The Information Environment of China’s A and B Shares: Can We Make Sense of the Numbers?

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Abstract: In 1990, three stock exchanges were opened in Shanghai, Shenzhen and Beijing. Partial privatization of China’s enterprises began with offering two types of shares: A shares are sold only domestically to locals and are denominated in local currency; B shares are denominated in dollars and are sold only to foreign investors. All listed firms offer A shares, but to qualify for offering B shares, the firm must prepare financial statements in accordance with International Accounting Standards and also meet other requirements. Firms issuing A shares only adopt domestic accounting regulations.

As a way of generating capital funds, market segmentation has been a success. Both types of shares, however, have two different information environments. The environment of A shares appears to be dominated by local regulations and customs at the time of offering or trading. The information environment of A shares appears to be relatively unstructured and is affected by informal communication between various groups. Other than the roles played by state officials and appointed managers, external monitoring of A shares appears to be limited. Independence and social acceptance of auditing appear to be making slow progress, especially when the majority of domestic CPA firms are government owned. In contrast, the information environment for the B shares is more structured because (1) financial reporting adheres to International Accounting Standards, (2) financial statements are audited by CPA firms with international practice; and (3) foreign investors — mainly large financial institutions — also act as external monitors.

We elaborate on the differences between these two information environments and suggest that accounting earnings and A share prices are not correlated, but earnings and share prices are correlated for B shares. In an event-study approach, we find results inconsistent with both hypotheses — for 1994 and 1995 we find that earnings and unexpected returns are correlated for A shares but not for B shares. The high price volatility, the significant and continuing dominance of government officials, and the thinness of trade in B shares are offered as possible explanation for these results.

Once the People’s Republic of China (PRC) allowed its citizens to own and operate business firms; actions were undertaken to facilitate capital formation. Reactivating the
stock exchange after having been abandoned for 4 decades was accompanied by regulatory reforms and by a move to partially privatize state-owned enterprises. PRC currently operates three stock exchanges, with the two most active stock exchanges being the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SEZ). The third, Beijing Stock Exchange has, at the time of this writing, two stock trading centers for institutional holders of equity shares of 17 companies only. Our analysis concentrates on SSE and SEZ.

The newly privatized firms were authorized to issue various types of shares. Most common are A shares that are sold only to Chinese in the mainland, B shares that are sold only to foreign investors. More recently, a few firms issued H and N shares that are sold to foreign investors through listing on the Hong Kong stock exchange and on the New York Stock Exchange, respectively. H and N shares are relatively new instruments and only a few were able to offer these types of shares.

All firms listed on SSE and SEZ issue A shares, but less than one-fifth of those firms issue B shares. As of November 1996 there were 467 listed companies, of which 82 (17.5%) had issued B shares and prepared financial statements in accordance with International Accounting Standards (IASs issued by the International Accounting Standards Committee [IASC]). These requirements are intended to signal a degree of reliability and assurance to foreign investors. Segmenting capital markets in this fashion allows firms to finance their capital requirements from local savings as well as international funds and, as a result, large amounts of foreign funds had flowed into China.

In recent years listed firms have published their financial statements bi-annually in the newspapers; there are no other known systematic or organized means of disseminating the information to investors.

THE RESEARCH QUESTION

We began this project with the anticipation that the emergence of stock exchanges in PRC creates an interesting setting for studying the role of information in emerging capital markets. Because of their recent origin, different emerging capital markets are at different stages and do not have information systems of the types known in the more developed capital markets. Of particular interest to us is the role of accounting information in pricing common stocks. The unbiased and fast assimilation of accounting information in security prices is a phenomenon that is well documented in developed capital markets beginning with the work of Ball and Brown (1968) (for reviews, see Bernard, 1990 and Beaver, 1998), but has not been well examined in developing economies.

Breaking with conventional methods of research in capital markets, we view the role of information in emerging capital markets to be dominated by domestic institutional arrangements, cultural norms of communication and local customs of doing business. These factors interact to reduce data reliability at both transaction and aggregate levels. The maturation of markets and the financial sophistication of participants in those markets are not likely to have evolved to the level that can facilitate formulating historical trends and relationships between stock prices and accounting information.
**RESEARCH PLAN**

To build a case for the issues of relevance in studying emerging capital markets, we first highlight some basic conditions that must exist in order to conduct information content analysis. Those conditions often remain in the background and are always assumed to be satisfied. This is followed by a brief discussion of the extent to which we believe these conditions to be satisfied in emerging capital markets. A discussion of capital markets and the role of the accounting profession in PRC begins by distinguishing the information environments for A and B shares. Finally, using data from the Shanghai and Shenzhen stock exchanges, the association between accounting disclosures and share prices is examined in each of these two information environments separately. Because the firms issuing B shares adhere to a relatively higher standard of information-reporting reliability than those issuing A shares only, we hypothesize that the association between unexpected rates of return and accounting information differ for those two types. In particular, that the pattern for B shares is more likely to be similar to what we know in the extant literature, but no particular pattern was expected for those issuing A shares only. We use data for 1994 and 1995 in an event study design to test this hypothesis. The results are inconsistent with expectations in that the pattern of unexpected returns around earnings announcements for B shares appears to be random but, surprisingly, the results for the A shares are similar to those obtained in developed capital markets.

After reflecting on the information environment of A shares and on the extent to which the conditions for studying information efficiency are satisfied, we could not interpret these results as reflecting a causal relationship between accounting numbers and share prices. We realize that others might use the same results to make different inferences, but analysis of the setting and information obtained directly from market participants does not support making inferences about the information content of accounting numbers. As is elaborated below, most CPA firms are government owned and a corporate governance culture is evolving although the state continues to be the majority shareholder (of about 80% of equity) in privatized firms (Zhang, 1996). This structure does not provide for the independence of information producers and market makers.

**Relevant Factors for Information Content Analysis**

**Basic and Necessary Conditions**

The research on information content in the setting of developed and mature capital markets implicitly assumes some necessary conditions that must prevail in the information environment in order to give credence to any market tests of information content. Some of these conditions can be stipulated as follows:

1. Transaction-related data and source documents of accounting systems are the outcome of arms-length exchanges.
2. Transaction data are consistently aggregated in accordance with a known set of rules.
3. Effective internal controls are in place to safeguard the company’s assets and to reduce opportunistic behavior.
4. Internal audits are implemented to ensure the integrity of the information system, input data and produced information.
5. Market prices reflect the preferences of market participants.
6. Capital markets are free of manipulation by regulators, individuals in power or capricious government interference.
7. Insiders do not use their informational advantage for their own gain before allowing equal access to other investors.

These conditions are generally satisfied for listed firms in developed economies where financial and accounting institutions, the public, the press and regulators act as external monitors or “watch dogs” that assure the integrity of the data reported to the public. In addition, enforcement agencies exist for dealing with serious departures from the expected norms. In that setting, researchers can reasonably assume that investors vote with their feet, capital markets operate efficiently, and prices reflect all publicly available information. To make reliable inferences about accounting information content, markets must operate with the least possible friction, a case that is difficult to make for many emerging capital markets.

**Information Content in Emerging Capital Markets**

There are various reasons why share prices in emerging capital markets may not satisfy the conditions listed above. Indeed, the efficiency of emerging capital markets has not been established because reported data and recorded stock prices may not reflect the free expression of the preferences of all market participants. Unique factors of local customs, bureaucratic regulation, the absence of a developed accounting and auditing profession, undue influence of state officials, and loose insider trading constraints do interact to impact the operation of capital markets.

A couple of illustrations might help to highlight this problem. Prior to May 1992, regulators of the SSE imposed tight controls over all share prices and trading volume. Although much of the underlying motives remain behind the scenes, to public observers these controls were manifested by imposing two constraints on trading in A shares, both aimed at reducing volatility. These constraints were: (1) the maximum allowed daily fluctuation in the price of any listed share cannot exceed 1%, and (2) trading prices should not change if volume of trade does not exceed 0.3% of the number of outstanding shares. On May 5, 1992, the allowed maximum daily fluctuation in prices was increased from 1% to 8%, but restrictions on the minimum volume required to trigger price changes were retained. On May 21, 1992 both measures of control were abolished. While the imposition of such regulatory controls on market forces has prevented share prices from reflecting the true preferences of market participants, it also has artificially maintained low levels of volatility. Upon lifting the restrictions on May 21, 1992, share prices more than doubled and the SSE price index increased by 105.3% in one day.

Another case of conspicuous regulatory interference with market processes in emerging capital markets was observed at a stock exchange in an Eastern European country (the “Exchange”) at the early stages of privatizing business. One of the authors witnessed a slice of the operations on that exchange in 1992 when the exchange had only 12 listed companies and trading shares took place on Tuesdays and Thursdays only. Fifteen minutes
before the official closing time, the chairman of the “Exchange” went to the trading floor, rang a bell and a bulletin board revealed the 12 closing prices for the day. On that particular day, the then chairman, a Western-educated man, went to the floor and, with news reporters and other observers looking on, unilaterally changed the prices of two stocks that he felt to be out of “acceptable ranges.” The closing price of what he perceived to be an “over priced” stock was lowered, and the price of another stock that he perceived to be “underpriced” was increased. The newly dictated prices became the opening prices for the next trading day.

It was evident that the chairman of that “Exchange” saw his role as a market maker and a smoothing agent whose task was to reflect what he thought to be the “true” price. While it was never made clear, as far as we know, how the chairman of the exchange had individually arrived at those so-called “true” prices, making these changes could conceivably signal to other market participants that the chairman was in position of private information. In that event, this unilateral act might exacerbate a trend the chairman of the “Exchange” has independently charted irrespective of other market forces. Because of this action, opening prices on a given trading day differ from closing prices for the same stocks on the preceding trading day. Thus, reported share prices in those markets would not have the same attributes of prices generated from the interplay of normal market forces.

The PRC Setting

Stock Exchanges

Two major PRC stock exchanges began operations in 1990 — these are the SSE and the SEZ. Both exchanges trade A and B shares. According to market reports, the SSE draws more capital from the local and Taiwanese Chinese, while SEZ, which is located in south China near the border of Hong Kong, draws funds from investors in Hong Kong and the West (Kaye, 1992; Sender, 1992b).

These stock exchanges were established to facilitate trading the portion of equity shares (estimated at about 20% of equity) of the newly privatized firms whose ownership the government had decided to release to private investors. In all cases, however, “land” continues to be owned only by the state and is valued as an intangible (Zhang, 1996). Although problems arise in the valuation of state-owned companies because of the lack of market price information to value their assets, the movement toward privatization was followed by a steady growth in the number of privatized firms. As of October 1994, stocks of 164 firms were traded on SSE, and of 103 firms were traded on SEZ. The numbers increased to 184 and 127 in 1995 for the SSE and SEZ, respectively.

As indicated earlier, we will concentrate on the two common types of equity instruments that can be owned by individuals: A and B shares and are traded only on domestic exchanges. The former is denominated in yuans (the domestic currency) and is owned and traded only by citizens, while the latter is denominated in US dollars and is owned and traded by foreign investors only. As of December 1995, of the 184 listings on SSE, only 36 had issued B shares, and of the 127 listed on SEZ, only 34 had issued B shares. In December 1995, market capitalization had reached estimated levels of about US$40 billion for A shares and US$2 billion for B shares (Shanghai Securities News, SSE, January 7,
1996). Additionally, because of the size difference between these two markets, in August 1994, the government announced its intent to facilitate trading in A shares by foreign investors, but only through fund management organizations (Hansell, August 1994).

This segmentation of capital markets has succeeded in raising capital from citizens and foreigners, but it is not at all clear why the price of an A share is more than three times the price of a B share in the same firm. This disparity might, for example, be reflecting the effects of two distinct demand functions for stocks, with three factors could be stipulated as enhancing the demand for ownership of A shares: (1) industries in the southern region where SEZ is located are relatively young and are growing at fast rates; (2) the enormous pent-up demand for consumer and durable goods assures the ability of these firms to convert all of their production into revenues; and (3) allowing prices to change with market conditions heightens the expectations that producers will share more of the consumer surplus and earn abnormal profits, especially since the PRC economy is estimated to have been growing at more than 8% a year.

The Accounting Profession

For four decades, the communist rule prohibited private ownership, organized and free capital markets and the operation of a market price system, which has impeded the development of accounting and the infrastructure required for the flow of price relevant information. Prior to the recent move to allow private ownership of capital and to operate a market economy, the accounting focus had been on a few tangible measures: i.e., the existence of physical assets, growth in sales and cash flows. This focus emanated from the government’s policies that measured firms’ success by growth in output and employment statistics. Also, the focus on cash flows was considered essential in order to account for the enterprise’s use of the funds appropriated by the state.

Although the information available about accounting as both a process and a profession in PRC is often incomplete, accounts of recent developments can be found in Zhang (1996), Qing et al. (1998) and Xiang (1998). Historically, conflicting descriptions appeared in the financial press. On the one hand, it is reported that, under prior systems, all transactions were recorded and “meticulously supported by vouchers” (Sender, 1992a) in a manner consistent with the Confucian philosophy of keeping historical records. On the other hand, the magnitude of missing controls were not reassuring:

In most cases, there is no independent verification of critical items such as bank balances or account receivables. Prices charged from one month to the next for the same inputs are frequently inconsistent. In other cases, blank checks are presigned and written for amounts up to certain ceilings — the assumption being that if the actual cost is less, it will be refunded down the line. And there is no formal monitoring of stocks (inventory) either. (Sender, 1992a, p. 59)

Upon switching from a purely state-owned enterprise to a system of sharing ownership with private investors, the assets and liabilities of the firms being privatized had to be assigned some values in order to determine the extent of ownership equity. Additionally, special problems arose when the firm’s debt included funds borrowed from foreign financial institutions since translating debt into the domestic currency at the prevailing
exchange rates has very often led to much higher obligations than the numbers recognized on the books. Against this background, it is understandable why preparing credible financial statements could be an extensive and highly costly undertaking of reconstructing financial statements from vouchers, appraisals and estimates. Even then, all appraisals have to be authorized and it is argued that the required “procedure is perceived as having too much government intervention, which may impair the independence of the valuation (appraisal) firms” (Zhang, 1996, p. 8).

Of the firms that the government had permitted to issue B shares (and adhere to IASs), “it took the Hong Kong-based office of Arthur Andersen about 6000 man hours in January and February 1992 to ready the financial statements of Shanghai Vacuum Electronic Device, China’s leading television maker for its B-share flotation in February” (Fairlamb, 1993, p. 37). The encountered difficulties are explicitly noted by the Arthur Andersen’s partner in the Hong Kong office who was in charge of about 50% of the B shares privatization (quoted in Fairlamb, 1993, p. 37):

Valuing a firm can be a nightmare. It is often unclear whether enterprises actually own some of the assets – such as land, which is not generally tradable in China – included in their balance sheets. Working out the value of goodwill in a socialist context is also difficult, as is assessing the true worth of stockpiled goods. And predicting future profitability in an environment where many prices were until recently controlled and where the domestic currency is not freely convertible is highly risky.

Similarly, it took more than 30 Hong Kong-based accountants with Arthur Andersen (who spent over 11,000 man-hours) to prepare the financial statements of Brilliance China Automotive Holdings, (Sender, 1992b).

In recent years, the PRC’s government has established China’s Institute of Certified Public Accountants to regulate and govern the conduct of professional CPAs. the Institute is a quasi-government organization that proclaimed independence, fairness, and objectivity as the three most fundamental professional rules of conduct. Since then, Fang and Tang (1991) report an apparent acceleration of development in accounting standards. In 1993, the government issued *Enterprise Accounting Standards No. 1*, which mandated desirable accounting qualities to adhere to “authenticity, relevance, comparability, consistency, timeliness, distinctiveness and materiality.” Although these characteristics have the tone of the qualitative criteria adopted by the US Financial Accounting Standards Board as part of its conceptual framework, it is not clear they have been put into action. For example, Xiang (1998) reports that the implementation of the 13 accounting standards that were issued in 1992 has been postponed in spite of the assertion that they are considered transitory because of their concentrating on the mechanical processes of recording.

Zhang (1996) offers a lucid description of some major problems in accounting in PRC. He highlights the major difficulty business firms encounter in valuing their receivables and debt. First, payment of obligations is very slow-paced; firms “have not yet developed the habit of confirming the amounts of receivables requested by auditors” ( p. 3); “and the government arbitrarily dictated that allowance for bad debt should not exceed the range of only 0.3% – 0.5% of the total amounts” ( p. 3). Zhang details other serious shortcomings in the accounting system, but most general institutional concerns arise from the fact that the majority of CPA firms are government owned, the Ministry of Finance is in charge of
making accounting and auditing standards, and auditors independence is at issue. In addition, the shortage of CPAs in China is critical; it is estimated that “78% are over 60 years old and 80% are retired personnel. Nearly all ... did not go through the CPA examination which was only introduced a couple of years ago” (Zhang, 1996, p. 23). According to Qing et al. (1998, p. 8), the biggest challenge facing the system is that the persistent ailment of lack [of ] fidelity [faithful representation] about accounting information [which is] widespread in China.”

Creating an accounting profession and culture cannot be done in a short period of time, especially when the basic elements of arms-length exchanges remain to be developed. However, optimism and high expectations accelerate with every new proposal that offer hope for improved disclosure and information environment. For example, Xiang (1998) describes some cases of the planned transition that give rise to those expectations:

The selection of depreciation methods and the estimation of useful life were administered by government regulations; further, the amount of the provision for doubtful accounts could not exceed a maximum percentage of the amount of year-end accounts receivable. These regulations are no longer required under the [proposed] detailed standards. The proposed detailed accounting standards intend to be more prudent with the application of the LCM rule, as well as to be more flexible in the choice of accounting policies and estimates. These proposed detailed accounting standards will move China’s accounting practice closer to IAS. (Xiang, 1998, p. 115)

The slow development of a reliable information structure in China has not been without cost to the economy. Information problems seem to be a major reason in delaying many firms from being traded; an estimated 4400 enterprises are waiting to develop the capacity to issue A shares and most firms are allowed to issue A shares. In addition, the relative scarcity of reliable financial information has been considered a major contributor to the speculative nature of the market for A shares. Chow et al. (1995) offer additional insights on the role of various cultural factors in influencing the development of accounting in China (see also Hall and Hall (1987) for assessment of some broad differences in culture).

Types of Information Environments

The Relatively More Formal Environment

B shares are denominated in US dollars and are sold only to foreign investors, cannot be owned by citizens and their registration requires that financial statements be prepared according to IASs. Although the IASC has representatives from over 140 countries, it is a voluntary standard-setting body having only a professional advisory capacity and no enforcement mechanism. To accommodate a variety of cultures the IAS are less stringent and leave more for judgment than the corresponding professional standards in the United States of America (USA) or in the United Kingdom (UK). While IASs constitute the lower bound for the set of accounting principles about which there could be general acceptance across nations, they are well developed by comparison to most domestic accounting standards in countries with emerging capital markets.
Beyond the comprehensiveness of the standards, there are also qualitative differences between applying either USA or UK accounting standards and IASs. In spite of those differences, the London Stock Exchange allows foreign registrants to use IASs in their filings. To this day, no evidence exists of major financial problems arising from granting this privilege to foreign-based companies, suggesting that IAS standards have met a threshold of credibility that satisfies the rigorous demands of a field test.

The information environment for Type B shares includes disclosure of financial statements in the documentation of the initial public offering and semi-annually for the related fiscal periods. In addition, the investment funds that own B shares represent sophisticated foreign investors who monitor the issuing firms’ activities and decisions. Since Chinese citizens are not allowed to own or trade B shares, these shares are relatively insulated from trade manipulation by insiders or state officials.

To summarize, the main features of the information environment of B shares are as follows:

1. financial reporting must follow IASs;
2. these standards require a level of documentation and system quality that ensures the credibility of aggregated numbers;
3. financial statements are audited by internationally recognized audit firms to assure compliance with IASs;
4. almost all B shares are owned by institutional investors; because of the need to continue the inflow of foreign investments, state officials are likely to avoid burdening the B share firms with domestic problems;
5. in the final analysis, investors, auditors and state officials perform different functions in monitoring the activities and performance of B share firms.

From these features, as well as the earlier statements by the Hong Kong-based Arthur Andersen, we conclude that the information environment of firms issuing B shares is relatively formalized and is not too dissimilar to other information environments in more developed capital markets.

The Relatively More Informal Environment

In contrast with B shares, the information environment for A shares (available only for domestic investors) is much less formalized in terms of both reporting requirements and external monitoring. Osland (1990, p. 7) claims that “because of the extensive networks of relationships with significant interaction between people, communications among Chinese customers for a given product may be diffused very quickly. Word-of-mouth publicity takes on greater importance in China than in most Western nations.”

This informality has become more apparent in connection with the procedures of making initial public offering of A shares. The informal communication networks of family and friends in the processing and execution of the initial public offerings of A shares was almost invited by the institutional arrangements that prevailed in the first few years of market operations. Until 1994, to offer new A shares to the public, the government had a complex system requiring prospective investors to purchase certificates of entitlement (CE, hereafter) that would entitle them to buy shares. The privatization
agency’s role in the initial offering was to announce (1) the type of enterprise being privatized, (2) the location and date of the sale of these CEs to the public, and (3) the location and times allowed for exchanging CEs for actual shares. Typically, the announcements appeared in newspapers, which were posted in visible places for the public to read and to spread the word through their informal networks. Because of the huge demand and the cumbersome process, the locations used to issue CEs were typically large public arenas such as football fields. Until the end of 1993, to acquire one A share, a person had to present 10 consecutively numbered CEs. Yet, each person was allowed to purchase only a limited number of CEs per identification card (ID). This arrangement created a market for relatives, friends and others to pool their IDs and to strategically position the holders of their ID pools in waiting lines to maximize the number of 10 serially-numbered bundles of CEs. College students, including the one who helped with an early draft of this paper, found temporary jobs standing in lines for CEs, sometimes for as long as 3 days, which created serious problems.

Lining up for three days in front of the Shenzhen Stock Exchange to buy overpriced share-application forms (certificates of entitlement) on 9–11 August (1992) was bad enough for the 1 million people from throughout China who had flocked to the SEZ [Schenzhen Exchange] for the occasion. But when it became clear that insiders had taken the forms, their patience ran out. In the rampage among themselves and with police that followed, more than 200 people were hospitalized. (Clifford, 1992, p. 53).

From the account of Chun Wang (a PhD student in agronomy who was once hired to pool IDs of different individuals), the CEs for a privatized auto company were dispensed at a football stadium in order to accommodate the large crowd that showed up to subscribe, with individuals holding onto each other to keep their places in line and to keep their pools of IDs together. Because of the allegations that insiders, party members and favored officials scooped a larger percentage of the initial public offering prior to making it available to others, the government has taken steps to reduce the ratio of required CEs for purchasing shares as well as some other controls, which were not specified in reporting to the public.

In this type of information environment, even if the accounting system is well developed, accounting disclosures would not be expected to be informative to the public because state officials actions could impound that information in prices prior to its release. This environment coupled with growth of unsupported rumors has led the government in December 1996 to threaten taking action against speculators. Some of that speculation was attributed to information leakage through insider trading and personal contacts.

Implications of the Two Different Environments

The most tangible outcome of the differences between the two information environments is the difference in the prices of A and B shares for the same firm as well as the varying degrees of their price volatility. As one observer reports: “The Chinese markets are quite volatile because trading volume is low and because they are dominated by individual speculators often operating without access to the most basic corporate reports or financial statements” (Hansell, 1994). In 1995, the average price of shares traded on the
SSE ranged from a high of US$13.742 to a low of US$6.055 and the turnover rate for that year was 483.6%. For B shares, the average price fluctuation ranged between a high of US$0.482 and a low of US$0.267 and the turnover rate was 58.2% (Shanghai Securities News, January 7, 1996, p. 7).

Relative to A shares, the market for B shares on SSE is small because the high transaction cost of trading in the latter is affordable mainly by institutional investors who tend to hold most of B shares. The total volume of B shares issued over the period from 1992 to 1995 was estimated to be US$1.5 billion. At the end of 1995, the B shares traded on the SSE accounted for 3.64% of total market capitalization. Over the period from 1992 to 1995, the B shares trading ranged from 4.6% to 1.5% of the total volume on SSE. These shares are thinly traded because investors in B shares hold stocks for reasons other than making short-term gains. Thinness of trade deprives analysts from constructing trading profiles that could help in explaining the reasons for pricing A Shares at about one-third to one-fifth of the price of B shares.

As with other developing capital markets, the need to draw capital funds from abroad provided incentive to enhance the markets’ international reputation and public image. Preparing financial statements of firms issuing B shares in accordance with IASs is one devise to show that the reported statements are less influenced by state-mandated actions in accounting and auditing or by other bureaucratic management discretion. Consequently, these financial statements can be viewed as providing a relatively more accurate description of the activities of the firms upon which they report. Increasing confidence in the publicly disclosed information about the 70 privatized companies (36 listed on SSE and 34 listed on SEZ) that issued B shares could only increase the likelihood that accounting numbers are utilized by external investors in share pricing. In contrast, firms that did not improve their information structure to the level of adopting IASs, either because of reluctance to incur high cost of conversion to IASs or other reasons, are forbidden from seeking foreign capital. We consider the differences in the information environment noted in the preceding as one of the reasons underlying this segmentation of capital markets. Furthermore, the accounting environment described in Zhang (1996) and Xiang (1998) and summarized above suggests that the relevance, objectivity and consistency of applying domestic accounting standards are of a much lower threshold than what is required by IAS.

These implications lead to the following two hypotheses:

**H1:** Changes in stock prices for the firms issuing B shares are associated with the disclosure of accounting earnings based on IASs.

**H2:** Disclosure of accounting earnings based on domestic accounting procedures has no observable effect on share prices for firms issuing only A shares.

**Preliminary Empirical Analysis**

Data on PRC firms have not found their way out of the country in a manner that would facilitate their accessibility to researchers. Even for firms issuing B shares, the data seem to be the province of a few large sophisticated (institutional) traders. In recent years, a Taiwanese consulting firm began collecting published financial information
(sales and earnings), security prices, and trading volume (in addition to macro data) from PRC publications and all available financial press reports. Using this information and other macro-type data, the consulting firm compiled a data bank for sale to interested investors and businesses. The partners of the consulting firm have granted the National Chengchi University (Taiwan) the right to use the data bank for research purposes only, including this project.

Table 1 shows the number of firms disclosing financial information for the period 1993–1995. The year 1993 has poor data; public information can be found for less than 25% of listed A shares and only for 2% of listed B shares because most were privately placed directly with institutions. For this reason, 1993 is not part of the empirical analysis that follows. By 1995, the listing of both types of shares has almost doubled. For the SSE, 170 of 184 listed companies publicly disclosed performance information; of those companies, 33 also issued B shares. For Shenzhen, 120 of 127 listed companies have publicly disclosed financial performance information in 1995. Of those companies, 23 had issued B shares. Due to data limitations, the empirical analysis that follows is carried out for 1994 and 1995 only.

**Characteristics of Trade**

Table 2 presents summary information about trading on both the Shanghai and Shenzhen stock exchanges. Panel A shows total volume of trade per year for the period 1993–1995. The highest volume during the period under study was in 1994 when total trade amounted to 812 billion yuan. Less than 2% of the traded volume was due to trading in B shares, which is consistent with the view that foreign institutions invest in B shares for the long-term more so than for profiting from the market’s short-term volatility. As a reflection of the speculative era of 1994, the volume of trade in 1995 was only 50% of that in 1994 in spite of the fact that additional firms were added to the listing on both exchanges.

Faced with limited opportunities to diversify their investments, domestic investors rushed to invest in the newly privatized firms, which spurred heavy demand for A shares,
as can be discerned from Panel B of Table 2, which presents information about six major firms. Converted into yuan, an A share was traded at more than four times the trade value of a B share in the same company. While both A and B shares have inelastic supply, their demand functions differ significantly, and the artificial segmentation of funding sources appears to have given rise to price differentiation in the two different markets. Because of regulatory restraints, domestic investors have limited opportunities to diversify their investments. Domestic savings could not be used to invest in securities other than A shares and the ensuing competition for a limited stock of A shares has led to this price discrimination between the domestic and foreign markets.

### Estimating the Market Model

Testing the two hypotheses stated earlier is based on an event-study research design. Given the above description of the information environment, we believed that applying more rigorous research designs could not be justified by the quality of the published financial data or the information system generating those data.

As a first step in generating unexpected returns, we estimated Sharpe’s market model. Using all available security prices, daily and weekly rates of return were computed for each stock as in Equation (1):

\[
r_{jt} = \log\left(\frac{p_{jt} + d_{jt}}{p_{j(t-1)}}\right)
\]

where \(p\) is for closing prices, \(d\) is for dividends, \(j\) is for the firm, and \(t\) is the relevant time period (day for daily and week for weekly). These returns were used to compute two
market indices: one is equally weighted and the other is value weighted using the capitalized values of outstanding shares as weights. A market index, $r_{mt}$, was computed separately for A and B shares and for each stock exchange. Rates of returns of all traded shares, including those for which we have prices but do not have the financial reporting information, were used in computing the related market index. Because of the large difference in the price relatives of A and B shares (see Table 1), a different market index was deemed necessary for each type.

Market rates of return were used in various regressions to estimate a market model for each share type on each exchange. For the daily returns, the market model was estimated using 60 days prior to the earnings announcements (from $-71$ to $-10$). The corresponding estimation period for the weekly model was $-20$ to $-3$. The estimated models took the form of Equation (2):

$$r_{jt} = \alpha_j + \beta_j r_{mt} + e_{jt}$$

where $\alpha_j$ is the intercept term and $\beta$ is the estimated systematic risk, $e$ is an error term with expectations zero and a variance $\sigma_e^2$.

The market model could not be estimated for all disclosing firms due to missing observations. (After extensive search, it appeared that data were missing either because they were not reported or were not archived.) Table 3 includes the various samples of firms disclosing accounting information and those included in the analysis. The analysis is reported for 1994 and 1995 only since available information for 1993 yielded too small a sample to be useful for estimation.

For all models, $\beta$ estimates are very small and are not statistically significant; this is generally true whether we use equal- or value-weighted rates of return for market indices. By construction, average $\beta$ estimates are expected to approach unity. The number of firms used to construct market return indexes includes all of the listed firms for which price data can be collected, but the empirical analysis is done for the disclosing firms only. For the 1994 data, average $\beta$ values ranged from 0.80 to 1.09. However, the distribution of $\beta$ values for that year suggests a much wider dispersion for B shares than for A shares. The standard deviation of the distribution of estimated $\beta$ for B shares is at least twice as much as that of A shares. A similar pattern is observed

### Table 3. Summary of Market Return Betas for 1994 and 1995

<table>
<thead>
<tr>
<th>Stock market share type</th>
<th>Shanghai</th>
<th>Shenzhen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms in the sample</td>
<td>90</td>
<td>13</td>
</tr>
<tr>
<td>Mean daily return betas (standard deviation)</td>
<td>1.01 (0.24)</td>
<td>0.87 (0.46)</td>
</tr>
<tr>
<td>Mean weekly return betas (standard deviation)</td>
<td>1.07 (0.23)</td>
<td>0.80 (0.47)</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms in the sample</td>
<td>166</td>
<td>32</td>
</tr>
<tr>
<td>Mean daily return betas (standard deviation)</td>
<td>1.02 (0.17)</td>
<td>1.04 (1.08)</td>
</tr>
<tr>
<td>Mean weekly return betas (standard deviation)</td>
<td>0.97 (0.25)</td>
<td>0.91 (0.43)</td>
</tr>
</tbody>
</table>
for 1995. This is obtained for both daily and weekly estimates. However, the low efficiency of these estimates is largely due to the thinness of trading B shares as indicated earlier.

**Hypotheses Testing**

To test the two hypotheses stated above, the estimated $\alpha$ and $\beta$ were used to estimate unexpected rates of return. A window of 32 trading days ($-10$ to $+20$, where $0$ is the date of disclosure) was used for daily analysis, and a window of 5 weeks [$-2$ to $+2$] was used for weekly analysis.

The hypotheses being tested are not directional since we did not have a way of unambiguously identifying good and bad news. Thus, we used Beaver’s $U$ as a test statistic that does not distinguish between positive and negative reactions but takes account of the variation attributable to good and bad news relative to prior information. For each firm and share type, $U$ statistics were estimated as in Equation (3):

$$U_{ij} = s^2_{it}/s^2_e$$ (3)

where $s^2_{it}$ is the average sum-of-squared residuals during the $i$th day of test period (days $-10$ to $+20$), $s^2_e$ is the average sum of the squared residuals during the estimation period, and $j$ is for the $j$th stock.

In the absence of changes in the underlying return-generating process, the expected value of $U$ would be unity. A large deviation of $U$ values from unity implies a structural change consistent with the existence of an earnings announcement effect. A
significantly smaller $U$ also implies a change in structure but one that might be attributed to lack of trading activity in the announcement period. Four portfolios were formed for each day of 1994 and 1995 in the test period. As shown in Table 4, these are: (1) Shanghai A shares; (2) Shanghai B shares; (3) Shenzhen A shares; and (4) Shenzhen B shares.

For each portfolio, the average values of the estimated $U$, denoted $\mu_U(A)$, and $\mu_U(B)$ for A and B shares, respectively, were tested against unity. The two hypotheses offered earlier can then be restated in operational terms as follows:

$$H_1: \mu_U(B) > 1$$

$$H_2: \mu_U(A) = 1$$

Tables 4 and 5 report the test results for unexpected daily returns for 1994 and 1995, respectively. For the first hypothesis concerning B shares, $\mu_U(B)$ is generally below its expected value of unity for the shares traded on SSE. $\mu_U(B)$ is significantly less than 1 for 1994 for trading days $-4, 0$ and $+1$. As to B shares traded on SEZ, $\mu_U(B)$ is significantly less than unity for day $+2$. For 1995, also significantly negative average $\mu_U(B)$ values are observed for stock trades on SSE for days $-5, -4, -2$, and $-1$, and for shares traded on SEZ for days $-4, -1, +2$, and $+4$. The only results that appear consistent with the expectations presented in the first hypothesis are observed for B shares that were traded on SSE for post-earnings announcement. However, post-disclosure, positive $\mu_U(B)$ values are obtained for B shares on the SSE in 1995 with days $+1$ and $+5$ are significant at 0.10, and day $+2$ significant at 0.01. This positive pattern did not extend to trades on SEZ and

<table>
<thead>
<tr>
<th>Day with respect to announcement</th>
<th>Shanghai A - Shares</th>
<th>Shanghai B - Shares</th>
<th>Shenzhen A - Shares</th>
<th>Shenzhen B - Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean (t)</td>
<td>Mean</td>
<td>Mean (t)</td>
</tr>
<tr>
<td>$-5$</td>
<td>1.26</td>
<td>(1.25)</td>
<td>0.60</td>
<td>(-4.01)$^a$</td>
</tr>
<tr>
<td>$-4$</td>
<td>1.66</td>
<td>(1.39)</td>
<td>0.58</td>
<td>(-3.51)$^a$</td>
</tr>
<tr>
<td>$-3$</td>
<td>1.15</td>
<td>(1.00)</td>
<td>0.85</td>
<td>(-0.80)</td>
</tr>
<tr>
<td>$-2$</td>
<td>1.22</td>
<td>(1.15)</td>
<td>0.54</td>
<td>(-4.20)$^a$</td>
</tr>
<tr>
<td>$-1$</td>
<td>1.49</td>
<td>(1.89)$^b$</td>
<td>1.36</td>
<td>(0.83)</td>
</tr>
<tr>
<td>0</td>
<td>2.29</td>
<td>(2.93)$^a$</td>
<td>2.26</td>
<td>(1.46)</td>
</tr>
<tr>
<td>$+1$</td>
<td>2.34</td>
<td>(4.20)$^a$</td>
<td>3.57</td>
<td>(1.71)$^b$</td>
</tr>
<tr>
<td>$+2$</td>
<td>2.86</td>
<td>(1.44)</td>
<td>5.51</td>
<td>(2.16)$^a$</td>
</tr>
<tr>
<td>$+3$</td>
<td>1.45</td>
<td>(1.68)$^b$</td>
<td>4.55</td>
<td>(1.69)$^b$</td>
</tr>
<tr>
<td>$+4$</td>
<td>0.91</td>
<td>(-0.76)</td>
<td>9.27</td>
<td>(1.50)</td>
</tr>
<tr>
<td>$+5$</td>
<td>1.19</td>
<td>(1.04)</td>
<td>3.06</td>
<td>(1.87)$^b$</td>
</tr>
<tr>
<td>$+6$</td>
<td>0.29</td>
<td>(-0.59)</td>
<td>2.01</td>
<td>(1.18)</td>
</tr>
<tr>
<td>$+7$</td>
<td>0.98</td>
<td>(-0.09)</td>
<td>1.53</td>
<td>(0.73)</td>
</tr>
<tr>
<td>$+8$</td>
<td>0.96</td>
<td>(-0.20)</td>
<td>0.38</td>
<td>(-6.04)$^a$</td>
</tr>
<tr>
<td>$+9$</td>
<td>0.91</td>
<td>(-0.55)</td>
<td>1.27</td>
<td>(0.81)</td>
</tr>
</tbody>
</table>

Sample size 168 ± 32 ± 120 ± 23

Notes: $^a$Statistically significant below 0.01. $^b$Statistically significant below 0.05.
they are not consistent enough to reverse the conclusion that the findings for 1994 and 1995 are inconsistent with $H_1$. Furthermore, the obtained finding of positive daily abnormal returns did not extend to analysis of weekly data as reported in Table 6. As shown in the weekly analysis, none of the average values of $\mu U(B)$ on either exchange is significantly different from unity. In general, these results are inconsistent with $H_1$.

In summary, for both exchanges (SSE and SEZ), the evidence does not support the hypothesis that accounting numbers in the relatively better information quality environment (the environment of B shares) are correlated with changes in share prices.

As to the second hypothesis concerning A shares, we find mean values of $U(A)$ to be significantly higher than unity using daily unexpected returns for both SSE and SEZ and for 1994 and 1995. For the shares traded on SSE, $\mu U(A)$ is significantly higher than one in every day of the period $-5$ through $+3$ for 1994, and for the period $-1$ to $+1$ for 1995. The results for SEZ show significant positive values $\mu U(A)$ on the day $+1$ for 1994, and on trading days 0 and $+1$ for 1995. In contrast with 1994, no significant negative values of $\mu U(A)$ are obtained for 1995.

The results of analyzing daily trades in A shares do not hold up when weekly returns are examined. For 1995, Table 6 shows significantly positive $\mu U(A)_w$ for weeks 0 and $+2$ for shares traded on SSE. However, the daily results are opposite of the expected findings for the information environment of A shares and suggest rejecting hypothesis $H_2$.

### Interpretation of Results

The results reported in Tables 4 and 5 do not support either hypothesis. It is counterintuitive to suggest that accounting disclosures have information content in setting security prices for the low quality information environment (of A shares), but not for the high quality information environment (B shares). It is tempting, however, to celebrate and jump to the conclusion that accounting earnings are value relevant in pricing A shares.

### Table 6. Beaver’s $U$ for Weekly Unexpected Rates of Return (for 1995)

<table>
<thead>
<tr>
<th></th>
<th>A - Shares</th>
<th></th>
<th></th>
<th>B - Shares</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Probability</td>
<td></td>
<td>Mean</td>
<td>Probability</td>
</tr>
<tr>
<td>Panel A: Shanghai stock exchanges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–2 weeks</td>
<td>1.32</td>
<td>0.89</td>
<td>1.07</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>–1 week</td>
<td>0.94</td>
<td>0.31</td>
<td>1.48</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>0: disclosure week</td>
<td>2.69</td>
<td>0.65</td>
<td>0.78</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>+1 week</td>
<td>1.05</td>
<td>0.12</td>
<td>1.48</td>
<td>0.167</td>
<td></td>
</tr>
<tr>
<td>+2 weeks</td>
<td>1.88</td>
<td>0.76</td>
<td>3.66</td>
<td>0.33</td>
<td></td>
</tr>
<tr>
<td>Panel B: Shenzhen stock exchanges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>–2 weeks</td>
<td>0.98</td>
<td>0.008</td>
<td>3.77</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>–1 week</td>
<td>0.57</td>
<td>0.95</td>
<td>1.74</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>0: disclosure week</td>
<td>0.87</td>
<td>0.002</td>
<td>2.11</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>+1</td>
<td>1.56</td>
<td>0.42</td>
<td>1.29</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>+2</td>
<td>0.99</td>
<td>0.015</td>
<td>1.04</td>
<td>0.64</td>
<td></td>
</tr>
</tbody>
</table>
Given the previous discussion of the differing information environments, four possible explanations for these findings are suggested:

1. Insider trading in A shares.
2. Thinness of trade in B shares.
3. The high volatility of trading prices.
4. Effects of other information channels.

**Insider Trading**

Without the necessary ingredients for market efficiency and allowing equal access to information prior to using it in trading, it is not defensible to conclude that the statistical results obtained for A shares are consistent with market efficiency. These results are consistent with several possible reasons because information is reflected in security prices when any trader, including insiders, acts on it. Given the information environment described earlier and the cases reported in Zhang (1996), a scenario can be advanced that insider trading and manipulation of trade by officials might be responsible for impounding accounting information in share prices prior to making public disclosure. Another scenario is that the obtained results are a statistical artifact because (a) the findings about A shares are not consistent across the two stock exchanges (SSE and SEZ), and (b) the obtained results for daily returns are not confirmed by the results of the less noisy weekly returns. Since these explanations cannot be ruled out given this analysis, we are unwilling to conclude that some of the observed findings reflect the reaction to accounting numbers.

**Thinness of Trade**

The data reported in Table 1 reveal that about 50% to 60% of all listed firms in 1994 disclosed accounting reports to the public, with this percentage increasing to over 90% in 1995, suggesting an improved reporting system. The annual volume of trade (in yuan) for both A and B shares is reported in Table 2. We also know from earlier citation (Shanghai Securities News, SSE, January 7, 1996) that total capitalization of A shares at that time was about 20 times that of B shares. At average currency conversion rates of 1995, this volume amounts to about US$40 billion in 1994 as compared to US$2 billion in December 1995. These two tables present conflicting signals, however, the trading volume presented in Table 2 shows the ratio of A shares to B shares during 1995 to be about 52% and the corresponding ratio in 1994 to be about 65%. Thus, while the number of listed firms has increased in 1995 over 1994, A shares were traded much more heavily in 1995 as compared to 1994. In addition, the SSE publication reports significant variation in turnover rates of A and B shares:

<table>
<thead>
<tr>
<th>Year</th>
<th>Type A</th>
<th>Type B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>1995</td>
<td>10</td>
<td>3.5</td>
</tr>
</tbody>
</table>
These ratios reveal the extent to which B shares are thinly traded as compared to A shares. As a result, analysis of the association between unexpected returns and accounting information is not likely to reveal the true information linkage — investors in B shares do not trade for short-term gains.

**Analysis of Volatility**

A further analysis of thinness of trade and relative market volatility of B shares is examined using relative volume movements. Using volume data, an equally weighted index of changes in the volume of trades, $v_{mt}$, was constructed for each market using all listed shares in a manner analogous to constructing the market return portfolios. And, as in Beaver (1968) and Bamber (1987), a linear function of the following form (Equation [4]) was estimated for each firm in each market:

$$v_{jt} = a_j + b_j v_{mt} + u_{jt}$$  \(4\)

where $v_{jt}$ is the volume of trade for firm $j$ during the trading period $t$, which is a day for the daily analysis and a week for the weekly analysis, $a_j$ is an intercept term, $b_j$ is the slope coefficient reflecting the covariation of the trading volume of the firm and market, $v_{mt}$ is the index of market volume, and $u$ is an error term. This model was estimated for daily and weekly volumes of trade for each share type and each exchange.

Table 7 provides some indication of the pattern of the estimated $b$ coefficients for the firms that disclosed earnings. Using $b$ estimates to denote relative volume volatility, it appears that the volume of trade for the firms disclosing financial information is less volatile than the volume for the market as a whole. Averages of $b$ coefficients are consistently below unity for 1994 and 1995. (The data for the 1993 volume of trade is reported here for comparison only.) The estimated $b$ coefficients show a widely dispersed distribution showing high standard deviations, sometimes as large as the mean (e.g., Table 7, Shanghai Exchange in 1994).

**Efficiency and Sources of Market Friction**

A likely explanation of the results relates to the operation of capital markets — can we take informational efficiency as a maintained hypothesis? As indicated earlier, unless markets are taken to be informationally efficient, the unexpected variation in market return reflects the joint effect of two hypotheses: market efficiency and information content. Testing for the information content of accounting numbers, or any other news, is contingent on satisfying market efficiency. As indicated earlier in this paper, emerging capital markets are not known to be efficient because of the numerous institutional frictions imposed by regulatory processes and unequal access to information. Some of the institutional features that characterize the PRC’s stock exchanges are relevant to this issue.

First, the government remains the majority shareholder, and a sizable percentage of the privatized portions of A shares are owned by state officials, party members and other insiders. Because laws restricting insider trading are not known to be
enforced, it is very likely that insiders act on the information prior to its public release and, as a result, the information content of disclosure would have been impounded in prices prior to the public release of annual reports. Second, given that PRC is at the “take off” stage of economic development and growth, which averaged more than 8% a year since 1979 except for 1990 (Fairlamb, 1993, p. 35), financial statements and short-term earnings may not be good indicators or predictors of future performance. The question that appears to be problematic is how to channel the huge pool of local savings that remain liquid into capital markets while keeping the markets orderly and avoiding severe volatility. In 1992, for example, these local savings were estimated at yuan 60 billion in the city of Shanghai alone (Kaye, 1992, p. 50).

Third, the history of trading shares to absentee investors in a public forum and of disclosing information about business firms’ performance has been too brief to develop association measures and rules-of-thumb connecting reported numbers and subsequent events.

Fourth, the size of pent-up demand for products in PRC is such that the products of any firm will sell, and given the relative increase in the freedom to set prices, there are expectations of a continued long-term profitability irrespective of short-term profit volatility.

Finally, the novelty of the information and the extent to which pre-disclosure of accounting earnings are issues that need more research and validation.

<table>
<thead>
<tr>
<th>Stock market share type</th>
<th>Shanghai</th>
<th>Shenzhen</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>For daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of firms used</td>
<td>90</td>
<td>14</td>
</tr>
<tr>
<td>Mean daily betas</td>
<td>0.54</td>
<td>0.59</td>
</tr>
<tr>
<td>(standard deviation)</td>
<td>(0.57)</td>
<td>(0.61)</td>
</tr>
<tr>
<td>For weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of firms used</td>
<td>64</td>
<td>11</td>
</tr>
<tr>
<td>Mean volume betas</td>
<td>0.84</td>
<td>0.21</td>
</tr>
<tr>
<td>(standard deviation)</td>
<td>(0.78)</td>
<td>(0.07)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>For daily</th>
<th>For weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of firms used</td>
<td>Number of firms used</td>
</tr>
<tr>
<td>1994</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>1.08</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>(1.254)</td>
<td>(0.402)</td>
</tr>
<tr>
<td>1995</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>1.36</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>(1.74)</td>
<td>(0.88)</td>
</tr>
</tbody>
</table>
Summary

In this paper we address the relevance of the information environment in understanding and interpreting published data about share pricing in the People’s Republic of China. Two major stock exchanges opened in Shanghai and Shenzhen in 1990 to trade two types of stocks: A and B shares. The former is to be owned and traded only by citizens, while the latter is to be traded and owned only by foreign investors. Privatization of business in PRC has been growing but the state remains the majority owner; it is estimated that only about 20% of shares in privatized firms are held by private investors.

Although both types are traded on the same exchange, an A-type share is priced at three to four times the price of a B-type share. Because of the institutional arrangements, both types of shares face different demand preferences for investment and liquidity. While this aspect might explain the unusual difference in the prices of A and B shares, we attempt in this paper to examine the varying information environment that appear to characterize the markets for A and B share types. With respect to the A-type shares, several issues are of particular interest: (1) the process of making initial public offering, (2) the role of state officials in share ownership and management of the newly privatized firms, and (3) the structure of the accounting and auditing profession in PRC. While the official requirement is to have financial statements audited, most of the CPAs in PRC are trained under the state-owned and operated system and most of the CPA firms are owned by the government. Accounting standards are issued by a quasi-independent body that is under the jurisdiction of the Ministry of Finance. Few of those standards exist and their implementation is often delayed. Financial statements are issued at most twice a year and are published in the newspapers for public dissemination. In addition, cultural acceptance of independent audits is in its early stage of development.

In contrast, the information environment that characterize B-type shares is distinct by (1) requiring that financial statements be prepared according to IASs, (2) having CPAs who are qualified internationally to audit and offer audit opinions on financial statements, (3) foreign investors, consisting mainly of financial institutions, act as added external monitoring agents, and (4) state officials have little (if any) role to play in stock trading of B shares.

Because of these differences, we posited that A and B share prices react differently to accounting information. The varying elements of the environment discussed for A-type shares led us to hypothesize that accounting numbers are soft description of the underlying economics and would not be associated with security prices as these prices are determined by many other institutional and trade factors. A similar reasoning led us to hypothesize an association between accounting numbers and B-type share prices.

A preliminary analysis of trades on both exchanges in 1994 and 1995 led us to reject both hypotheses. While the evidence could be construed differently by different readers, we would like to point out that the results of daily and weekly return data lead to inconsistent inferences. In particular,

<table>
<thead>
<tr>
<th>Hypothesis 1</th>
<th>Hypothesis 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Table 5</strong></td>
<td><strong>In Table 6</strong></td>
</tr>
<tr>
<td>consistent</td>
<td>inconsistent</td>
</tr>
<tr>
<td>inconsistent</td>
<td>consistent</td>
</tr>
</tbody>
</table>
This contradictory pattern led us to question the data quality and the factors that drive price changes. In attempting to explain this pattern, we speculated on the thinness of trading of B-type shares, the role of state officials, the role of insider trading and speculators, and the slow development of accounting and auditing. However, much more work is needed to further our understanding of these issues.

This conclusion is inconsistent with the findings reported by Haw et al. (1998). They find that the Chinese GAAP is more associated with returns than the information reported under the IASs. They even express surprise at their findings, which could fall in the class of anomalies, but they offer those results as exploratory without sufficiently detailed explanation.

Acknowledgments: We appreciate the encouragement of Chee Chow and would like to thank Chun Wang (a participant in a PRC public offering), Pierre Liang, and participants at Workshops at National University of Singapore, Wilfred Lurier University (Canada), the 1997 Asia-Pacific Conference in Korea, and IAAER/CIERA 1998 conference in Chicago.

REFERENCES


*Shanghai Securities News*. Shanghai Stock Exchange, various issues.

