32.47	31.47	12.95	12.22
Trade Value (B)	51.99	46.13	348.37	338.72	298.44	286.02	115.52	108.03

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Investor Groups' Trading Pattern
Measures of Excess Buying (Selling)

- A measure of net buying (selling) of stock i by investor group G. $g = 1, \ldots, N_G$ is an investor in group G.

$$\mathrm{NB}_{i,t}^{G} = \frac{\sum_{g=1}^{N_G} \mathrm{Buy}_{i,t}^{g} - \sum_{g=1}^{N_G} \mathrm{Sell}_{i,t}^{g}}{\sum_{g=1}^{N_G} \mathrm{Buy}_{i,t}^{g} + \sum_{g=1}^{g} \mathrm{Sell}_{i,t}^{g}} = -\mathrm{NS}_{i,t}^{G}$$

- $\mathbb{E}(\mathrm{B}_{i,t}^{G}) = \frac{\sum_{i=1}^{N_t^G} \mathrm{NB}_{i,t}^{G}}{N_t^G} = -\mathbb{E}(\mathrm{S}_{i,t}^{G})$

- By adjusting for the group's average excess buying and selling of all stocks at time t, define two measures for excess buying and selling of each stock by investor group G.

$$\mathrm{XB}_{i,t}^{G} = \mathrm{NB}_{i,t}^{G} - \mathbb{E}(\mathrm{B}_{i,t}^{G}) = -\mathrm{XS}_{i,t}^{G}$$

Independet and Control Variables

- Returns prior to trading day are independent variables.
- Dummies for contemporaneous and one-day lagged stock-specific "good" and "bad" news
- Dummies for capturing day-of-the-week effect
- A dummy for IPO
- Two dummies for "reference point" effects

Table 3: Investor Trading Decisions and Past Stock Returns

| | Institutional | | Individual Investors Grouped by Trade Value | | | | | |
| | | | Largest | | Middle group | | Smallest | |
	Buy	Sell	Buy	Sell	Buy	Sell	Buy	Sell
$R(-1)$	0.690**	-0.384	0.941**	-0.481**	-0.430**	1.477**	-2.725**	2.882**
	(2.22)	(-0.98)	(8.54)	(-4.08)	(-6.88)	(22.3)	(-39.2)	(38.8)
$R(-2, -5)$	0.188	-0.494**	0.137**	0.088*	-0.503**	0.710**	-0.967**	0.821**
	(1.26)	(-2.72)	(2.67)	(1.71)	(-17.2)	(24.6)	(-29.8)	(25.4)
$R(-6, -27)$	0.080	-0.170*	-0.034	0.098**	-0.189**	0.251**	-0.322**	0.263**
	(1.01)	(-1.91)	(-1.31)	(3.86)	(-12.7)	(17.5)	(-19.4)	(16.4)
$R(-28, -119)$	-0.068	0.067	-0.043**	0.024	-0.089**	0.107**	-0.094**	0.121**
	(-1.17)	(1.14)	(-2.67)	(1.41)	(-9.71)	(11.2)	(-9.22)	(11.3)
R^2	0.07%	0.08%	0.31%	0.28%	0.63%	1.14%	3.30%	3.14%
Obs	50004	50004	175527	175527	182115	182115	181755	181755

$^{**}p < 0.05$, $^{*}p < 0.1$

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Impact of Trading on Future Volatility
The Model

$$\sigma_{i,t} = \phi_{i,0} + \phi_1 \, \text{Max} \left[\mathbf{NB}_{i,t-1}^{G}, 0 \right] + \phi_2 \, \text{Max} \left[\mathbf{NS}_{i,t-1}^{G}, 0 \right] + \phi_3 \sigma_{i,t-1}$$
$$+ \phi_4 \sigma_{\mathrm{M},t} + \phi_5 r_{i,t-1} + \epsilon_{i,t}$$

- $\sigma_{i,t}$ is the monthly return volatility of stock i in month t.
- This separates effects of net buying and net selling on future stock volatility, while controlling for the market wide volatility and the stock's own lagged volatility.

Results

- Only the **net buying** of stocks by **wealthiest** individuals and *net selling* by *institutions* help decrease future stock volatility.
  - This observation perhaps suggests that institutions are net sellers of some stocks where the group of wealthiest individual investors are net buyers.
- Less wealthy individual investors who are generally small players in the markets exert no influence on the volatility of the stocks.

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Impact of Trading on Future Returns
The Model

$$r_{i,t} = \delta_{i,0} + \delta_1 \text{Max}\left[\mathbf{NB}^G_{i,t-1}, 0\right] + \delta_2 \text{Max}\left[\mathbf{NS}^G_{i,t-1}, 0\right] + \delta_3 r_{M,t}$$
$$+ \delta_4 r_{i,t-1} + \eta_{i,t}$$

- If individuals are noise traders, there should be no systematic relation between their trading activity and future stock returns.
- In other words, the estimated δ_1 and δ_1 coefficients should be insignificantly different from zero or should bear signs suggesting that future returns are in counter direction to the trading activity.

Results

- Both Chinese institutions and the majority of Chinese individual investors have no predictive power for future stock returns.
  - The evidence that trading by institutions provides no prediction of future stock returns is somewhat surprising.
  - This finding contradicts existing evidence that institutions are typically more sophisticated and more informed than individual investors.
- To sum, there seems no evidence that the majority of Chinese individual investors are making sound investment decisions.

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Summary

- This papers employ a new unique data set at trade-level.
- Institutions pursue momentum investing.
- Less wealthy groups of individual investors mainly adopt contrarian strategies.
- Wealthier Chinese individuals are likely to increase purchases of winner stocks and to decrease sales of loser stocks.
- Only the trading activities of institutions and wealthiest individuals can affect future stock volatility.
- Chinese investors at large have no predictive power for future stock returns.