Chapter 15

CHINESE A AND B SHARES

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Abstract

A and B shares exist in the Chinese stock markets. A shareholders are domestic investors and B shareholders are foreign investors. During the early-and mid-1990s, B shares were traded at a discount relative to A shares, and B-share returns were higher than A-share returns. It is found that B-share market has persistent higher bid-ask spreads than the A-share market and traders in the B-share market bear higher informed trading and other transaction costs. In addition, the higher volatility of B-share returns can be attributed to the higher market making costs in the B-share market.

Keywords: Chinese A shares; Chinese B shares; stock; return; volatility; asymmetric information; bid-ask spread; transaction costs; stock ownership; Shanghai stock exchange; Shenzhen stock exchange

The development of equity markets in China started in early 1990s. Open for business in December 1990, the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) are the two major securities exchanges in China. By 1998, the SHSE had raised a total of RMB140.814 billion for listed companies and the SZSE had raised a total of RMB 128 billion for listed companies. The two exchanges played an important role in promoting the restructuring of state-owned enterprises.

Stock shares in China are divided into two broad categories: untradable and tradable. By the end of 1998, the total untradable equity of the listed companies was 166.484 billion shares (i.e. 65.89 percent of the total equity of the listed companies), allocated as follows: (1) shares owned by government, 86.551 billion; (2) shares owned by legal persons, 71.617 billion; (3) shares owned by employees and others, 8.317 billion. Outstanding tradable shares totaled 86.193 billion shares (i.e. 34.11 percent of the total equity of the listed companies), allocated as follows: (1) Class A shares, 60.803 billion; (2) Class B shares, 13.395 billion; and (3) Class H shares, 11.995 billion. Class A shares are owned by domestic investors and traded in the domestic markets. Class B shares are owned by foreign investors but traded in the domestic markets. Class H shares are listed on the Hong Kong Stock Exchange.

China has tightly restricted foreign stock ownership throughout the 1990s. The ownership restriction creates two distinct groups of investors: the domestic and foreign investors. Class A shares are domestic shares and class B shares are foreign shares. In 1991, the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) began to offer B shares, providing foreign investors with a legal channel to invest in China's equity markets. B shares are also known as Renminbi Special Shares. B shares are issued in the form of registered shares and they carry a face value denominated in Renminbi. B shares are subscribed

and traded in foreign currencies, but they are listed and traded in securities exchanges inside China. The B share market has attracted a considerable amount of foreign investors. The Market provides an additional channel for foreign capital to invest in China.

Since March 2001, China has opened its B-share market – previously reserved for overseas investors – to Chinese individuals with foreign currency deposits. However, the impact of the opening up of the B-share market to Chinese is limited, because that market is small compared to the number of Chinese people and institutions' foreign currency holdings. Despite the rising foreign currency deposits in China, Chinese people who have foreign currency holdings still account for a very small proportion of investors.

Tables 15.1 to 15.3 are obtained from the China Securities Regulatory Committee.

During the early- and mid-1990s, B shares were traded at a discount relative to A shares, and B-share returns were higher than A-share returns. Su (1999) explains the return premiums on the foreign-owned B shares in the Chinese stock markets by testing a one-period capital asset-price model (CAPM). He concludes that foreign investors are more risk-averse than domestic investors. Sun and Tong (2000) explain the price discount of the B shares by differential demand elasticity. They document that when more H shares and red chips are listed in Hong Kong, the B-share discount becomes larger. In addition, Chui and Kwok (1998) show that the returns on B shares lead the returns on A shares, which induces an asymmetric positive cross-autocorrelation between the returns on B and A shares. They argue that A- and B-share investors have different access to information, and information often reaches the B-share market before it reaches the A-share market.

The Chinese stock markets have grown very rapidly during the late 1990s and early 2000s. A number of studies investigate the return and risk in the newly developed markets. For example, Lee et al. (2001) examine time-series features of stock returns and volatility, as well as the relation between return and volatility in four of China's stock exchanges. On the one hand, test results provide strong evidence of time-varying volatility and show volatility is highly persistent and predictable. On the other hand, the results do not show any relation between expected returns and expected risk.

Table 15.1. Trading summary of A and B shares during 11/2000–11/2001

	A or B share listed No. of companies	Total market capitalization (100 000 000 Yuan)	Stock turnover (100 000 000 Yuan)	Stock trading volume (100 000 000)	No. of transactions (10 000)
2000/11	1063	46061.78	5012.27	365.02	5013
2000/12	1088	48090.94	3737.6	271.35	3719
2001/01	1100	48497.99	3013.63	220.08	3082
2001/02	1110	46228.75	1950.05	151.92	2197
2001/03	1122	50908.44	5095.17	488.33	4335
2001/04	1123	51006.9	5395.87	422.43	4720
2001/05	1129	53205.49	4452.16	328.33	3739
2001/06	1137	53630.58	4917.12	355.5	4449
2001/07	1140	46440.83	3100.68	228.25	2983
2001/08	1151	48054.63	2490.85	221.31	2507
2001/09	1154	45831.36	1766.64	154.67	1858
2001/10	1152	43742.14	1951.5	181.03	1914
2001/11	1153	45431.59	2092.26	200.31	2374

Table 15.2. A and B shares offering (1987–1998)

	87	88	89	90	91	92	93	94	95	96	97	98	Total
Shares issued (100MM)	10	25	7	4	5	21	96	91	32	86	268	102	746
A share	10	25	7	4	5	10	43	11	5	38	106	79	343
H share							40	70	15	32	137	13	307
B share						11	13	10	11	16	25	10	96
Capital raised (RMB 100MM)	10	25	7	4		94	375	327	150	425	1,294	837	3,553
A share	10	25	7	4		50	195	50	23	224	655	440	1,687
H share							61	89	31	84	360	38	763
B share						44	38	38	33	47	81	26	307
Rights offering of A and B shares							82	50	63	70	198	335	797

Table 15.3. Number of listed companies (1990–1998)

Companies	1990	1991	1992	1993	1994	1995	1996	1997	1998
Issuing A share	10	14	35	140	227	242	431	627	727
Issuing B share	0	0	0	6	4	12	16	25	26
Issuing A and B shares	0	0	18	34	54	58	69	76	80
Issuing A and H shares	0	0	0	3	6	11	14	17	18
Total	10	14	53	183	291	323	530	745	851

The development in the Chinese markets may affect the risk and return of A- and B-share classes. He and Wu (2003) provide two interesting findings: (1) the daily returns of domestic shares (A shares) and foreign shares (B shares) were almost identical in the late 1990s, while the B-share returns were much higher than the A-share returns during the mid-1990s; (2) the volatility of B-share daily returns was higher than that of A shares, while previous studies have often documented higher return volatility for A shares. (For example, Su and Fleisher (1999) report that A shares have higher volatility than B shares based on the data of mid-1990s.)

Since A and B shares are entitled to the same cash flows of a firm and have similar returns, the higher return volatility of B shares is puzzling. The market microstructure theory suggests that both volatility and bid-ask spreads are positively related to asymmetric information (see Kyle, 1985; Easley et al., 1996). According to this theory, higher volatility is caused by higher degree of information asymmetry and participation rate of informed traders in the market, which, in turn, lead to higher trading costs. Thus, the higher volatility of B shares may be due to a more severe asymmetric information problem in the B-share market. If so, we should observe higher trading costs for B shares. Furthermore, Easley et al. (1996) show that spreads and volatility are negatively related to liquidity. Since the order processing cost is the cost of providing liquidity and immediacy, lower liquidity results in higher order processing cost and higher volatility. A recent study by Green et al. (2000) on the London Stock Exchange shows that changes in transaction costs have a significant effect on share price volatility. Moreover, Chordia et al. (2002) document that return volatility is significantly related to quoted spreads. These findings confirm the theoretical prediction that volatility and trading costs are positively correlated.

Therefore, the higher volatility in the B-share market may reflect higher idiosyncratic risk (rather

than higher systematic risk) of B-share stocks. The trading risk associated with asymmetric information can be diversified away and therefore it is not systematic risk (see Chordia et al. 2001). Asset-pricing models (e.g. CAPM and APT) suggest that expected returns should be determined by systematic risk. Since higher volatility does not necessarily imply higher systematic risk, it may not be accompanied with higher returns. Su (1999) finds that market risk (measured by market betas) can explain returns of A and B shares, but nonmarket risk variables, such as the variance of returns and firm size, do not systematically affect returns. Thus, the difference in return volatility between the A- and B-share markets may be caused by the difference in idiosyncratic risk. Trading cost, which reflects asymmetric information and liquidity of trading, may explain the B-share market anomaly. For example, if B-share investors incur higher trading costs than A-share investors, the return volatility of B shares would be higher than that of A shares, other things being equal. In line with the above arguments, He and Wu (2003) examine whether the difference in trading costs (or market making costs) between the Chinese A and B shares can explain the difference in return volatility between the two classes of shares. They estimate the end-of-day bid-ask spread and its informed trading and noninformed trading cost components for each stock using daily data in the late 1990s. Their results show that the B-share market has persistent higher bid-ask spreads than the A-share market, and traders in the B-share market bear higher informed trading and other transaction costs. Furthermore, they find that the higher volatility of B-share returns can be attributed to the higher market making costs in the B-share market.

REFERENCES

Chordia, T., Roll, R., and Subrahmanyam, A. (2002). ''Order imbalance, liquidity, and market returns.'' *Journal of Financial Economics*, 65: 111–131.

Chui, A. and Kwok, C. (1998). ''Cross-autocorrelation between A shares and B shares in the Chinese Stock Market.'' *Journal of Financial Research*, 21: 333–354.

Easley, D., Kiefer, N., O'Hara, M., and Paperman, J. (1996). ''Liquidity, information, and infrequently traded stocks.'' *Journal of Finance*, 51: 1405–1436.

Green, C.J., Maggioni, P., and Murinde, V. (2000). ''Regulatory lessons for emerging stock markets from a century of evidence on transactions costs and share price volatility in the London Stock Exchange.'' *Journal of Banking and Finance*, 24: 577–601.

He, Y., Wu, C., and Chen, Y.-M. (2003). ''An explanation of the volatility disparity between the domestic and foreign shares in the Chinese Stock Markets.'' *International Review of Economics and Finance*, 12: 171–186.

Kyle, A. (1985). ''Continuous auctions and insider trading.'' *Econometrica*, 53: 1315–1335.

Lee, C.F., Chen, G., and Rui, O.M. (2001). ''Stock returns and volatility on China's stock markets.'' *The Journal of Financial Research*, 24: 523–544.

Su, D. (1999). ''Ownership restrictions and stock prices: evidence from Chinese markets.'' *Financial Review*, 34: 37–56.

Su, D. and Fleisher, B.M. (1999). ''Why does return volatility differ in Chinese stock markets?'' *Pacific-Basin Finance Journal*, 7: 557–586.

Sun, Q. and Tong, W. (2000). ''The effect of market segmentation on stock prices: the China syndrome.'' *Journal of Banking and Finance*, 24: 1875–1902.