A Profile of Individual Investors in an Emerging Stock Market

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Abstract

This paper is intended as a resource and reference - nothing more, nothing less. It is written for those interested in: i) individual investors; ii) emerging markets; or iii) stock markets in the PRC. Readers can learn about individual investor attributes (demographics) such as intracountry location, gender, and age. We detail stock trading behavior that includes: method of placing trades, frequency of trading, and value of trades. This paper contains information about stock portfolio holdings such as number of positions and turnover. Finally, we provide comparisons with existing studies from the United States and Israel.

We are fortunate to have access to a new and exciting dataset from the People's Republic of China (PRC). The data are comprised of 90,478 actively investing individuals with demographic information. These people make 4,996,306 stock trades from 1999 to 2000. Our goals in writing this paper are two fold: i) we want to know along which dimensions investors in an emerging market (the PRC) are similar to, or different from, investors in the United States; and ii) we use this paper to test the integrity of our data before initiating future research.

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1 Introduction

Over the past four years, work by Odean (1998 and 1999) and Barber and Odean (1999, 2000, 2001) has taught financial economists much about individual investors. In fact, most of the stylized facts we know about investors stem from these papers. For example, investors tend to trade too much, trading greatly decreases an investor's net profit, and investors are reluctant to realize their losses.

After reviewing results from the United States, one can't help but ask: "do these same characteristics apply to investors in other countries?" In particular: "do these characteristics apply to investors in an emerging stock market?" Answering the second question can help us understand how, if at all, emerging markets are different from markets in developed countries such as the United States.

This paper is meant as a reference for academics. It is not an academic study *per se*. We hope others will find the data compiled here both accessible and useful. Section 2 of this paper briefly reviews some existing literature in the field of investor behavior. Section 3 discusses the structure of brokerage accounts in the PRC. Section 4 outlines the structure of our actual data. Sections 5, 6, and 7 discuss individual demographics, trading behavior, and portfolio holdings. Sections 8 concludes briefly.

2 Existing studies of individual behavior

High-quality, account-level data is rare. Therefore, we divide the existing literature by dataset. The goal of this section is simply to reference existing and comparable work. We focus on the data employed rather, than results obtained, in the papers mentioned.

2.1 Accounts from a large retail brokerage house

Before the late 1990s, studies that use account-level data are rare. Notable exceptions include a series of articles by Lease, Lewellen, and Schlarbaum (1974), Cohn, Lewellen, Lease, and Schlarbaum (1975), and Schlarbaum, Lewellen, and Lease (1978a,b). Data for these papers consist are a sample of approximately 3,000 accounts from 1964 to 1970. The authors focus on characteristics of investors including: age, wealth, and risk aversion. The authors also

consider common stock investments and portfolio performance for individuals in their sample.

Badrinath and Lewellen (1991) study 80,000 "round-trip" investments by approximately 3,000 individuals between 1971 and 1979. The accounts are from the same large, retail brokerage house used in the papers mentioned above. The authors concentrate their investigation on tax-loss selling at the end of the year. They find there is "strong evidence of a concentration of loss-taking trades late in the year."

2.2 Accounts from a nationwide discount brokerage house (small sample)

More recently, Odean (1998 and 1999) and Barber and Odean (1999, 2000, 2001) have greatly expanded our understanding of the individual investors. Odean (1998) studies the disposition effect with 10,000 customer accounts. The customer trade data consists of 162,948 records from January 1987 to December 1993. Odean (1999) uses the same data to test whether investors trade too much. Barber and Odean (1999) present the disposition effect results in a practitioner journal.

2.3 Households from a nationwide discount brokerage house (large sample)

Barber and Odean (2000) increase the size of their original sample seven-fold. They study 78,000 households and show that increased trading reduces net return. The data consist of 1,969,701 purchases and sales. Barber and Odean (2001) use a subset of the total dataset (37,664 households) to study gender differences.

Ranguelova (2001) uses the same data to explore the disposition effect. The author finds that investors are less likely to realize losses in large stocks.

A series of papers from Yale also use the same data. Dhar and Kumar (2001) study momentum buyers/sellers and contrarian buyers/sellers. Goetzmann and Kumar (2002) show that the majority of investors are under diversified in their holdings. Dhar and Zhu (2002) show that individual traits such as wealth and experience tend to mitigate the disposition effect. Finally Zhu (2002) shows that investors tend to hold stocks of nearby companies.

2.4 Israeli accounts

Sharpari and Venezia (2000) study the disposition effect, trading frequency, volume, and profitability. Their sample of 4,330 accounts are randomly drawn from an Israeli bank that also has a brokerage arm. They document a disposition effect in Israel. Also, professionally managed accounts are more diversified than independent accounts.

2.5 Finnish accounts

Grinblatt and Keloharju (2000a, 2000b) study the shareholdings and trades of essentially all Finnish investors. The data include individuals and institutions. Given the enormous size of the dataset, the authors don't focus on statistics such as number of accounts. Instead, the authors concentrate on trading in the largest stocks. They find Finnish households are contrarian investors while foreigners tend to be momentum investors.

3 Brokerage accounts and individuals in the PRC

We are fortunate to have access to account-level data from the PRC. Our data is provided by a national brokerage firm and includes information about the individual account-holders and their trades from January 1999 to December 2000.

Brokerage accounts in the PRC are both similar to, and different from, what we are used to in the U.S. A brokerage firm (the firm) may have branch offices (branches) throughout the country. However, many brokerage firms are regionally focused and have branches in only one province.

Individuals may only open one stock account in the PRC. What's more, after choosing a firm and branch office, they conduct all their transactions through *one* branch. They place all of their trades through this one branch, they receive their statements from the branch, etc.

There is a critical difference in this paper and work to follow, between brokerage firms (our data are from one firm) and branch offices (our data come from fifteen different branches.) Table 1 shows where the fifteen branch offices used in this study are located. Nine of the fifteen are located in Guangdong Province or the Shanghai municipality. This is not too

surprising since the two stock exchanges in the PRC are located in these two provinces. The table shows the province population in Column 3. Column 4 has the size (in km^2) of the province or municipality as provided by central government of the PRC. The GDP per capita in Column 5 is also from the central government. Column 6 shows the results of a private survey. The survey is provided by the brokerage office and gives a measure of wealth distribution in the country. Table 1 shows the wide dispersion of wealth in China. According to the survey, residents in Shanghai make about three times those in Heilongjiang.

A branch office may have a number of ways for investors to place trades: computer terminals in the branch; cashier windows; telephone services; and computer links. Computer links from private computers are uncommon at this time, effectively leaving three channels with which to place a trade. Consider a brokerage firm with five regional branches in the country's largest cities. An individual who opens an account at the Beijing branch must place all his or her trades with the Beijing branch. Even if the individual is visiting Shanghai, he or she may not place trades at the local Shanghai branch of the same firm. Instead, he or she must call Beijing to place a trade (and may only do so if the account has previously been set up to allow phone trades.)

4 Database structure

Our account-level data is in three main databases. The first database has information about each individual (account). For each individual, we know the gender and birth date. We also have information on where the investor is registered to live.

The second database has transaction information. Each record is dated, has the associated account number, stock code (when relevant), shares (when relevant), purchase or sale price, taxes, etc. The brokerage firm who has provided this data switched to a new storage system in late 1998, early 1999. Our data come exclusively from this new system.¹

The third database is a monthly position (holdings) file for investors. Stock positions are derived from the transaction database and initial positions provided by the brokerage firm. We use the monthly positions to calculate returns on investors' portfolios.

¹The date which a branch adopts the new systems determines the length of data we have. Branch 2 performed a testing role for the system starting in 1998. Other branches adopted in 1999. Thus, data from branch 2 are the only information we have before 1-Jan-1999. At this point we do not filter our data. In future studies we can look at trading behavior over a common time interval.

We also have daily price, volume, and return information for the aggregate stock market. The price files allow us to value an investor's portfolio at the end of any day.

We now provide and in-depth description of each of the three main databases.

5 Overview of individuals (demographics)

We begin by looking at individuals (accounts.) Since each individual is limited to only opening one account, we can use the words "accounts" and "individuals" interchangeably.² Table 2 provides an overview of the number of individuals (unique accounts) in our dataset. Overall, there are 195,164 individuals in our sample. Of those, our data contain the corresponding National Identity Card (NIC) number for 146,369 individuals (Column 3). The NIC number is very important for our study since it contains information about the individual. The place an individual is currently registered to live (region, county, city) is contained in the NIC number. An individual's birthday and gender is also part of the NIC.

When an individual is born in the PRC, their NIC number is coded to reflect where their parents are currently registered. If the individual moves during his lifetime, one of two things can happen. If the individual registers at his new residence, he will be given a new NIC number that reflects the new location. If the individual does not register, the NIC number will show the last place the individual was registered (i.e., his birthplace.)

The reason the NIC number is critical for our study becomes very clear. If we see and individual who has opened an account in the Beijing branch, we can assume the individual lives near by (because trades have to be placed at this branch). If the individual's NIC number is coded with a different province, we can assume this person has moved to Beijing and not changed her registration. The NIC number, is thus, assumed to represent the individual's birthplace. If the NIC number is coded for Beijing, it is not possible to know if the individual was actually born in Beijing or not. We only know either: she was born in Beijing or she was born elsewhere and has officially changed her residence to Beijing.

Table 2 Column 4 shows the number of active individuals. We define an active individuals as one that buys or sells a PRC-listed stock, denominated in RMB, with a price and number

²Individuals must show a National Identity Card (internal passport) when opening an account. These can be checked by the central government to insure an individual is not opening multiple accounts at various branches or firms.

of shares greater than zero during our sample period (1999 to 2000.) Our definition of active individuals excludes trading in bonds or warrants. It also, excludes unsuccessful bids for public offerings. As we can see, only about half of the individuals are active. In an emerging market, this is not too surprising since many brokerage accounts are opened for the express purpose of receiving privatization shares. For example, an employee of a state owned enterprise (SOE) is sometimes given shares of the company as part of the privatization process. The employee may then need a brokerage account to hold shares of her company.

Table 2, Column 5 (in boldface) is the most important column in the table. The intersection of active individuals and valid NIC numbers form the basis for most of our studies. As we can see, most active individuals have a valid NIC number so we are assured (a little) that we are not systematically excluding one type of investor or another.

Appendix 1 compares our sample with existing studies. Our finding that approximately 50% of individuals are active, appears in-line with studies in the United States.

5.1 NIC number, location of registration, and active investors

Table 3 shows that most people open accounts in the same province where they are registered (boldface numbers.) Branches in Guangdong province show the largest influx of investors from other provinces - which is probably interesting to people studying intra-national migration in the PRC. This finding is not too surprising since Guangdong province contains cities like Shenzhen. Shenzhen has grown rapidly over the past decade and is known as a Mecca of sort for new businesses, nouveau riche, and young professionals. On the other hand, provinces such as Heilongjiang and Hubei have the lowest number of investors from other provinces. Most migration in the PRC is towards the big cities of Beijing, Shanghai, and Guangzhou (Canton).

While our data contain accounts from around the PRC, any single branch office has little diversity. Thus, for some of our future studies, the branch office will become the unit of analysis. We might consider the average holdings of investors from branch X and compare this number to the average holdings of investors from branch Y.

5.2 Gender of investors

The number of male investors is remarkably similar to the number of female investors in the PRC. Table 4 shows that accounts with a valid NIC number only (the NIC number is needed to discern the gender of an investor) are 53.3% male and 46.5% female. When we look at active individuals with valid NIC numbers the percentages are much closer to 50.0% - there are 51.2% males and 48.8% females. We can conclude that males are slightly more likely than females to open an account and not trade. This result may simply result from males being offered, or bidding for, more privatization shares than females (and thus having to open accounts).

The gender equality found in the PRC is not found elsewhere in the world. Lease, Lewellen, and Schlarbaum (1974) find that 80% of U.S. investors are males in the 1960s. Barber and Odean (2001) show that not much as changed in the U.S. over the past thirty years. A full 78.7% of their sample is male. These comparisons can be seen in tabular form in Appendix 2.

5.3 Age of investors

We can extract an investor's birthday from a valid NIC number. Table 5 shows that less than 3.0% of investors are under 25 years old. This is a little surprising since one might expect that young professionals in an emerging market to be some of the first people to invest in stocks. On the other hand, it is possible that young adults stay in school until their mid-twenties thus delaying their entrance into the job force. A delayed start of one's working life may be desirable in countries that aim to have 100% employment. A slight majority of our sample is in the 35 to 45 year old age range.

Not surprisingly, investors in the PRC are younger than those in the U.S. This result is most likely driven by three factors: i) longer life expectancy in the U.S.; ii) younger people are usually considered "early adopters" and stock markets were recently opened in the PRC; and iii) stock is not traditionally used in retirement planning the PRC so there is no reason to expect older people to own stock. Again, we present comparisons in Appendix 2.

We graph the distribution of birth years for two reasons. The first is to expand the information given in Table 5. Figure 1 shows a remarkably smooth distribution of birth years. Currently, we have no explanation for the slight dips around 1960 and 1967. The second

reason for making a graph of birth years is to check the integrity of our data. Without knowing much about the distribution of age in the PRC, our data certainly look like they are free from biases. For example, our sample contains investors ranging in age from those in their late teens to the those in their nineties.

Figures 2 and 3 graph the birth month and day of birth for investors in our sample. Birth months show some seasonality with more people being born between October and January than in any other four-month period. Day of birth also shows a smooth distribution. About half as many people are born on the thirty-first of the month than on the thirtieth - a fact that is reassuring.

5.4 Investor trading rights

When individuals sign up for an account, they are given certain trading rights. This is not unlike U.S. investors who must apply to trade options. Table 6 shows that the vast majority of investors have the right to place trades by terminal, telephone, and at a cashier's window. Very few have the right to trade with a web-based system over the internet and 0.0% of the investors may place trades at non-home branches. This is reassuring for future studies since we want to associate each investor with a particular branch.

6 Overview of transactions

Our data also contain detailed information about trades investors make during the period 1999 to 2000 (with the exception of Branch B which has transaction data from mid-1998.) In Table 7 we see there are over 10 million (mm) transactions in total. In Column 3, we see that 5.7mm transactions concern PRC-listed stocks. The other 4.4mm transactions cover trading in warrants, transactions regarding dividends, and bidding for secondary offerings.

In order to study the trading behavior of individuals, we concentrate on transactions by active investors with valid NIC numbers. Column 5 is the most important column in Table 7 as it is the basis of many future inquiries. Here we see about five million stock transactions. By limiting ourselves to individuals with valid NIC numbers we end up using over 86% of the available stock data.

6.1 Method of placing transactions

Of the five million transactions that we concentrate on, Table 8 shows that 61.8% are placed via a terminal. This means that investors are physically standing in the branch office at the time they place these trades. It also means that they enter the stock code, number of shares, etc. themselves.

Table 8, Column 4 shows that 24.5% of the trades are placed over the phone. When placing a telephone trade, investors may be anywhere. They call to the branch office (the one where they originally opened the account) and speak with a order-processor who then submits the trade for the investor.

Table 8, Column 5 shows that 12.1% of the trades are placed at a cashier window. Investors fill out a form (much like U.S. citizens fill out a withdrawal slip at a bank) in order to place an order. If we add Column 3 and Column 5, we see that 73.9% of all trades (or over 3.6mm trades) are physically placed in a brokerage branch office. We use this fact in future research. Since we know which trades are physically placed in a branch office, we can identify which investors are in the same room (branch office room) at the time trades are placed. We can also isolate disparate groups of investors who are physically in different branch offices.

Table 9 looks at individuals who regularly use one method or another to place stock trades. Here, we define "regularly" as 90% of the time. For example, suppose investor X in our sample places 50 trades over the 1999 to 2000 time period. If 45 or more of those trades are placed by telephone, we say investor X regularly uses the telephone.

In Table 9, we see that 63.4% of the investors regularly use only one method to place trades (63.4% = 34.6% + 21.1% + 7.7%). Therefore, if we would like to group investors by method of placing a trade, we know that over half of individuals are not hopping from one group to another group.

6.2 Size and value of stock transactions

We now cut our data along a number of dimensions to test for inconsistencies. Table 10A and 10B look at the percentage of buy and sell transactions. The tables also look at the average value and median value of both buys and sells. Overall, our sample contains 53.1% buys and 46.9% sells. Barber and Odean (2000) report 54.9% of their sample is buys. The similarity of these numbers is worth mentioning.

Table 10A shows the average value of a buy is RMB 27,604 which works out to approximately USD 3,450 when using a rough exchange rate of 8 RMB to 1 USD. The average sell is bigger at RMB 31,125 or approximates USD 3,890. Barber and Odean (2000) also find sells are bigger than buys (USD 13,707 vs. USD 11,205). The average trade (buy) in the U.S. appears to be about 3.97x larger than in the PRC. The difference in trade sizes is a little surprising since GDP per capita and average income are about 10x larger in the U.S. than the PRC. We can conclude that stock investing is limited to a smaller and wealthier fraction of the population in the PRC than in the United States.

Table 10B shows the median trade value is smaller than the average trade value in both the PRC (this is also true in the United States.) In the PRC the average trade value is three to four times larger than the median. In the U.S., the average trade value is two to three times as large as the median. Again, this is evidence that stock market investing in the PRC is skewed towards wealthy individuals.

Table 11A and 11B look at the value of a transaction conditional on whether the trade is placed by terminal, over the telephone, or at a cashier counter. It is startling to note that transactions placed at the cashier counter are 3x to 5x larger than those placed by another method. We do not know the reason for this finding and suggest two possibilities: i) investors who use terminals "break-up" their trades while investors who use a cashier do not; and ii) investors who want to trade in sizable quantities find security in placing large trades with a cashier. The first explanation probably makes more sense.

7 Overview of individual portfolios (holdings or positions)

We now turn to our portfolio data. These data record the monthly holdings (positions) of the investors in our dataset. Providing summary statistics is a little tricky when dealing with investor holdings since the number of investors, composition of investors, and value of holdings can change over time. For example, Schlarbaum, Lewellen, and Lease (1978) show that the aggregate value of holdings in their sample almost doubles from 1963 to 1968 before falling back near original level in 1970.

There is another factor that makes interpreting panel-summary statistics difficult. In an emerging stock market like the PRC, investors may be building their portfolios over time. We have not yet studied how investors build their portfolios, but can imaging a time-varying component or trend in our data and the market as a whole. For these reasons, we focus on

holding only on 1-Jun-2000 for the purpose of presenting summary statistics. Of course, we later plan to study holdings over time and can easily provide similar statistics at the start of any month.

Table 12 Column 3 shows that number of active investors with a positive portfolio balance as of 1-Jun-2000. Since some investors might be passively holding the same portfolio throughout our sample period, we choose to focus only on active investors (those who make at least one trade during 1999 or 2000.) Of those investors with a positive balance, 60,260 or 96.1% have a valid NIC number. Again, we do not have to worry much about selection biases in future studies. Column 4 is the most important column in the Table 12 and is the basis of the next two tables.

Table 13A looks at individual portfolios in terms of number of stocks held (positions). The average number of positions is 3.2 and the median number of positions is 2. The investors in our data are active and trade quite frequently. During the month of June 2000, the average investor has 2.9 buy trades and 3.2 sell trades. We have not aggregated trades in any way so it is possible that these high numbers are the result of investors "breaking-up" their own trades.

Table 13B looks at the portfolios in terms of value (in RMB). The average balance on 1-Jun-2000 was RMB 135,127 which works out to roughly USD 16,891 when using an approximate exchange rate of 8 RMB to 1 USD. We can see that the median portfolio value is not nearly as high as the average. In fact, the median value across all branches is RMB 30,960 (not reported) or USD 3,870. When we measure turnover measured in terms of value, our investors still appear very active. The average value bought over the month of June 2000 was RMB 64,413 or USD 8,052 and the average value sold was RMB 77,351 or USD 9,669.

There is a very important and interesting comparison to be made here. The correlation of the average balance of each branch (from Table 13B) with the average monthly household income (from Table 1) is 0.60! Therefore, differences we see at the branch level mirror differences within the PRC. We can compare the investing behavior of a relatively {wealthy, poor} person from a relatively {wealthy, poor} province with the investing behavior of other groups.

Not surprisingly, there is a long right-hand side tail to the distribution of portfolio holdings. Figure 4 graphs the distribution of individual portfolio values. Even after graphing the natural log of value we still see (right) skewed distribution. In fact, there are 94 portfolios with a value over RMB 8,886,111 or USD 1,110,764 as of 1-Jun-2000.

8 Conclusion

This paper is meant as a reference and we hope it serves as exactly that. We have provided a very detailed description of stock market investors in an emerging market (the PRC.) We have detailed demographic information, trading behavior, and portfolio holdings.

The appendices compare our data to the data used in comparable papers. In the broadest terms, we are surprised how similar PRC investors seem to those in developed countries like the United States. The number of positions held and portfolio values are comparable (Appendix 3). The percentage of buys and sells is also very similar (Appendix 4).

Of course there are differences. PRC investors are younger (Appendix 2). They also trade a lot more (Appendix 4). The high volume is a fact we already know by looking at aggregate market volume and turnover.

Finally, and most importantly, there seems to be nothing obviously odd about the data. We are thus confident in proceeding with future, academic studies.

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Table 1. Branch Location and Regional Statistics

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). We have data from fifteen branch offices located throughout the country. The majority of the offices are located near one of the two stock exchanges in the PRC (Guangdong Province and the Shanghai Municipality.) Province population in Column 3 is from the brokerage firm. Column 4 has the size (in km²) of the province or municipality as provided by central government of the PRC. The GDP per capita in Column 5 is also from the central government. Column 6 shows the results of a private survey. The survey is provided by the brokerage firm and gives a measure of wealth distribution in the country.

| (1) | (2) | (3) | (4) | (5) | (6) Average Monthly |
|---------------|--------------|---------------------------------|-----------------|------------------------------|--------------------------------|
| Branch | Province | Province Population (#mm) | Area (km²) | GDP per Capita (RMB) | Household Income (RMB) |
| A, B, C, D | Guangdong | 73.0 | 170,000 | 11,728 | 1,337 |
| E, F, G, J, K | Shanghai | 13.1 | 6,340 | 30,805 | 1,422 |
| Н | Heilongjiang | 36.6 | 453,900 | 7,660 | 490 |
| I, L | Sichuan | 83.6 | 570,000 | 4,452 | 722 |
| М | Hubei | 59.4 | 187,000 | 6,514 | 754 |
| N | Beijing | 11.1 | 16,800 | 19,846 | 1,184 |
| 0 | Shandong | 89.2 | 153,800 | 8,673 | 794 |

Table 2. Overview of Individual Investors (Accounts)

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Data are recorded and kept by one of fifteen branch offices that are located throughout the country. Individuals sign-up and then complete all transactions with one branch office. One individual may only open one account in the PRC and, thus, is only registered at one branch office. Each branch office is responsible for maintaining all records of the individuals who are registered with that branch. The total number of individuals (accounts) is shown in Column 2. In Column 3, we can see that approximate 75% of all individuals have a valid national identification number (NIC) associated with them. A valid NIC allows us to know an investors age, birthplace, and gender. In column 4, we define an active account as one who that buys or sells a PRC-listed common stock, denominated in RMB, with a price and number of shares greater than zero (this excludes bonds, warrants, and unsuccessful bids for public offerings of common stock). Column 5, in boldface, shows the number of individuals that we consider for the rest of this paper.

| (1) | (2) | (3) | (4) | (5) | (6) |
|---------|----------------|----------------|--------------|--------------|----------------|
| | Tatal Niveshau | Ni la a m. a f | | Number of | D |
| | Total Number | Number of | | Active Stock | Percentage of |
| | of Individual | Individuals | Number of | Investors | Active Stock |
| | Investors | with a Valid | Active Stock | with a Valid | Investors with |
| Branch | (Accounts) | NIC | Investors | NIC | a Valid NIC |
| | (#) | (#) | (#) | (#) | (%) |
| Α | 4,402 | 3,452 | 2,374 | 2,296 | 96.7 |
| В | 30,148 | 5,327 | 3,929 | 3,342 | 85.1 |
| С | 16,922 | 5,963 | 3,511 | 2,778 | 79.1 |
| D | 7,856 | 7,365 | 3,740 | 3,701 | 99.0 |
| Е | 12,812 | 12,174 | 4,274 | 4,169 | 97.5 |
| F | 15,285 | 14,322 | 7,801 | 7,650 | 98.1 |
| G | 6,107 | 3,619 | 4,030 | 2,808 | 69.7 |
| Н | 15,313 | 15,151 | 12,100 | 12,071 | 99.8 |
| - | 8,541 | 7,108 | 5,217 | 4,832 | 92.6 |
| J | 9,120 | 7,553 | 4,758 | 4,504 | 94.7 |
| K | 19,024 | 18,670 | 10,301 | 10,164 | 98.7 |
| L | 4,588 | 4,465 | 3,817 | 3,761 | 98.5 |
| M | 10,645 | 10,391 | 7,437 | 7,346 | 98.8 |
| N | 16,451 | 15,968 | 11,855 | 11,726 | 98.9 |
| 0 | 17,950 | 14,841 | 9,397 | 9,330 | 99.3 |
| Total | 195,164 | 146,369 | 94,541 | 90,478 | - |
| Average | · - | - | - | - | 95.7 |

Table 3. National Identification Card (NIC) Location of Registration and Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Data are recorded and kept by one of fifteen branch offices that are located throughout the country. Individuals sign-up and then complete all transactions with one branch office. NIC cards or internal passports originally show where an individual's family lived at the time of his or her birth. If the investors moves and registers in a new province, the NIC number changes. If the investor moves and does not register, the NIC Column 3 shows that 85% of individuals have accounts at a branch office that is in the same province as their NIC indicates. Note that branches A, B, C, D are from Guangdong Province and many investors are from the city of Shenzhen. This city has experience rapid grown over the past decade. Many investors have moved from other provinces for job-related reasons.

| | | | | North | | East | Sout | h | Central | |
|-------------|----------------|-----------------|----------|---------|-----------|----------|--------|---------|---------|-------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| | | Percent of | | | | | | | | |
| | | Active and | | | | | | | | |
| | Number of | Valid Investors | | | | | | | | |
| | Active Stock | From Same | | | | | | | | |
| | Investors with | Province as | Heilong- | | | | Guang- | | | |
| Branch | a Valid NIC | Branch | jiang | Beijing | Shan-dong | Shanghai | dong | Sichuan | Hubei | Other |
| | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| Α | 2,296 | 49.9 | 2.0 | 2.2 | 1.6 | 0.9 | 49.9 | 4.3 | 9.1 | 30.0 |
| В | 3,342 | 54.1 | 1.2 | 1.3 | 1.4 | 0.4 | 54.1 | 6.2 | 6.9 | 28.4 |
| С | 2,778 | 41.0 | 2.3 | 2.6 | 0.9 | 0.9 | 41.0 | 6.8 | 7.2 | 38.3 |
| D E F | 3,701 | 52.2 | 1.4 | 0.6 | 0.6 | 8.0 | 52.2 | 5.9 | 4.6 | 33.9 |
| Е | 4,169 | 88.8 | 0.4 | 0.4 | 0.4 | 88.8 | 0.4 | 0.6 | 0.7 | 8.3 |
| | 7,650 | 91.4 | 0.3 | 0.1 | 0.2 | 91.4 | 0.2 | 0.3 | 0.4 | 7.1 |
| G | 2,808 | 87.6 | 0.4 | 0.2 | 0.3 | 87.6 | 0.1 | 0.6 | 0.5 | 10.2 |
| Н | 12,071 | 98.8 | 98.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| I | 4,832 | 96.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 96.2 | 8.0 | 2.4 |
| J | 4,504 | 87.1 | 0.4 | 0.3 | 0.2 | 87.1 | 0.3 | 1.7 | 8.0 | 9.2 |
| K | 10,164 | 88.0 | 0.4 | 0.1 | 0.3 | 88.0 | 0.1 | 0.7 | 0.5 | 9.8 |
| L | 3,761 | 91.6 | 0.3 | 0.5 | 0.1 | 0.1 | 0.3 | 91.6 | 0.5 | 6.6 |
| M | 7,346 | 92.9 | 0.2 | 0.4 | 0.1 | 0.3 | 0.5 | 0.7 | 92.9 | 4.9 |
| N | 11,726 | 83.8 | 1.3 | 83.8 | 1.1 | 0.3 | 0.3 | 1.1 | 8.0 | 11.2 |
| 0 | 9,330 | 95.0 | 0.7 | 0.1 | 95.0 | 0.2 | 0.0 | 0.4 | 0.2 | 3.4 |
| Total | 90,478 | - | | | | | | | | |
| Average | - | 85.8 | 13.8 | 11.2 | 10.2 | 29.0 | 6.8 | 10.2 | 8.8 | 10.0 |

Table 4. Gender of Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Our sample contains nearly equal percentages of men and women. Columns 4 and 5 show that men are slightly more apt to open an account. However, Columns 8 and 9 show that active accounts are much more evenly divided.

| (1) | (2) | (3) | (4) | (5) | (6) | (7) Total | (8) | (9) |
|---------|------------|--------------|--------------|---------|--------------|--------------|--------------|--------------|
| | Total | | | | | Number of | | |
| | Number of | Number of | | | Total | Active Stock | Percent of | Percent of |
| | Individual | Individuals | | | Number of | Investors | Active Stock | Active Stock |
| | Investors | with a Valid | | Percent | Active Stock | with Valid | Investors | Investors |
| Branch | (Accounts) | NIC | Percent Male | Female | Investors | NIC | Male | Female |
| | (#) | (#) | (%) | (%) | (#) | (#) | (%) | (%) |
| Α | 4,402 | 3,452 | 51.5 | 48.5 | 2,374 | 2,296 | 50.2 | 49.8 |
| В | 30,148 | 5,327 | 49.4 | 50.6 | 3,929 | 3,342 | 48.6 | 51.4 |
| С | 16,922 | 5,963 | 53.7 | 46.3 | 3,511 | 2,778 | 51.1 | 48.9 |
| D | 7,856 | 7,365 | 57.1 | 42.9 | 3,740 | 3,701 | 57.4 | 42.6 |
| E F | 12,812 | 12,174 | 59.4 | 40.6 | 4,274 | 4,169 | 55.0 | 45.0 |
| | 15,285 | 14,322 | 57.7 | 42.3 | 7,801 | 7,650 | 54.7 | 45.3 |
| G | 6,107 | 3,619 | 48.6 | 51.4 | 4,030 | 2,808 | 47.6 | 52.4 |
| Н | 15,313 | 15,151 | 48.7 | 51.3 | 12,100 | 12,071 | 47.6 | 52.4 |
| I | 8,541 | 7,108 | 49.5 | 50.5 | 5,217 | 4,832 | 48.6 | 51.4 |
| J | 9,120 | 7,553 | 51.2 | 48.8 | 4,758 | 4,504 | 49.8 | 50.2 |
| K | 19,024 | 18,670 | 53.1 | 46.9 | 10,301 | 10,164 | 49.6 | 50.4 |
| L | 4,588 | 4,465 | 47.8 | 52.2 | 3,817 | 3,761 | 48.4 | 51.6 |
| M | 10,645 | 10,391 | 53.9 | 46.1 | 7,437 | 7,346 | 52.7 | 47.3 |
| N | 16,451 | 15,968 | 54.8 | 45.2 | 11,855 | 11,726 | 53.9 | 46.1 |
| 0 | 17,950 | 14,841 | 54.5 | 45.5 | 9,397 | 9,330 | 50.9 | 49.1 |
| Total | 195,164 | 146,369 | - | - | 94,541 | 90,478 | - | - |
| Average | - | - | 53.5 | 46.5 | - | - | 51.2 | 48.8 |

Table 5. Age of Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Our sample contains a rather smooth distribution of investors based on age. The table below show that the majority of investors are middle-aged (please see Figure 1 also). Notice that the breakdown is not even across branches. Branches A, B, C, D are from Guangdong Province and many investors are from the city of Shenzhen. This city has experience rapid grown over the past decade. Many investors have moved from other provinces for job-related reasons. Shenzhen is known for it's high proportion of young-professionals. Figure 1 graphs investors birth year for readers who want more detail.

| (1) | (2) Number of Active Stock Investors with | (3) | (4) | (5) | (6) | (7) | (8) |
|---------|--|---------------|-------------|-------------|----------------------|-------------|--------------|
| | a Valid NIC | Age Less | Age Between | Age Between | Age Between | Age Between | |
| Branch | (Accounts) | Than 25 years | 25 and 35 | 35 and 45 | ⁴⁵ and 55 | 55 and 65 | Age Above 65 |
| | ` (#) | (%) | (%) | (%) | (%) | (%) | (%) |
| Α | 2,296 | 4.4 | 41.5 | 28.4 | 13.6 | 7.0 | 5.1 |
| В | 3,342 | 3.7 | 41.0 | 30.3 | 12.7 | 6.4 | 5.8 |
| С | 2,778 | 2.1 | 40.1 | 32.3 | 13.3 | 6.7 | 5.4 |
| D | 3,701 | 1.9 | 48.2 | 30.9 | 11.5 | 4.1 | 3.3 |
| E F | 4,169 | 1.6 | 15.6 | 24.5 | 36.8 | 14.0 | 7.6 |
| | 7,650 | 1.5 | 16.5 | 26.1 | 31.4 | 15.3 | 9.2 |
| G | 2,808 | 2.8 | 16.2 | 23.0 | 36.4 | 12.6 | 9.0 |
| Н | 12,071 | 3.2 | 25.6 | 36.6 | 24.7 | 6.8 | 3.0 |
| I | 4,832 | 1.6 | 21.3 | 26.8 | 33.7 | 11.8 | 4.8 |
| J | 4,504 | 2.5 | 15.5 | 22.6 | 33.1 | 14.2 | 12.1 |
| K | 10,164 | 2.3 | 17.4 | 26.7 | 32.8 | 13.3 | 7.6 |
| L | 3,761 | 6.0 | 34.8 | 25.3 | 18.9 | 10.0 | 5.1 |
| M | 7,346 | 3.3 | 25.8 | 31.1 | 24.0 | 10.1 | 5.7 |
| N | 11,726 | 4.5 | 29.4 | 33.5 | 19.7 | 7.9 | 5.1 |
| 0 | 9,330 | 2.3 | 22.9 | 31.9 | 30.2 | 8.7 | 4.1 |
| Total | 90,478 | - | - | - | - | - | - |
| Average | - | 2.9 | 25.4 | 29.8 | 26.0 | 10.0 | 5.9 |

Table 6. Individual Trading Rights

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Investors can place trades in one of five methods: a) through computer terminals that are located in the branch offices. The national brokerage office updated its terminals at some point; b) through the telephone; c) from home, over the computer with a modem; d) at a cashier's window that is located in the brokerage office; and e) with a computer, via an internet website. Column 9 shows that investors in our sample may not use other branches. Column 10 shows that most investors have the right (approval) to use one of four methods to place trades.

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---------|----------------|-----------|-----------|------------|---------|-----------|----------|----------|------------|
| | Number of | | | | | | | | B.4. 11 |
| | Active Stock | | | | | May Trade | | | Median |
| | Investors with | May Use | May Use | | | at the | | May Use | Number of |
| | a Valid NIC | Old-Style | New-Style | May Use | May Use | Cashier | May Use | Non-Home | Rights per |
| Branch | (Accounts) | Terminal | Terminal | Tele-phone | Modem | Window | Internet | Branch | Investor |
| | (#) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (#) |
| Α | 2,296 | 100.0 | 100.0 | 100.0 | 9.3 | 100.0 | 0.0 | 0.0 | 4.0 |
| В | 3,342 | 100.0 | 100.0 | 99.9 | 79.3 | 100.0 | 0.3 | 0.0 | 4.0 |
| С | 2,778 | 100.0 | 100.0 | 100.0 | 40.7 | 100.0 | 0.0 | 0.0 | 4.0 |
| D | 3,701 | 100.0 | 100.0 | 100.0 | 41.9 | 100.0 | 0.0 | 0.0 | 4.0 |
| Е | 4,169 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 4.0 |
| F | 7,650 | 100.0 | 81.1 | 100.0 | 67.8 | 100.0 | 0.1 | 0.0 | 4.0 |
| G | 2,808 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 4.0 |
| Н | 12,071 | 100.0 | 62.9 | 66.1 | 51.4 | 100.0 | 0.0 | 0.0 | 4.0 |
| I | 4,832 | 99.9 | 100.0 | 100.0 | 99.9 | 100.0 | 0.0 | 0.0 | 4.0 |
| J | 4,504 | 99.9 | 99.9 | 45.0 | 66.4 | 99.9 | 0.0 | 0.0 | 4.0 |
| K | 10,164 | 100.0 | 100.0 | 100.0 | 99.9 | 100.0 | 0.0 | 0.0 | 4.0 |
| L | 3,761 | 100.0 | 44.0 | 100.0 | 29.3 | 100.0 | 0.3 | 0.0 | 4.0 |
| M | 7,346 | 100.0 | 100.0 | 99.7 | 56.6 | 100.0 | 4.4 | 0.0 | 4.0 |
| N | 11,726 | 97.1 | 35.0 | 99.9 | 26.2 | 100.0 | 0.0 | 0.0 | 4.0 |
| 0 | 9,330 | 100.0 | 56.9 | 99.1 | 46.8 | 100.0 | 0.0 | 0.0 | 4.0 |
| Total | 90,478 | _ | _ | _ | _ | _ | _ | _ | _ |
| Average | - | 99.6 | 78.2 | 92.6 | 60.3 | 100.0 | 0.4 | 0.0 | 4.0 |

Table 7. Overview of Transactions

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Transactions encompass any entry regarding an investor's account and can include: trading in stock, trading in warrants, trading in bonds, receiving dividends, etc. We see that 56.7% of the entries relate to purchases or sales of common stocks. Of these, 86.9% are made by investors with a valid NIC number. The total value of all stock trades made by active investors with a valid NIC is over RMB 146 bn.

| (1) | (2) | (3) | (4) | (5) | (6) Percentage of | (7) |
|---------|-----------------|-----------------|-------------------|------------------------|----------------------|--------------------|
| | Total Number of | | Number of Stock | Number of Stock | Stock Transaction | Value of all Stock |
| | Entries in | | Transactions as a | Transactions by | Made by Active | Transactions by |
| | Transaction | Number of Stock | Percentage of | Active Investors | Investors with | Active Investors |
| Branch | Database | Transactions | Database Entries | with Valid NIC | Valid NIC | with Valid NIC |
| | (#) | (#) | (%) | (#) | (#) | (RMB mm) |
| Α | 273,964 | 190,917 | 69.7 | 173,112 | 90.7 | 8,140.0 |
| В | 352,204 | 249,960 | 71.0 | 197,352 | 79.0 | 9,142.0 |
| С | 479,173 | 279,911 | 58.4 | 196,696 | 70.3 | 12,260.0 |
| D | 228,647 | 151,271 | 66.2 | 148,918 | 98.4 | 3,770.7 |
| E F | 666,482 | 345,068 | 51.8 | 297,928 | 86.3 | 8,404.2 |
| | 681,095 | 329,798 | 48.4 | 293,390 | 89.0 | 7,101.2 |
| G | 861,250 | 517,478 | 60.1 | 284,414 | 55.0 | 7,688.1 |
| Н | 824,752 | 489,413 | 59.3 | 488,270 | 99.8 | 5,667.7 |
| I | 482,502 | 306,598 | 63.5 | 239,660 | 78.2 | 5,502.7 |
| J | 939,795 | 551,014 | 58.6 | 518,572 | 94.1 | 16,911.9 |
| K | 1,181,980 | 595,871 | 50.4 | 515,290 | 86.5 | 9,519.7 |
| L | 327,915 | 207,001 | 63.1 | 201,218 | 97.2 | 7,241.3 |
| M | 726,462 | 413,254 | 56.9 | 405,857 | 98.2 | 9,765.6 |
| N | 1,183,829 | 680,432 | 57.5 | 603,612 | 88.7 | 22,097.5 |
| 0 | 936,192 | 444,339 | 47.5 | 432,017 | 97.2 | 12,812.5 |
| Total | 10,146,242 | 5,752,325 | - | 4,996,306 | - | 146,025.2 |
| Average | - | - | 56.7 | - | 86.9 | - |

Table 8. Method of Placing Stock Transactions - By Transaction

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Investors can place trades in one of five methods: a) through computer terminals that are located in the branch offices. The national brokerage office updated its terminals at some point; b) through the telephone; c) from home, over the computer with a modem; d) at a cashier's window that is located in the brokerage office; and e) with a computer, via an internet website. Column 3 shows approximately two thirds of all trades are placed at a computer terminal which is located at the branch office.

| (1) | (2) Number of | (3) | (4) | (5) | (6) |
|---------|------------------|---------------|------------|---------------|-------------|
| | Stock | | | | |
| | Transactions | Percentage | | Percentage | Percentage |
| | by Active | Placed by | Percentage | Placed at the | Placed with |
| | Investors with | Terminal | Placed by | Cashier | Another |
| Branch | Valid NIC | (Either Type) | Telephone | Window | Method |
| | (#) | (%) | (%) | (%) | (%) |
| Α | 173,112 | 65.6 | 22.9 | 8.8 | 2.7 |
| В | 197,352 | 65.9 | 21.5 | 11.3 | 1.2 |
| С | 196,696 | 67.7 | 22.5 | 6.9 | 2.9 |
| D | 148,918 | 53.2 | 27.6 | 18.1 | 1.1 |
| Е | 297,928 | 55.2 | 26.6 | 18.0 | 0.1 |
| F | 293,390 | 74.1 | 15.2 | 10.6 | 0.1 |
| G | 284,414 | 58.1 | 16.9 | 25.0 | 0.0 |
| Н | 488,270 | 74.3 | 14.2 | 10.6 | 0.9 |
| | 239,660 | 51.1 | 37.7 | 6.4 | 4.8 |
| J | 518,572 | 66.0 | 15.4 | 18.6 | 0.0 |
| K | 515,290 | 54.7 | 29.2 | 16.0 | 0.0 |
| L | 201,218 | 62.2 | 29.5 | 2.8 | 5.5 |
| M | 405,857 | 63.4 | 23.8 | 9.7 | 3.0 |
| N | 603,612 | 49.4 | 44.1 | 4.5 | 2.0 |
| 0 | 432,017 | 67.8 | 16.7 | 12.3 | 3.2 |
| Total | 4,996,306 | - | - | - | - |
| Average | - | 61.8 | 24.5 | 12.1 | 1.6 |

Table 9. Method of Placing Stock Transactions - By Investor

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Investors can place trades in one of five methods though here we concentrate on the three most popular methods. We show the fraction of investors who regularly use one of these methods. We define regularly as using one method at least 90% of the time.

| (1) | (2) | (3) Percentage of | (4) | (5) Percentage of |
|---------|----------------|----------------------|---------------|----------------------|
| | Number of | Investors Who | Percentage of | Investors Who |
| | Active Stock | Regularly Use | Investors Who | Regularly Use |
| | Investors with | Either Style of | Regularly Use | the Cashier |
| Branch | a Valid NIC | Terminal | Telephone | Windowr |
| | (#) | (%) | (%) | (%) |
| Α | 2,296 | 37.1 | 21.6 | 2.0 |
| В | 3,342 | 27.9 | 20.8 | 12.8 |
| С | 2,778 | 36.2 | 23.7 | 1.4 |
| D | 3,701 | 22.8 | 17.3 | 16.6 |
| Е | 4,169 | 25.4 | 24.1 | 13.7 |
| F | 7,650 | 39.0 | 15.4 | 11.2 |
| G | 2,808 | 29.8 | 19.5 | 13.8 |
| Н | 12,071 | 51.4 | 8.2 | 8.8 |
| 1 | 4,832 | 26.1 | 35.2 | 2.9 |
| J | 4,504 | 30.9 | 16.0 | 20.8 |
| K | 10,164 | 25.3 | 27.4 | 13.0 |
| L | 3,761 | 33.5 | 28.2 | 0.2 |
| M | 7,346 | 36.2 | 14.4 | 3.7 |
| N | 11,726 | 26.0 | 39.7 | 0.2 |
| 0 | 9,330 | 47.1 | 9.7 | 2.9 |
| Total | 90,478 | - | - | - |
| Average | - | 34.6 | 21.1 | 7.7 |

Table 10A. Average Size and Value of Stock Transactions - By Transaction

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). A slight majority of trades are buys. The number of shares sold and the value of shares sold is larger than the corresponding amount for purchases.

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------|----------------|---------------|------------|---------------|---------------|------------|---------------|
| | Number of | | | | | | |
| | Stock | | | | | | |
| | Transactions | | Average | | | Average | |
| | by Active | Percentage of | Number of | | Percentage of | Number of | |
| | Investors with | Buy | | Average Value | Sell | | Average Value |
| Branch | Valid NIC | Transactions | Buy | of a Buy | Transactions | Sell | of a Sell |
| | (#) | (%) | (shares) | (RMB) | (%) | (shares) | (RMB) |
| Α | 173,112 | 53.0 | 4,163 | 44,731 | 47.0 | 4,630 | 49,604 |
| В | 197,352 | 53.1 | 4,032 | 43,611 | 46.9 | 4,548 | 49,397 |
| С | 196,696 | 54.0 | 5,016 | 57,098 | 46.0 | 5,939 | 68,462 |
| D | 148,918 | 53.0 | 2,250 | 23,728 | 47.0 | 2,568 | 27,120 |
| E F | 297,928 | 52.7 | 2,698 | 27,179 | 47.3 | 2,928 | 29,354 |
| F | 293,390 | 52.8 | 2,521 | 22,911 | 47.2 | 2,815 | 25,652 |
| G | 284,414 | 52.5 | 2,619 | 25,966 | 47.5 | 2,854 | 28,211 |
| Н | 488,270 | 53.9 | 1,054 | 10,970 | 46.1 | 1,197 | 12,352 |
| 1 | 239,660 | 51.8 | 1,865 | 22,128 | 48.2 | 1,992 | 23,854 |
| J | 518,572 | 50.6 | 3,188 | 32,172 | 49.4 | 3,261 | 33,064 |
| K | 515,290 | 53.0 | 1,846 | 17,408 | 47.0 | 2,069 | 19,679 |
| L | 201,218 | 56.8 | 2,749 | 32,661 | 43.2 | 3,424 | 40,353 |
| M | 405,857 | 52.2 | 2,530 | 22,883 | 47.8 | 2,788 | 25,348 |
| N | 603,612 | 55.6 | 3,454 | 33,369 | 44.4 | 4,230 | 40,672 |
| 0 | 432,017 | 52.0 | 3,383 | 28,432 | 48.0 | 3,671 | 30,983 |
| | | | | | | | |
| Total | 4,996,306 | - | - | - | - | - | - |
| Average | - | 53.1 | 2,766 | 27,604 | 46.9 | 3,110 | 31,125 |

Table 10B. Median Size and Value of Stock Transactions - By Transaction

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). A slight majority of trades are buys. The median value of shares sold is slightly larger than the corresponding amount for purchases.

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------|----------------|---------------|-------------|--------------|---------------|-------------|--------------|
| | Number of | | | | | | |
| | Stock | | Madian | | | Madian | |
| | Transactions | D | Median | | D | Median | |
| | by Active | Percentage of | Number of | | Percentage of | Number of | |
| _ | Investors with | Buy | Shares of a | Median Value | Sell | Shares of a | Median Value |
| Branch | Valid NIC | Transactions | Buy | of a Buy | Transactions | Sell | of a Sell |
| | (#) | (%) | (shares) | (RMB) | (%) | (shares) | (RMB) |
| Α | 173,112 | 53.0 | 1,000 | 12,690 | 47.0 | 1,000 | 14,350 |
| В | 197,352 | 53.1 | 1,000 | 13,650 | 46.9 | 1,200 | 15,849 |
| С | 196,696 | 54.0 | 1,100 | 17,010 | 46.0 | 1,500 | 20,470 |
| D | 148,918 | 53.0 | 900 | 8,309 | 47.0 | 1,000 | 8,808 |
| Е | 297,928 | 52.7 | 1,000 | 8,811 | 47.3 | 1,000 | 9,414 |
| E F | 293,390 | 52.8 | 700 | 7,710 | 47.2 | 900 | 8,500 |
| G | 284,414 | 52.5 | 600 | 7,112 | 47.5 | 500 | 6,800 |
| Н | 488,270 | 53.9 | 500 | 5,550 | 46.1 | 500 | 6,005 |
| 1 | 239,660 | 51.8 | 600 | 6,965 | 48.2 | 700 | 7,350 |
| J | 518,572 | 50.6 | 500 | 6,792 | 49.4 | 500 | 7,230 |
| K | 515,290 | 53.0 | 500 | 5,536 | 47.0 | 500 | 5,980 |
| L | 201,218 | 56.8 | 900 | 9,180 | 43.2 | 1,000 | 10,224 |
| M | 405,857 | 52.2 | 800 | 8,100 | 47.8 | 1,000 | 9,000 |
| N | 603,612 | 55.6 | 700 | 8,390 | 44.4 | 1,000 | 10,020 |
| Ö | 432,017 | 52.0 | 700 | 7,560 | 48.0 | 900 | 8,450 |
| J | 402,017 | 02.0 | 700 | 7,500 | ₹0.0 | 300 | 0,400 |
| Total | 4,996,306 | - | - | - | - | - | - |
| Average | - | 53.1 | - | - | 46.9 | - | - |

Table 11A. Average Size and Value of Transactions - By Method of Placing Transaction

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Investors can place trades in one of five methods: a) through computer terminals that are located in the branch offices. The national brokerage office updated its terminals at some point; b) through the telephone; c) from home, over the computer with a modem; d) at a cashier's window that is located in the brokerage office; and e) with a computer, via an internet website. We report the average value of a transaction conditional on method of placing the transaction.

| (1) | (2) | (3) | (4) | (5) | (6) |
|---------|----------------|---------------|---------------|---------------|---------------|
| ` , | | Average Value | , | Average Value | , |
| | Stock | of a | Average Value | of a | Average Value |
| | Transactions | Transaction | of a | Transaction | of a |
| | by Active | Using a | Transaction | Using the | Transaction |
| | Investors with | Terminal | Using a | Cashier | Using Other |
| Branch | Valid NIC | (Either Syle) | Telephone | Window | Methods |
| | (#) | (RMB) | (RMB) | (RMB) | (RMB) |
| Α | 173,112 | 36,992 | 29,045 | 170,034 | 42,850 |
| В | 197,352 | 43,435 | 29,114 | 91,871 | 82,864 |
| С | 196,696 | 56,832 | 40,775 | 198,838 | 33,032 |
| D | 148,918 | 27,915 | 15,706 | 31,665 | 36,957 |
| Е | 297,928 | 21,337 | 16,547 | 66,445 | 33,334 |
| F | 293,390 | 19,073 | 14,667 | 73,840 | 24,129 |
| G | 284,414 | 14,248 | 14,579 | 65,236 | 20,202 |
| Н | 488,270 | 11,072 | 9,981 | 17,461 | 13,016 |
| I | 239,660 | 22,935 | 10,530 | 97,956 | 20,385 |
| J | 518,572 | 21,900 | 14,794 | 85,263 | 16,832 |
| K | 515,290 | 14,895 | 12,157 | 42,253 | 24,272 |
| L | 201,218 | 41,902 | 15,726 | 123,860 | 33,761 |
| M | 405,857 | 20,490 | 15,601 | 68,011 | 24,818 |
| N | 603,612 | 40,038 | 17,692 | 170,581 | 65,765 |
| 0 | 432,017 | 21,441 | 16,353 | 95,164 | 20,650 |
| Total | 4,996,306 | - | - | - | - |
| Average | - | 9,604 | 6,132 | 30,870 | 8,320 |

Table 11B. Median Size and Value of Transactions - By Method of Placing Transaction

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Investors can place trades in one of five methods: a) through computer terminals that are located in the branch offices. The national brokerage office updated its terminals at some point; b) through the telephone; c) from home, over the computer with a modem; d) at a cashier's window that is located in the brokerage office; and e) with a computer, via an internet website. We report the median value of a transaction conditional on method of placing the transaction.

| (1) | (2) | (4) | (5) | (6) | (7) |
|---------|----------------|----------------|--------------|--------------|--------------|
| | Number of | Median Value | | Median Value | |
| | Stock | of a | Median Value | of a | Median Value |
| | Transactions | Transaction | of a | Transaction | of a |
| | by Active | Using a | Transaction | Using the | Transaction |
| | Investors with | Terminal | Using a | Cashier | Using Other |
| Branch | Valid NIC | (Either Style) | Telephone | Windowr | Methods |
| | (#) | (RMB) | (RMB) | (RMB) | (RMB) |
| Α | 173,112 | 12,200 | 11,820 | 69,300 | 10,506 |
| В | 197,352 | 14,295 | 10,725 | 36,335 | 24,270 |
| С | 196,696 | 17,820 | 15,510 | 140,140 | 13,281 |
| D | 148,918 | 8,750 | 7,352 | 9,575 | 21,600 |
| Е | 297,928 | 8,808 | 7,370 | 18,160 | 12,846 |
| F | 293,390 | 7,616 | 7,500 | 21,720 | 8,920 |
| G | 284,414 | 4,794 | 6,490 | 22,470 | 9,926 |
| Н | 488,270 | 5,821 | 5,340 | 5,841 | 6,790 |
| 1 | 239,660 | 7,790 | 5,580 | 26,300 | 8,450 |
| J | 518,572 | 5,640 | 6,608 | 20,750 | 11,685 |
| K | 515,290 | 4,724 | 6,270 | 9,400 | 6,990 |
| L | 201,218 | 10,670 | 7,345 | 34,560 | 12,600 |
| M | 405,857 | 7,920 | 7,530 | 23,200 | 10,880 |
| N | 603,612 | 10,280 | 7,128 | 106,080 | 26,075 |
| 0 | 432,017 | 7,146 | 7,080 | 26,040 | 9,935 |
| Total | 4,996,306 | - | - | - | - |
| Average | - | - | - | - | - |

Table 12. Overview of Portfolios

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Portfolio holdings in stock are recorded at the beginning of every month. Here we concentrate on the cross-sections of holdings at the beginning of one month: June 2000. For reference, there are 90,478 active and valid accounts in our data set. On 1-Jun-2000, there are 62,687 active investors with a non-zero stock holding. Of these individuals, 96.1% had a valid NIC.

| (1) | (2) | (3) | (4) Number of Active Stock Investors | (5) |
|---------|----------------|----------------|---|-----------------|
| | | Number of | with a Valid | Percent of |
| | | Active | NIC and | Active |
| | Number of | Investors with | Portfolio | Investors with |
| | Active Stock | Portfolio | Balance > 0 | Valid NIC on |
| | Investors with | Balance > 0 | on 1-Jun- | 1-Jun-2000 |
| Branch | a Valid NIC | on 1-Jun-2000 | 2000 | (col 4 / col 3) |
| | (#) | (#) | (#) | (%) |
| Α | 2,296 | 1,605 | 1,561 | 97.3 |
| В | 3,342 | 1,990 | 1,765 | 88.7 |
| С | 2,778 | 2,480 | 2,012 | 81.1 |
| D | 3,701 | 2,199 | 2,188 | 99.5 |
| Е | 4,169 | 3,043 | 2,987 | 98.2 |
| F | 7,650 | 2,071 | 2,022 | 97.6 |
| G | 2,808 | 2,846 | 2,041 | 71.7 |
| Н | 12,071 | 8,842 | 8,817 | 99.7 |
| I | 4,832 | 3,748 | 3,411 | 91.0 |
| J | 4,504 | 3,235 | 3,106 | 96.0 |
| K | 10,164 | 7,974 | 7,911 | 99.2 |
| L | 3,761 | 2,840 | 2,806 | 98.8 |
| M | 7,346 | 4,987 | 4,922 | 98.7 |
| N | 11,726 | 8,671 | 8,593 | 99.1 |
| 0 | 9,330 | 6,156 | 6,118 | 99.4 |
| Total | 90,478 | 62,687 | 60,260 | - |
| Average | - | - | - | 96.1 |

Table 13A. Portfolio Turnover (Positions)

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Portfolio holdings in stock are recorded at the beginning of every month. Here we concentrate on the cross-sections of holdings at the beginning of one month: June 2000. The average individual holds 3.2 different stocks (or positions) on 1-Jun-2000. Over the next month (June 2000) the average individual makes 2.9 purchases and 3.2 sells.

| (1) | (2) Number of Active Stock Investors with a Valid | (3) Average Number of Positions (Stocks) for | (4) Median Number of Positions (Stocks) for | (5) | (6) | (7) | (8) |
|---------|---|--|---|-------------|-------------|-------------|-------------|
| | NIC and | ` Active | Active | Average | Median | Average | Median |
| | Portfolio | Investors | Investors | Number of | Number of | Number of | Number of |
| | Balance > 0 | with Valid | with Valid | Buys per | Buys per | Sells per | Sells per |
| | on 1-Jun- | NIC on | NIC on | Investor in | Investor in | Investor in | Investor in |
| Branch | 2000 | 1-Jun-2000 | 1-Jun-2000 | Jun-2000 | Jun-2000 | Jun-2000 | Jun-2000 |
| | (#) | (#) | (#) | (#) | (#) | (#) | (#) |
| Α | 1,561 | 3.2 | 2.0 | 3.5 | 2.0 | 4.4 | 2.0 |
| В | 1,765 | 2.8 | 2.0 | 2.9 | 2.0 | 3.2 | 2.0 |
| С | 2,012 | 3.3 | 2.0 | 3.6 | 2.0 | 4.6 | 2.0 |
| D | 2,188 | 2.8 | 2.0 | 2.3 | 1.0 | 2.4 | 2.0 |
| E F | 2,987 | 3.6 | 3.0 | 3.7 | 2.0 | 3.8 | 2.0 |
| | 2,022 | 4.5 | 3.0 | 3.5 | 2.0 | 4.3 | 2.0 |
| G | 2,041 | 3.9 | 3.0 | 5.0 | 2.0 | 4.6 | 2.0 |
| Н | 8,817 | 2.8 | 2.0 | 2.0 | 1.0 | 2.4 | 2.0 |
| I | 3,411 | 2.8 | 2.0 | 2.8 | 1.0 | 2.8 | 2.0 |
| J | 3,106 | 4.3 | 3.0 | 4.9 | 2.0 | 5.4 | 2.0 |
| K | 7,911 | 3.4 | 2.0 | 2.6 | 1.0 | 3.3 | 2.0 |
| L | 2,806 | 2.9 | 2.0 | 2.7 | 1.0 | 3.1 | 2.0 |
| М | 4,922 | 3.0 | 2.0 | 2.5 | 1.0 | 2.9 | 2.0 |
| N | 8,593 | 3.1 | 2.0 | 3.2 | 1.0 | 3.0 | 2.0 |
| 0 | 6,118 | 2.9 | 2.0 | 2.2 | 1.0 | 2.5 | 2.0 |
| Total | 60,260 | - | - | - | - | - | - |
| Average | - | 3.2 | - | 2.9 | - | 3.2 | - |

Table 13B. Portfolio Turnover (RMB)

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). Portfolio holdings in stock are recorded at the beginning of every month. Here we concentrate on the cross-sections of holdings at the beginning of one month: June 2000. The average individual holds RMB 135,127 on 1-Jun-2000. Over the next month (June 2000) the average individual purchases RMB 64,413 of stock and sells RMB 77,351.

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---------|--------------|------------|------------|-------------|-------------|-------------|-------------|
| | Number of | | | | | | |
| | Active Stock | Average | Median | | | | |
| | Investors | Portfolio | Portfolio | | | | |
| | with a Valid | Value for | Value for | | | | |
| | NIC and | Active | Active | Average | Median | Average | Median |
| | Portfolio | Investors | Investors | Value of | Value of | Value of | Value of |
| | Balance > 0 | with Valid | with Valid | Buys per | Buys per | Sells per | Sells per |
| | on 1-Jun- | NIC on | NIC on | Investor in | Investor in | Investor in | Investor in |
| Branch | 2000 | 1-Jun-2000 | 1-Jun-2000 | Jun-2000 | Jun-2000 | Jun-2000 | Jun-2000 |
| | (#) | (RMB) | (RMB) | (RMB) | (RMB) | (RMB) | (RMB) |
| Α | 1,561 | 346,898 | 56,883 | 89,400 | 19,794 | 166,016 | 34,075 |
| В | 1,765 | 255,483 | 37,964 | 78,997 | 17,525 | 117,667 | 20,723 |
| С | 2,012 | 351,529 | 96,600 | 124,006 | 34,110 | 200,826 | 51,090 |
| D | 2,188 | 153,736 | 29,855 | 31,870 | 10,209 | 42,066 | 14,120 |
| Е | 2,987 | 174,483 | 42,784 | 159,054 | 14,160 | 117,420 | 19,530 |
| F | 2,022 | 190,755 | 57,640 | 56,495 | 14,768 | 74,813 | 23,060 |
| G | 2,041 | 186,641 | 37,512 | 130,366 | 10,338 | 125,430 | 15,634 |
| Н | 8,817 | 43,992 | 20,104 | 17,472 | 7,530 | 24,678 | 10,059 |
| - 1 | 3,411 | 106,886 | 22,980 | 72,484 | 9,600 | 62,400 | 12,024 |
| J | 3,106 | 331,072 | 45,810 | 163,302 | 13,492 | 160,546 | 18,507 |
| K | 7,911 | 72,165 | 31,912 | 32,447 | 8,750 | 50,550 | 12,950 |
| L | 2,806 | 157,373 | 32,760 | 74,017 | 12,280 | 88,648 | 16,411 |
| М | 4,922 | 85,578 | 29,196 | 36,048 | 12,180 | 46,771 | 15,467 |
| N | 8,593 | 135,893 | 32,013 | 77,566 | 10,325 | 98,847 | 13,271 |
| 0 | 6,118 | 71,368 | 23,821 | 34,504 | 8,865 | 46,238 | 12,000 |
| P | -, | , | -,- | , | -, | -, | , |
| Total | 60,260 | _ | - | - | - | - | _ |
| Average | - | 135,127 | - | 64,413 | - | 77,351 | - |

Figure 1. Birth Year of Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). The distribution of birth years is not too surprising. The peaks and dips from 1955 to 1970 have yet to be explained.

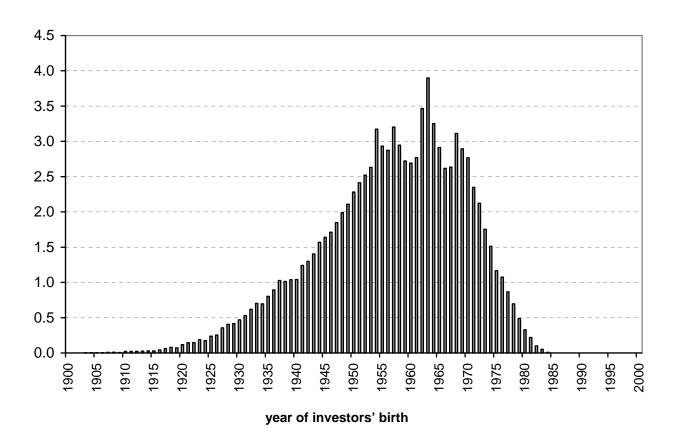


Figure 2. Birth Month of Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). The distribution of birth months serves as a data-verification check. There appears to be some seasonality. There are no large or obvious outliers.

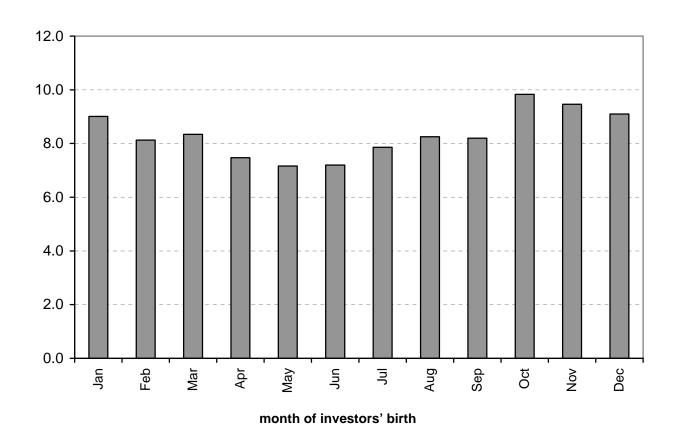


Figure 3. Day of Birth for Active Stock Investors

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). The distribution of birth days serves as a data-verification check. There appears to be some variation. There are no large or obvious outliers.

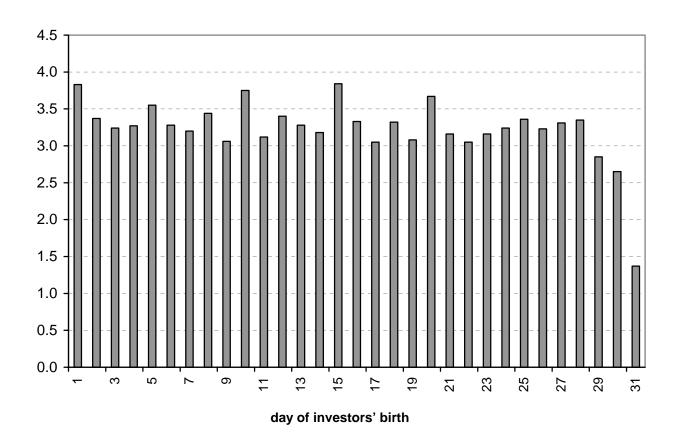
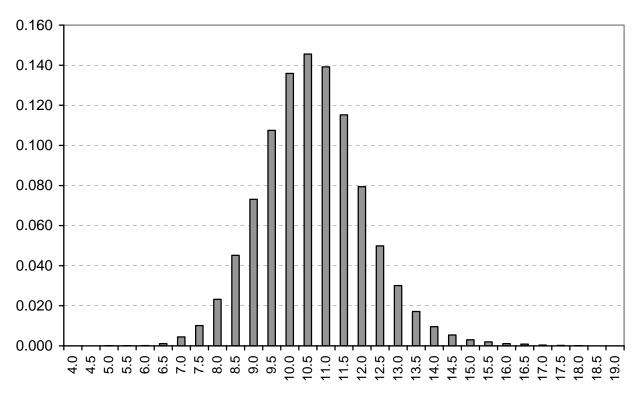


Figure 4. Portfolio Balances of Active Stock Investors

We graph the distribution of log portfolio value (in RMB) for all investors as of 1-Jun-2000. A log value of 11.0 corresponds to RMB 59,874. If we use a rough exchange rate of 8 RMB to 1 USD, this works out to USD 7,484. On the upper tail of the distribution, 94 portfolios are worth at least RMB 8,886,111 (log value of 16.0) or USD 1,110,764.



natural log of portfolio value (RMB)

Appendix 1. Comparison of PRC Data with Other Studies

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--|---------------------------------|---|-------------------------|------------------------------------|---|-------------------------|
| | This Paper | LLS JF-74 CLLS JF-75 SLL JB-78 SLL JF-78 | BL JF-91 | O JF-98; O AER-99; BO FAJ-99 | BO JF-00; BO QJE-01; R WP-01 DK WP-01 GK WP-02 DZ WP-02 Z WP-02 | ZV JB&F-00 |
| Country | PRC | USA | USA | USA | USA | Israel |
| Time Period | Jan 1999 to Dec 2000 | Jan 1964 to Dec 1970 | Jan 1971 to Sep 1979 | Jan 1987 to Dec 1993 | Jan 1991 to Dec 1996 | Jan 1994 to Dec 1994 |
| Accounts Individuals (I) Households (H) Total (T) Active (A) | (I,T) 195,164 (I,A) 90,478 | (I) 2,506 | (I) 3,002 | (H,T) 10,000 (H,A) 6,380 | (H,T) 77,995 (H,A) 66,465 | 4,330 |
| Transactions Total (T) Com. Stock (S) | (T) 10,146,242 (S) 4,996,306 | 179,820 | 217,776 | 162,948 97,483 | 1,969,701 | 61,856 |

Appendix 2. Comparison of PRC Investor Attributes with Other Studies

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|------------|------------|---|----------|------------------------------------|---|------------|
| | This Paper | LLS JF-74 CLLS JF-75 SLL JB-78 SLL JF-78 | BL JF-91 | O JF-98; O AER-99; BO FAJ-99 | BO JF-00; BO QJE-01; R WP-01 DK WP-01 GK WP-02 DZ WP-02 Z WP-02 | ZV JB&F-00 |
| | | | | | | |
| Gender | | | | | | |
| male (m) | (m) 51.2% | (m) 80.0% | N.R. | N.R. | (m) 78.7% | N.R. |
| female (f) | (f) 48.8% | (f) 20.0% | | | (f) 21.3% | |
| Age | | | | | | |
| under 34 | 28.3% | 4% | | | | |
| 35-44 | 29.8% | 12% | | | | |
| 45-54 | 26.0% | 29% | N.R. | N.R. | N.R. | N.R. |
| 55-64 | 10.0% | 26% | | | | |
| over 65 | 5.9% | 30% | | | | |

Appendix 3. Comparison of PRC Stock Holdings with Other Studies

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|-------------|---|----------|------------------------------------|---|------------|
| | This Paper | LLS JF-74 CLLS JF-75 SLL JB-78 SLL JF-78 | BL JF-91 | O JF-98; O AER-99; BO FAJ-99 | BO JF-00; BO QJE-01; R WP-01 DK WP-01 GK WP-02 DZ WP-02 Z WP-02 | ZV JB&F-00 |
| | | | | | | |
| Average number of positions (stocks) | 3.2 | N.R. | N.R. | N.R. | 4.0 | N.R. |
| Median number of positions (stocks) | 2.0 | N.R. | N.R. | N.R. | 2.6 | N.R. |
| Average Value of positions (USD) | ~USD 16,891 | N.R. | N.R. | N.R. | USD 47,000 | N.R. |
| Median value of positions (USD) | ~USD 3,870 | N.R. | N.R. | N.R. | USD 16,000 | N.R. |

Appendix 4. Comparison of PRC Trading Behavior with Other Studies

| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|-------------------------------------|--------------------|---|----------|------------------------------------|---|------------|
| | This Paper | LLS JF-74 CLLS JF-75 SLL JB-78 SLL JF-78 | BL JF-91 | O JF-98; O AER-99; BO FAJ-99 | BO JF-00; BO QJE-01; R WP-01 DK WP-01 GK WP-02 DZ WP-02 Z WP-02 | ZV JB&F-00 |
| Buys % Sells % | 53.1% 46.9% | N.R. | N.R. | N.R. | 54.9% 45.1% | N.R. |
| Value of Buy Average Median | ~USD 3,451 N.R. | N.R. | N.R. | USD 10,625 N.R. | USD 11,205 USD 4,988 | N.R. |
| Value of Sell Average Median | ~USD 3,891 N.R. | N.R. | N.R. | USD 12,198 N.R. | USD 13,707 USD 5,738 | N.R. |
| Value of Trade Average Median | N.R. | N.R. | N.R. | N.R. | N.R. | USD 7,323 |
| Trades per month | 6.10 | 0.85 | N.R. | N.R. | N.R. | N.R. |

Appendix 5. Comparison Notes

Account-level data are from a national brokerage firm in the People's Republic of China (PRC) over the time period Jan-1999 to Dec-2000 (with the exception of Branch B). We have data from fifteen branch offices located throughout the country. Below we compare different datasets in the literature. Column headings use the following convention: initials of the authors last names, initial of journal, -YY for year of publication. "WP" indicates a working paper. For example, "LLS JF-74" refers to Lease, Lewellen, and Schlarbaum (1974) and published in the *Journal of Finance*.

num accts: SLL JB-78 p. 301-302; BL JF-91 p. 373; O JF-98 p 1780; BO FAJ-99 p. 42; BO JF-00 p. 778; ZV JB&F-00 p. 4.

transactions: SLL JB-78 p. 301-302; BL JF-91 p. 373; O JF-98 p 1780; BO FAJ-99 p. 42; BO JF-00 p. 779; ZV JB&F-00 p. 6.

Gender: LLS JF-74 p. 417; BO QJE-01 p. 268

Age: LLS JF-74 p. 417

Position: BO, QJE-01 p. 267

Port. Value: BO QJE-01

Buys / Sells:

Trade Value: BO FAJ-99; BO JF-00; ZV JB&F-00

Trade Freq.: SLL JB-78 p 301-303