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# A Comparison of Reported Earnings Under Chinese GAAP vs. IAS: Evidence from the Shanghai Stock Exchange

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**SYNOPSIS:** This paper reports the results of an empirical examination of the difference between earnings based on Chinese GAAP and those based on International Accounting Standards (IAS). Specifically, the study determines how current Chinese accounting standards are different from the IAS, whether these differences are systematically biased toward under- or overstated earnings, and which items from the financial statements contributed most to these differences. The findings suggest that reported accounting earnings based on current Chinese GAAP are significantly different from those based on IAS. On average, the reported earnings determined under the Chinese GAAP are 20-30 percent higher than earnings reported under IAS. After restatement, 15 percent of the B-share companies changed from a reported profit to a reported loss. The findings suggest that the differences between the two sets of earnings are caused by differences in accounting standards and financial rules, opportunistic applications of Chinese GAAP, and unusual market-wide events. An analysis of recently promulgated accounting standards indicates that the difference between the two sets of accounting earnings is likely to be significantly reduced from those reported for 1998 as a result.

**Data Availability:** Accounting earnings based on Chinese GAAP and IAS are publicly available from sources identified in the paper, breakdown details of earnings are available from the corresponding author.

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## INTRODUCTION

China opened the Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) in 1990 and 1991, respectively, as part of its efforts to reform state-owned enterprises (SOEs) and to attract foreign investments (Tang et al. 1996). The companies listed on these two stock exchanges were originally authorized to issue shares (known as A-shares) to domestic Chinese citizens only. In 1992, some companies (most had already issued shares to domestic Chinese citizens) were authorized to issue shares denominated in foreign currencies (U.S. dollars in the SSE and Hong Kong dollars in the SZSE) to foreign investors including investors from Hong Kong, Taiwan and Macau (known as B-shares).<sup>1</sup> The issue of these B-shares has generated skepticism among the business and academic community for a number of reasons including the disparity between Chinese accounting standards for A-shares and International Accounting Standards (IAS) for B-shares. For example, a Hong Kong-based newspaper made the following comments on the B-share market:

B-shares [prices] have fallen almost two-thirds from their peaks of more than a year ago....Poor prospects and the weak yen can only explain weak investor interest in recent months, although the B [share] markets have been bugged by problems for as long as they were around. The problems were well known; generally poor quality of listed companies, notoriously opaque disclosure standards; weak regulation; and lack of liquidity. (*South China Morning Post* 1998)

Listed companies are required to issue annual reports audited by independent CPAs, then release them to the public through designated securities newspapers. Companies issuing B-shares also need to restate their financial statements according to IAS.<sup>2</sup> The application of Chinese accounting standards and IAS for the same company has provided a unique opportunity to examine how Chinese accounting standards differ from IAS.

This study focuses on the financial reporting and disclosure practices of B-share companies by examining the differences between earnings and balance sheet items prepared according to Chinese accounting standards and IAS. An attempt is made to assess how current Chinese accounting standards are different from the IAS, and whether these differences are systematically biased toward understated or overstated<sup>3</sup> earnings, and which items from the financial statements contributed most to these differences.

The findings suggest that reported accounting earnings based on current Chinese GAAP are significantly different from those based on IAS. Accounting practices relating to bad debt allowance, depreciation, inventory valuation, long-term investment and foreign currency translation are the main causes for the differences between the two sets of earnings. An analysis of recently promulgated accounting standards indicates that the differences between the two sets of accounting earnings are likely to be significantly reduced after 1998.

This study contributes to the international accounting literature in several ways. First, it quantitatively analyzes the effect of Chinese GAAP vis-à-vis IAS on financial

<sup>1</sup> A small number of Chinese companies are also listed on overseas stock exchanges. These shares are known as H-shares (Hong Kong), N-shares (New York), and T-shares (Tokyo).

<sup>2</sup> B-share companies are required to convert their financial statements in a similar manner as H-share companies, i.e., convert financial statements into either IAS or Hong Kong standards which are very close to IAS. Most companies select IAS.

<sup>3</sup> The term understated (overstated) as used in this paper simply represents a result of a comparison that is less (greater) in dollar amount, it does not involve any value judgment.

statements. Second, to understand the trend of Chinese accounting, the current differences between Chinese GAAP and IAS are analyzed in the context of new accounting standards to assess the likelihood that the discrepancies will be narrowed in the near future. Third, the analysis is extended to include disclosure requirements that may not be reflected in the difference in accounting earnings. In addition, this study also discusses the differences between the IAS and Chinese (national) accounting standards. These are clearly important issues since standards should account for the substance of the underlying economic transactions and the financial statements should report the entity's transactions in a standard, verifiable manner (Wulf and Koski-Grafer 1998). Last, this study also provides some insights regarding the institutional arrangements in China which are distinctly different from those of the U.S. These differences include certain characteristics of Chinese financial reporting, such as the number of annual reports a listed company usually prints, the manner in which these reports are available to individual investors, and the identity of auditors of these reports. Hopefully, evidence on the issues raised in this paper will provide an understanding of the process of internationalization of accounting standards in China and, at a more practical level, will provide practicing accountants and researchers with an understanding of the peculiarities of Chinese financial reporting.

The remainder of the paper is organized as follows. The next section provides the background to the study and this is followed by a discussion on mechanics for conversion of Chinese GAAP-based financial statements to IAS-based financial statements. The following two sections present, respectively, the methodology and data collection procedures, and the analyses and discussion of results. The last section concludes the paper.

## BACKGROUND

### Accounting Reform

The present Chinese accounting regulations and practices evolved from a Russian-style macro-economy-oriented accounting system adopted by China in the 1950s (Tang et al. 1996). As a result of economic reform aimed at rebuilding a market economy, China undertook far-reaching changes to its accounting system in the 1980s. Two events are particularly important in the reform process. The first was in 1983, when, for the first time, China selectively adopted internationally accepted accounting terminology and practices in its accounting regulation for joint ventures with foreign investments. The second was in 1992, when a new set of accounting regulations modeled along IAS were promulgated for share-issuing companies. The significance of these changes is reflected by the fact that both Chinese researchers and regulators describe them as "revolutionarily changes" to Chinese accounting (Yang and Yang 1998).

The present accounting framework is the product of a nationwide campaign aimed at aligning China's accounting practices with internationally accepted practices in the latter part of 1992.<sup>4</sup> The outcome of this reform has been widely documented and discussed (Winkle et al. 1994; Chow et al. 1995; Davidson et al. 1996; Xiao and Pan 1997; Chen et al. 1997; Graham and Li 1997; Xiang 1998, among others). Despite these accounting reforms, it is widely recognized in these studies that major differences still exist between the revised Chinese accounting framework and IAS. However, the extent

<sup>4</sup> The slogan of the campaign was set in Chinese characters "connecting the track with international practices" (Chinese translation).

and nature of the differences between Chinese accounting standards (Chinese GAAP, hereafter) and IAS and their effects on financial reporting have not been empirically evaluated.

### **A- and B-shares**

The experiment to incorporate SOEs started in the middle of the 1980s. However, early share-issuing companies were allowed to issue shares to only government agencies, related business entities and employees. The first public issue was made in Shanghai in November 1984, over a bank counter rather than a stock exchange. In September 1986, a trading room was established by the Shanghai government for two listed companies. The number of listed companies increased to 13 in 1990 (Yang and Yang 1998). The first B-share was issued in 1991.

As evidenced in table 1, the emerging capital market in China has experienced a rapid growth since 1991, the year in which the first Chinese stock exchange was founded. By the end of 1997, there were 50 companies on the SSE which issued B-shares to foreign investors with a total capitalization equivalent to RMB 18.56 billion (Chinese currency, U.S.\$1 is approximately equivalent to RMB 8.4). Among these B-share companies, 39 also issued A-shares.

In China, the granting of permission by the authorities for a company to list, either A-shares or B-shares, is viewed as a great privilege and honor for the relevant SOE manager (Aharony et al. 1997). In general, only a firm considered as having a good record and promising potential is allowed to be listed. It should be noted that A-shares and B-shares for the same company have equal voting power and dividends rights, although the price of A-shares is usually much higher than that of B-shares.<sup>5</sup> The substantial price difference can be explained by the fact that foreign investors have less information about local firms, relative to domestic investors, and this information disadvantage is caused by language barriers, different accounting standards, and lack of reliable information about the local economy and firms (Chakravarty et al. 1998). The substantial differences have been persistent over time due to the fact that arbitrage is not allowed between the two types of shares: A-shares are traded only among domestic investors and B-shares only among overseas investors.

### **Accounting Regulation for Share-Issuing Companies**

Listed or nonlisted share-issuing Chinese companies must follow both general accounting standards that apply to all Chinese companies and a special set of standards promulgated only for share-issuing companies (Ministry of Finance 1998). The special accounting regulation, known as *Accounting System for Companies Limited by Shares*, was jointly issued by the Ministry of Finance and the State Commission for Economic Reforms in 1992 as a response to the experiment of incorporating SOEs. This regulation, along with its amendments and attachments issued in the following years, is widely regarded as the part of Chinese GAAP that is closest to IAS (Yang and Yang 1998). Moreover, the accounting standards for share-issuing companies have been revised recently, and became effective as of January 1, 1998. An examination of these new standards should provide an insight as to whether some of the differences between the

<sup>5</sup> For example, at the end of 1996, the first 10 B-share companies that also issued A-shares on the SSE had an average closing price of RMB 7.59 for their A-shares, but U.S.\$0.289 (approximately RMB 2.40) for their B-shares.

**TABLE 1**  
**Growth of Chinese Stock Markets 1992-97**

	1992	1993	1994	1995	1996	1997
Number of companies						
A-share: SSE <sup>a</sup>	33	101	169	184	287	372
SZSE <sup>b</sup>	24	76	118	127	227	348
B-share: SSE	18	22	34	36	42	50
SZSE	9	19	24	34	43	50
Market capitalization (billion RMB)						
A-share: SSE	52.06	206.61	248.08	243.37	531.61	903.25
SZSE	45.75	124.25	103.25	87.69	413.24	812.17
B-share: SSE	3.79	12.80	11.66	9.20	16.17	18.56
SZSE	3.22	8.43	5.80	7.18	23.22	18.94
Trading volume (billion RMB)						
A-share: SSE	23.27	238.04*	562.67	304.26	901.91	1354.87
SZSE	41.92	126.09	237.63	91.53	1203.21	1674.50
B-share: SSE	1.45	—*	10.85	6.09	9.46	21.29
SZSE	1.66	2.58	1.62	1.70	18.53	21.37

\* Data on the break down between A and B-share trading volumes are not available for 1993.

<sup>a</sup> Shanghai Stock Exchange.

<sup>b</sup> Shen Zhen Stock Exchange.

Source: The Securities Regulatory Office of Shenzhen: *Annual Report on Shenzhen Securities Market* (1998).

current Chinese GAAP and IAS are likely to be eliminated once the new standards are implemented.

The *Accounting System for Companies Limited by Shares* deals mainly with measurement issues. Listed companies are also subject to disclosure requirements promulgated by the China Securities Regulatory Commission (CSRC). Among the handful of disclosure requirements, two of the most important are the *Bylaws of Information Disclosure for Publicly Traded Companies* (1993) and the *Content and Format of Annual Reports* (issued in 1994 and revised in 1997).

### CONVERSION OF CHINESE GAAP-BASED FINANCIAL STATEMENTS

Chinese companies issuing B-shares are required to publish summarized financial statements that are based on both Chinese GAAP and IAS. Apart from publishing summarized financial statements, listed companies are also required to submit copies of full financial reports to various government agencies, regulatory bodies, banks and other financial institutions. In addition, companies should have some copies available in their head offices for review by investors. Anecdotal evidence suggests that few investors are aware of the existence of this opportunity. The required financial statements include a balance sheet, an income statement, a cash flow statement, attached schedules and footnotes. The Chinese GAAP-based statements must be audited by a designated CPA

firm that is authorized by the CSRC to audit listed companies. Summaries of these financial statements are required to be published in at least one of the securities newspapers or a journal selected by the CSRC<sup>6</sup> by April 30 of the following year.<sup>7</sup> The audited IAS-based statements for the B-shares are published in Hong Kong, either in Chinese or in English, on the same day that the Chinese GAAP-based report is released in China. A summarized reconciliation between the two sets of accounting earnings is required to be provided along with the Chinese GAAP-based statements in local newspapers. Both the SSE and SZSE require that trading in the shares of reporting companies be suspended for half a day on the day of the earnings announcement to minimize the probability of insider trading.<sup>8</sup>

The IAS-based financial statements for B-share companies published in Hong Kong are all audited by Big 6 auditors and other international firms in order to improve the credibility of the financial statements. On the other hand, most of these companies hire local CPA firms to audit their Chinese GAAP-based annual reports.<sup>9</sup> Interviews with managers of listed companies reveal that the main reason for a company to hire a local CPA firm for A-share reporting is to reduce audit costs, because Big 6 audit fees are much higher than local CPA firm audit fees. When two CPA firms are hired for A- and B-share audits, they must work jointly on the audits.

Anecdotal evidence and interviews with both auditors and their clients suggest that there are two common approaches to financial statement conversion adopted by B-share companies. Under the first approach, the local CPA firms independently conduct their own audits before passing on their audited financial statements to the Big 6 auditors for a restatement. The Big 6 auditors invariably carry out additional work such as inventory valuation, depreciation analysis and long-term investment reconciliation. During the process of restatement, the Big 6 auditors may require a significant amount of working papers from their local counterparts, but there is no formal cooperation between them. Under the second more efficient approach, the two firms work more like partners and both agree to allocate field tests and share working papers. Interviews with Big 6 auditors suggested that the second approach is adopted only when the Big 6 are convinced that the work of local CPA firms is of acceptable quality. Sometimes the second approach is suggested by the client as part of its effort to minimize audit costs.

### RESEARCH QUESTIONS AND METHODOLOGY

A feature of China's accounting reform program is a discernible trend toward international harmonization of accounting standards. This is considered by some researchers and practitioners to be a desirable and achievable goal (Levitt 1998). Over the last

<sup>6</sup> There are seven securities newspapers and one journal selected by the CSRC for this purpose. They are: *China Securities News*, *Shanghai Securities News*, *Securities Times*, *Financial Times*, *Economic Daily*, *China Reform*, *China Daily* (English), and *Security Markets Weekly*. However, most companies select the first three newspapers to publish their financial reports.

<sup>7</sup> Chinese companies are required to use the calendar year as their fiscal year.

<sup>8</sup> The SZSE, for example, states in its *Guidelines for Listed Companies* that the purpose of a half-day suspension is to maintain an "open, equal and fair" market.

<sup>9</sup> According to the Chief Accountant's Office of the CSRC, among 118 companies that issued either B- or H-shares, 108 hired a Big 6 firm and 10 hired a non-Big 6 international firm to audit their IAS-based 1997 annual reports, while 80 of their Chinese GAAP-based annual reports were audited by local CPA firms and 38 by joint ventures between Big 6 and local firms. During our sample period, Chinese law required foreign accounting firms to set up joint ventures with local firms to audit local companies.

25 years, IAS has gained support and recognition by both industrialized nations and developing countries. China is one of the developing countries with an emerging capital market that formulates its accounting standards along IAS (Xiang 1998).<sup>10</sup> However, due to a lack of detailed information on earnings components, it remains an empirical question as to how far away these newly developed accounting standards are from IAS.<sup>11</sup> This leads to:

**Question 1:** What are the differences between the IAS and present Chinese accounting standards? Are these differences systematically biased toward under- or overstated earnings?

**Question 2:** What items from the financial statements contribute most to these identifiable differences?

Sufficient relevant disclosures can help investors to better understand the implications of reported accounting earnings (Rogerero 1988). Thus, information asymmetry due to discrepancies in reported earnings could be reduced by appropriate disclosures. Our analysis goes beyond reported earnings by examining differences in disclosure requirements between Chinese GAAP and IAS. Accordingly:

**Question 3:** Apart from differences in accounting recognition and measurement, are Chinese disclosure requirements significantly different from those promulgated by IAS?

China's economic reform and the privatization of SOEs gained new momentum in 1998 when the 9th National People's Congress called for "deeper" changes in its market systems. The Ministry of Finance quickened its process of improving China's accounting standards by issuing new standards and revising existing regulations. The recently promulgated accounting regulation for share-issuing companies introduced important changes to financial reporting practices of Chinese listed companies. Whether this change will reduce the differences between current Chinese GAAP and IAS is an interesting issue which leads to:

**Question 4:** Will these differences be eliminated/narrowed by the new standards implemented in 1998?

<sup>10</sup> For example, recently the Ministry of Finance promulgated eight new accounting standards, which are similar, in all material aspects, to the corresponding IAS.

<sup>11</sup> However, the valuation relevance of the reported reconciliation for B- and H-share companies has been studied by Haw et al. (1998). Following Easton and Harris (1991), Haw et al. (1998) employ the following model to investigate incremental value relevance:

$$RET^B = \alpha_0 + \alpha_1 EARN^{PRC} + \alpha_2 \Delta EARN^{PRC} + \alpha_3 AER^{IAS} + \alpha_4 \Delta AER^{IAS} + \varepsilon$$

where:

- $RET^B$  = the 12-month rate of return on a B-Share in domestic currency beginning four months after the fiscal year end  $t-1$  (adjusted for dividends and stock rights);
- $EARN^{PRC}$  = the reported fiscal year (after tax) domestic earnings (EPS) based on PRC-GAAP at time  $t$ ;
- $\Delta EARN^{PRC}$  = the change in reported fiscal year domestic EPS under PRC-GAAP at time  $t$  (i.e.,  $EARN_t - EARN_{t-1}$ );
- $AER^{IAS}$  = the aggregate earnings reconciliation which is the difference between domestic EPS and EPS measured under IAS at time  $t$ ;
- $\Delta AER^{IAS}$  = the change in the annual aggregate earnings reconciliation (i.e., the change of  $AER^{IAS}$  between  $t$  and  $t-1$ ); and
- $\varepsilon$  = a random error term.

They find that neither  $\alpha_3$  nor  $\alpha_4$  is significant (table 6) and conclude that earnings prepared under IAS have no incremental value relevance.

Although both Chinese GAAP-based and IAS-based earnings are reported publicly in summarized financial reports for all B-share companies, detailed breakdown of the differences are available only on B-share companies listed on the SSE for a four-year period from 1994 to 1997. Thus, the sample covers only B-share companies on the SSE for this period. The sample size increased from 34 in 1994 to 50 in 1997. The SSE provides statistics about detailed differences between the two sets of accounting earnings. However, the SSE does not have a defined classification scheme for breaking down the differences between the two earnings numbers. The classification scheme used in these four years varied from year to year, ranging from 23 to 41 items. Based on a discussion with the SSE's personnel in charge of financial statements filing, and a careful analysis of the original breakdown, a classification scheme of 12 items was derived which is described in column 1 of table 2. These 12 items are responsible for the differences between the two sets of accounting earnings. Explanations of these items are also presented in table 2 which is discussed later.

### ANALYSES AND DISCUSSION

This section provides analyses and discussion for each of the four research questions raised in the preceding paragraphs.

#### Differences Between Current Chinese Accounting Standards and IAS

Table 3 summarizes the overall differences between reported earnings based on Chinese GAAP vis-à-vis IAS from 1994 to 1997. Panel A presents results based on overall differences and Panel B, results obtained excluding differences due to foreign currency translation.<sup>12</sup> In general, Chinese GAAP led to higher earnings for all four years during this period. Once earnings are restated in terms of IAS, they are reduced on average by a minimum of 17.9 percent in 1994 and a maximum of 30.1 percent in 1995. Table 3 also shows that the magnitude of the difference between the two sets of earnings varies significantly among B-share companies. This is evidenced by both the large standard deviations (about twice the mean differences) and the wide range of the difference (239 million RMB in panel A and 190 million RMB in panel B). Results in both panels A and B indicate that compared with IAS, Chinese accounting standards tend to be significantly less conservative, resulting in earnings that are significantly higher than those based on IAS. Further, an analysis of total accruals shows that (not reported in the tables), on average, 28.5 percent of the total difference between the two reported earnings is attributable to accruals.

The total difference between the two sets of earnings reached its highest point in 1995, then steadily declined in the following years. This suggests that the joint efforts by the CSRC and the CICPA in reforming the Chinese financial reporting system by taking more disciplinary actions against poor financial reporting practices in recent years have perhaps narrowed the gap between two sets of earnings based on Chinese accounting standards and IAS. For example, under the guidance of and pressure from the CSRC, Chinese CPA firms started to issue qualified audit opinions in 1995 for GAAP violations, scope limitations and consistency problems in financial reports. There were 19, 30 and 47 (representing 10.3 percent, 10.5 percent and 13.4 percent) A-share companies on the SSE which received either qualified audit opinions or unqualified opinions with explanatory paragraphs in 1995, 1996 and 1997, respectively.

<sup>12</sup> Panel B is included to adjust for a one-time-only event on January 1, 1994 when the Chinese government devalued the Chinese RMB from U.S.\$1.00 to RMB 5.80 to U.S.\$1.00 to RMB 8.70.



**TABLE 2**  
**Factors that are Responsible for the Difference Between**  
**Chinese GAAP Earnings and IAS Earnings**

Column 1 Description of Factors	Column 2 Current Chinese GAAP	Column 3 IAS	Column 4 Revised Chinese GAAP <sup>a</sup>
1. Foreign currency translation	Same accounting regulation; differences arise from currency rate regulation <sup>b</sup>	Same regulation.	No changes.
2. Inventory/temporary investment valuation	LCM is not required. Provision for stock obsolescence is not permitted.	Valuation and provision based on prudence concept.	LCM is required for B-share and allowed for A-share companies.
3. Allowance for bad debts	Restricted to a proportion of debtors prescribed by the State.	Provision based on prudence concept.	Companies are allowed to determine the amount of provision.
4. Long-term investment: valuation and consolidation	No provision for permanent diminution in value.	Stated at cost less provision for permanent diminution in value.	Same as IAS.
5. Deferred tax and other tax-related items	No regulation.	Deferred taxes are recognized and recorded.	Same as IAS.
6. Fixed assets: valuation, depreciation and revaluation	a. Expenses on self-constructed assets are allowed to be capitalized for a longer period.	a. Capitalization ceases when construction is completed.	a. No changes.
	b. Estimated residual value and useful life determined by the State.	b. Estimated residual value and useful life determined by the management.	b. Same as IAS.
7. Intangible assets amortization	Minimum amortization period is prescribed by the State.	Amortized on an estimated period of benefits.	No changes.
8. Equity vs. cost method	Accounted for, in different circumstances, either at cost or under equity method.	Equity method is required for 20–50 percent ownership.	Same as IAS.
9. Accrued expenses <sup>c</sup>	Similar regulation to IAS but discretionary usage is popular.	Matching and prudence are emphasized.	No changes.
10. Accrued revenues	Same as item 9.	Same as item 9.	Same as item 9.
11. Equity adjustments	Special requirements for appropriation on reserves and welfare funds.	Not applicable.	No changes.
12. Others	Special adjustments found only in China.	Not applicable.	No changes.

*(Continued on next page)*

TABLE 2 (Continued)

- <sup>a</sup> Share-issuing Chinese companies are regulated by a special accounting regulation, known as *Accounting System for Companies Limited by Shares*. The accounting system for share-issuing companies has been revised recently, and the revised version became effective as of January 1, 1998.
- <sup>b</sup> A dual currency exchange rate system was effective until January 1, 1994 when a single market rate was introduced. The difference arising from implementation of the new foreign currency exchange policy was allowed by the State to be amortized over a period of five years. However, the difference was expensed immediately in 1994 for B-share reporting.
- <sup>c</sup> Differences in accrued expenses can be further broken down into the following items: (1) amortization of deferred assets; (2) adjustment on accrued interest; (3) expenses capitalized under the Chinese GAAP; (4) adjustment on estimation of accrued expenses; (5) adjustment on costs of work in process and finished goods; (6) adjustment on wage and salary expenses; (7) adjustment on capitalized lease expenses; (8) capitalized R&D expenses; and (9) others.

Table 4 confirms the findings in table 3. During the period between 1994 and 1997, the number of companies that increased their earnings after the restatement (ranging from 5 to 9, average of 7.25) is consistently smaller than that of those reporting a decrease in the restated earnings (ranging from 24 to 42, average of 33.25): the former is less than a quarter of the latter. The magnitude of the difference also supports this finding: the average increase in the restated earnings for the "increase group" (i.e., IAS earnings are greater than Chinese GAAP earnings) is 732.24 million RMB, comparing with an average decrease for the "decrease group" (i.e., IAS earnings are smaller than Chinese GAAP earnings) of 2570.9 million RMB. Moreover, during these four years, no company, which originally reported a loss, later changed to profit after the restatement. On the other hand, five to seven companies each year reported net earnings under Chinese GAAP but net losses under IAS. Having identified the differences, the next step is to turn to the financial statements to identify the items that have contributed most to these differences.

### Items that Contribute to Differences in Earnings

Columns 2 and 3 in table 2 compare Chinese accounting standards with IAS for 12 factors that are responsible for the differences in reported accounting earnings under these two alternative sets of accounting rules. These factors can be summarized into four categories:

- **Chinese GAAP and IAS require different practices:** factors such as inventory and temporary investment valuation, provision for bad debts, depreciation and revaluation of fixed assets and amortization of intangible assets belong to this category. For example, inventory must be valued at historical costs under Chinese GAAP,<sup>13</sup> but at the lower of cost and market (LOCAM) under IAS. Another example is accounting for long-term investment. Chinese GAAP<sup>14</sup> offers companies a free choice between cost and equity methods if their investments in shares do not exceed 50 percent. In other words, differences in this category can be reduced or eliminated by changing accounting standards.

<sup>13</sup> The Ministry of Finance and State Economic Reform Commission (1995, Chapter 3).

<sup>14</sup> The Ministry of Finance and State Economic Reform Commission (1995, Chapter 4).

TABLE 3  
Differences Between Reported Earnings Based on Chinese GAAP vs. IAS<sup>a</sup>  
(in millions of RMB)

Year	N	Chinese GAAP	IAS	Mean Diff.	S.D.	Min	Q1	Median	Q3	Max
<b>Panel A: Results Obtained Including All Differences</b>										
1994	34	87.821	72.088	-15.733*	30.943	-129.806	-16.762	-4.502 <sup>#</sup>	0	20.779
1995	38	80.758	56.478	-24.280*	47.411	<b>-193.875</b>	-30.901	-8.769 <sup>#</sup>	-0.116	29.052
1996	43	79.350	61.459	-17.800**	27.213	-132.710	-29.702	-9.215 <sup>#</sup>	-0.871	15.987
1997	50	87.387	69.975	-17.412**	28.203	-117.580	-26.504	-10.434 <sup>#</sup>	-2.300	<b>45.391</b>
<b>Panel B: Results Obtained Excluding Differences Due to Foreign Currency Translation</b>										
1994	34	87.821	82.205	-5.616	23.519	-103.711	-4.728	-1.000	2.002	23.728
1995	38	80.758	67.205	-13.553*	38.354	<b>-166.541</b>	-15.010	-6.757 <sup>#</sup>	0.190	<b>41.599</b>
1996	43	79.350	66.069	-13.281**	27.455	-137.200	-17.133	-3.840 <sup>#</sup>	-0.359	24.154
1997	50	87.387	70.722	-16.665***	28.091	-100.273	-25.410	-8.619 <sup>#</sup>	-0.813	40.000

\* Mean differences between two sets of earnings are significant at 0.05 level.

\*\* Mean differences between two sets of earnings are significant at 0.01 level.

\*\*\* Mean differences between two sets of earnings are significant at 0.001 level.

# Median differences between two sets of earnings are significant at 0.01 level in Wilcoxon signed-rank test.

\*\* Median differences between two sets of earnings are significant at 0.001 level in Wilcoxon signed-rank test.

<sup>a</sup> Bold figures indicate the extreme values that are used in calculating the range of average differences during the four-year period.

N= Number of B-share companies listed at the Shanghai Stock Exchange each year.

Chinese GAAP= Reported earnings based on Chinese accounting standards for listed companies.

IAS= Reported earnings based on International Accounting Standards.

TABLE 4  
Average Changes in Reported Profit After Restatement

Year	N	Report Increases in Profit After Restatement		Report Decreases in Profit After Restatement		Number of Firms Changing Sign of Profit After Restatement	
		No. of Firms	Changes in million RMB	No. of firms	Changes in million RMB	From Profit to Loss	From Loss to Profit
1994	34	7	677.27	24	2426.44	0	0
1995	38	9	797.78	29	3429.10	5	0
1996	43	5	884.30	38	2130.62	7	0
1997	50	8	1179.16	42	2297.46	6	0
94-97	165	29	732.24	133	2570.90	18	0

N = Number of B-share companies listed at the SSE each year.

Report increases in profit after restatement: Reported profits based on International Accounting Standards > Reported profits based on Chinese accounting standards.

Report decreases in profit after restatement: Reported profits based on International Accounting Standards < Reported profits based on Chinese accounting standards.

- **The required practices by the Chinese GAAP and IAS may not be different but scope for managerial opportunistic applications exists under the Chinese GAAP.** A typical example would be discretionary use of accruals by capitalizing expenses such as operating leases, or by an unsystematic allocation of costs between finished goods and work in process. Needless to say, this type of difference will not be eliminated by a simple change in accounting standards, since scope for opportunistic applications also exists in IAS.
- **Differences that may be attributed to nonaccounting government regulations.** For example, *Financial Rules for Enterprises* promulgated by the Ministry of Finance in 1993 specifies the minimum residual value and estimated useful life for different types of fixed assets for business enterprises. The same regulations require that certain types of intangibles be amortized over a minimum period of 10 years which is usually longer than the period over which intangibles are expected to provide firms with economic benefits. This practice contradicts the matching and conservatism concepts. Appropriation for welfare, pension and other special reserves also falls into this category. Implementation of financial rules is a unique institutional feature that affects Chinese accounting regulation. The primary objective of financial rules is to clearly define the scope and content of revenue, cost and expense so that the State is able to maintain a desirable level of tax revenue (Yang and Yang 1998). Understandably, the government must carefully consider its revenue needs before it introduces any change to the existing financial rules.
- **Differences are also caused by special events in the process of China's economic reform.** For instance, the state-controlled currency exchange rate (i.e., U.S.\$1=RMB 5.8) was replaced by a market-based rate at U.S.\$1 to about RMB 8.7 on January 1, 1994. Huge foreign currency translation losses or gains are capitalized under the Chinese regulation, but are expensed for B-share reporting as requested by Big 6 firms. Though Chinese accounting standards and IAS on foreign currency

translation and transactions are very similar, a comparison between panels A and B of table 3 shows that 64.3 percent of the aggregate difference between the two reported earnings in 1994 is attributable to this adjustment.

Based on the above discussion, the 12 factors may be reclassified into four categories:

- |             |  |
|-------------|--|
| Category 1: | Differences regarding required accounting practices      |
| Factor 2:   | Inventory/temporary investment valuation                 |
| Factor 3:   | Allowance for bad debts                                  |
| Factor 4:   | Long-term investment valuation                           |
| Factor 5:   | Deferred tax and other tax-related items                 |
| Factor 8:   | Equity vs. cost method                                   |
| Category 2: | Differences arising from opportunistic applications      |
| Factor 9:   | Accrued expenses   |
| Factor 10:  | Accrued revenues   |
| Category 3: | Differences arising from nonaccounting regulations       |
| Factor 6:   | Fixed assets: valuation, depreciation and revaluation    |
| Factor 7:   | Intangible assets amortization                           |
| Factor 11:  | Equity adjustments                                       |
| Category 4: | Differences arising from special events and transactions |
| Factor 1:   | Foreign currency translation                             |
| Factor 12:  | Others   |

It should be noted that in this reclassification some factors fall into more than one category. For example, factor 6 *Fixed assets: valuation, depreciation and revaluation* covers three components: valuation, depreciation and revaluation which are determined by different regulations. The difference in valuation of fixed assets comes from the effects of the time lag between the completion of fixed assets and the issuance of completion certificates (normally the certificates are issued much later than the actual completion of the fixed assets). According to Chinese GAAP, costs are accumulated up to the date on which the certificate is issued, rather than the actual completion date. Revaluation of fixed assets is also allowed, subject to approval by government, in the related accounting standards.<sup>15</sup> Depreciation of fixed assets, however, is ruled by financial regulation. The *Financial Rules for Enterprises* specifies the acceptable depreciation methods, residual value and estimated useful life. Given the fact that differences relating to fixed assets largely remain after the recent revision of accounting standards, factor 6 is classified under nonaccounting regulated differences. It should be noted that alternative classification is possible under different assumptions.

Table 5 reports the breakdown of the total difference between the two sets of accounting earnings, and table 6 further reports the ranked results of the breakdown. The contribution of each factor to the total difference is given in table 5, both in terms of the number of companies that reported difference on the given factor and in terms of the absolute value and percentage of the affected amounts. The left column in table 5 reports the number of companies affected by a given factor each year. Over a four-year period, factor 1 (Foreign currency translation), factor 3 (Allowance for bad debts), factor 6 (Fixed assets: valuation, depreciation and revaluation), factor 9 (Accrued expenses), and factor 4 (Long-term investment: valuation and consolidation) are found to be the most important factors that contributed to the differences between the two sets of

<sup>15</sup> The Ministry of Finance (1998).

TABLE 5  
Contribution of Individual Factors to the Differences Between Chinese GAAP and IAS

Factors	1994			1995			1996			1997		
	No. of Companies Affected	Average Amount (absolute)	% of Reported Chinese GAAP Earnings	No. of Companies Affected	Average Amount (absolute)	% of Reported Chinese GAAP Earnings	No. of Companies Affected	Average Amount (absolute)	% of Reported Chinese GAAP Earnings	No. of Companies Affected	Average Amount (absolute)	% of Reported Chinese GAAP Earnings
1	22	1618.79	0.94	28	1678.61	1.46	24	14684.82	1.44	25	1228.66	1.17
2	11	625.22	3.07	18	555.54	1.93	24	1035.20	1.54	33	802.54	0.71
3	13	464.74	1.14	24	1208.13	1.65	30	427.90	1.25	37	1751.92	0.71
4	8	583.59	3.86	7	868.87	5.24	15	1777.11	1.16	10	1735.22	2.41
5	14	461.97	2.04	13	710.64	2.46	8	792.94	1.48	8	693.33	2.62
6	17	797.69	1.26	18	1134.58	2.51	26	161.40	1.08	26	628.44	0.79
7	6	144.60	2.42	2	151.35	14.98	8	2090.43	1.82	12	195.90	0.93
8	10	742.71	2.50	17	1240.34	2.96	18	86.20	1.89	22	1174.71	1.50
9	14	368.81	1.72	18	700.74	2.75	21	828.78	0.99	21	860.57	1.26
10	9	690.76	3.04	13	787.25	3.14	7	1805.96	2.98	13	529.53	1.75
11	5	1762.92	2.76	16	993.79	2.93	7	738.34	2.13	10	494.23	1.34
12	21	264.59	0.94	27	389.19	1.32	30	117.15	0.82	35	321.24	0.66

**Factors:**

1. Foreign currency translation
2. Inventory/temporary investment valuation
3. Allowance for bad debts
4. Long-term investment valuation
5. Deferred tax and other tax-related items
6. Fixed assets: valuation, depreciation and revaluation
7. Intangible assets amortization
8. Equity vs. cost method
9. Accrued expenses
10. Accrued revenues
11. Equity adjustments
12. Others

No. of companies affected = Number of companies whose reported earnings based on two sets of accounting standards are different on a given item.  
Average difference in million RMB (absolute) = Absolute value of average difference between two sets of earnings on a given item for those companies affected by this item.  
Percentage of difference on Chinese GAAP earnings = Average difference/reported earnings based on Chinese GAAP.



**TABLE 6**  
**Ten Major Contributing Factors to the Differences Between Chinese GAAP and IAS<sup>a</sup>**

Rank	1994		1995		1996		1997	
	In Terms of Number of Companies Affected	In Terms of Average Difference (absolute)	In Terms of Number of Companies Affected	In Terms of Average Difference (absolute)	In Terms of Number of Companies Affected	In Terms of Average Difference (absolute)	In Terms of Number of Companies Affected	In Terms of Average Difference (absolute)
1	1	11	1	1	3, 12	1	3	3
2	12	1	12	8	—	7	12	4
3	6	6	3	3	6	10	2	1
4	5, 9	8	2, 6, 9	6	1, 2	4	6	8
5	—	10	—	11	—	2	1	9
6	3	2	—	4	9	9	8	2
7	2	4	8	10	8	5	9	5
8	8	3	11	5	4	11	10	6
9	10	5	5, 10	9	5, 7	3	7	10
10	4	9	—	2	—	6	4, 11	11

**Factors:**

1. Foreign currency translation
3. Allowance for bad debts
5. Deferred tax and other tax-related items
7. Intangible assets amortization
9. Accrued expenses
11. Equity adjustments
2. Inventory/temporary investment valuation
4. Long-term investment valuation
6. Fixed assets: valuation, depreciation and revaluation
8. Equity vs. cost method
10. Accrued revenues
12. Others

<sup>a</sup> Numbers reported in this table represents items that are responsible for the differences between reported earnings based on Chinese accounting standards vs. that on IAS, Refer to table 2 for descriptions of the items.

accounting earnings. The middle column for each year in table 5 shows those factors that are most important in determining the magnitude of the differences. Factor 1 (Foreign currency translation), factor 2 (Inventory/temporary investment valuation), and factor 4 (Long-term investment: valuation and consolidation) are found to be important for all four years. Factor 3 (Allowance for bad debts), factor 8 (Equity vs. cost method), factor 9 (Accrued expenses), and factor 11 (Equity adjustments) are among the top six most important factors for two to three years during this period. Similarly, table 6 provides additional supporting evidence.

Table 7 reports differences in reported earnings for the ten companies that were affected most by the restatement process. The magnitude of the differences in the reported earnings between the two sets of accounting standards is extremely large, the largest being (company 900906 China Textile in 1995) 19125 percent (i.e., the difference from the restatement is 191 times the original reported profit under the Chinese GAAP). The number of companies that reported a restatement difference (absolute value) larger than the originally reported profit was six, eight and six in 1995, 1996 and 1997, respectively. In other words, for some Chinese companies, their reported earnings would have been wiped out entirely if they had adopted IAS.

Table 7 also shows the first three contributing factors that most affected these ten companies. By analyzing the frequency of these factors, we may infer that factor 3 (Allowance for bad debts, frequency = 25), factor 1 (Foreign currency translation, frequency = 19), factor 2 (Inventory/temporary investment valuation, frequency = 14), factor 6 (Fixed assets: valuation, depreciation and revaluation, frequency = 13), and factor 8 (Equity vs. cost method, frequency = 12) are the most responsible for the differences in the reported earnings for these companies.

### **Chinese Disclosure Requirements**

Promulgation of disclosure requirements for Chinese listed companies is vested with the China Securities Regulatory Commission (CSRC). Disclosures in annual reports is mainly outlined in the CSRC's *Content and Format of Information Disclosed for Publicly Traded Companies (No. 2): The Content and Format of Annual Reports*. This regulation has been revised several times since 1994. The most recent revision was made at the end of 1997. The thrust of these revisions in general have led to more specific rules as well as an increased number of required disclosure items. The current disclosure regulation requirements are largely comparable to IAS, although they are less detailed and clear-cut. Major areas of disclosure covered by IAS (e.g. prior period adjustments, contingent items, segment reporting, post balance sheet date events) are also, more or less, covered by CSRC regulation. However, the less detailed and definite CSRC requirements leave room for alternative interpretations. The lack of a clear and applicable definition of contingent liability, for example, has made the requirement difficult to enforce.

A unique feature of *The Content and Format of Annual Report* worth noting is its attempt to control opportunistic use of accounting policies by stipulating in quantitative terms, to a maximum practicable level, major disclosure requirements in the regulation. Some examples include: companies must explain the underlying reasons when the realized profit is ten percent lower or five percent higher than the forecasted one; operations in a different geographical region must be separately reported when it accounts for ten percent or more of the company's total revenue; asset and liability items that account for five percent or more of total assets, and expense items that account for



TABLE 7  
Ten Companies that are Affected Most by the Restatement

Rank	Co. Code	1994			1995			1996			1997		
		Diff / CN Profit %	Major Contributing Factors	Co. Code	Diff / CN Profit %	Major Contributing Factors	Co. Code	Diff / CN Profit %	Major Contributing Factors	Co. Code	Diff / CN Profit %	Major Contributing Factors	
1	900909	94.49	2, 10, 6	900906	19125.39	1, 2, 9	900902	5802.29	1, 3, 4	900915	2405.19	3, 1, 2	
2	900915	63.06	1, 10, 9	900909	829.87	6, 1, 12	900915	1409.09	9, 3, 1	900924	1192.53	3, 2, 12	
3	900912	58.71	1, 5, 4	900924	741.46	3, 10, 6	900925	1280.24	8, 3, 9	900906	932.42	3, 6, 1	
4	900904	56.76	1, 10, 8	900902	515.95	1, 3, 2	900924	1018.27	3, 6, 9	900926	578.35	3, 2, 12	
5	900907	49.85	6, 3, 8	900926	375.09	9, 4, 12	900901	383.95	6, 1, 8	900916	165.55	3, 2, 12	
6	900906	47.79	1, 6, 9	900915	274.87	1, 10, 8	900907	161.07	3, 6, 4	900904	115.40	1, 3, 8	
7	900902	43.59	1, 4, 12	900904	94.59	1, 8, 11	900931	120.66	3, 4, 8	900910	91.95	4, 1, 3	
8	900924	36.74	3, 2, 10	900907	64.06	11, 6, 3	900935	118.85	2, 3	900922	83.93	2, 3, 4	
9	900917	34.89	1, 5, 10	900922	58.31	2, 3, 11	900913	96.78	2, 8, 6	900935	81.14	3, 2, 6	
10	900934	34.28	8, 6, 1	900927	55.42	8, 10, 3	900916	89.70	3, 12, 2	900925	59.58	3, 8, 9	

**Factors:**

1. Foreign currency translation
2. Inventory/temporary investment valuation
3. Allowance for bad debts
4. Long-term investment valuation
5. Deferred tax and other tax-related items
6. Fixed assets: valuation, depreciation and revaluation
7. Intangible assets amortization
8. Equity vs. cost method
9. Accrued expenses
10. Accrued revenues
11. Equity adjustments
12. Other

ten percent or more of net income must be fully explained when changes in these items between two consecutive periods reach or exceed 30 percent. By specifying these quantitative criteria, the CSRC hopes to minimize the probability of earnings manipulations. Another tool used by the SCRC to control opportunism in financial reporting is to require disclosures of additional ratios that are less likely to be manipulated by management. For example, adjusted net assets per share removes from the numerator items that could be manipulated by management, such as accounts receivable that are three or more years old, unamortized expenses, deferred assets, and unapproved loss in assets.

It should be noted that although a comparable coverage of disclosure requirements has been promulgated by the CSRC, most investors might not benefit from the disclosures because their access to information is restricted to summarized financial reports published in securities newspapers and not the complete annual reports. In most cases, the complete annual report is available only to regulatory bodies, government agencies, banks, financial institutions, and securities brokers.<sup>16</sup> The absence of clear requirements on which items must be included in the summarized financial reports has significantly reduced the effectiveness of financial disclosures in China.

### Effects of New 1998 Standards on Financial Reporting

Recently, the Ministry of Finance promulgated the revised *Accounting System for Limited Companies* on January 1, 1998 in an effort to bring Chinese GAAP closer to internationally accepted accounting practices. The revised accounting standards introduced important changes to existing practices. These include relaxation of previously rigid limits on provisions for bad debts, on inventory and temporary investment valuation. These changes also remove such ambiguous requirements as free management discretion to choose between cost and equity methods in accounting for long-term investments with share holding from 20 percent to 50 percent. In general, the revised regulation significantly narrows the gap between Chinese GAAP and IAS.

Differences caused by the following factors which were identified in column 4 of table 2, will be largely eliminated with the implementation of the new standards:

- Factor 2: Inventory/temporary investment valuation
- Factor 3: Allowance for bad debts
- Factor 4: Long-term investment valuation
- Factor 5: Deferred tax and other tax-related items
- Factor 8: Equity vs. cost method

Table 5 suggests that these five factors account for about 40 percent of the total difference (in terms of dollar amount) of reported earnings between Chinese GAAP and IAS. In addition, the difference in foreign currency translation is expected to largely disappear after 1998 since the originally capitalized loss or gain is likely to be fully

<sup>16</sup> An interview with managers of a large listed company revealed that the company prints 2,000 copies per year of its annual report to satisfy the needs of various agents and institutions, and overseas investors. Occasionally some investors visit the company hoping to obtain a copy, but are only allowed to read the report on the premises of the company. However, if a foreign investor requests a copy, as is the case for B-shares, the company is likely to mail a copy as requested. For companies issuing both A- and B-shares, they may choose to prepare an all-in-one bilingual annual report covering both Chinese GAAP- and IAS-based information, or to print a Chinese version for A-shareholders, and an English version for B-shareholders.

amortized at the end of 1998. Together, there is good reason to expect that over 50 percent of the differences observed in the last four years will be removed. However, it should be noted that the reconciliation differences may not be reduced as much as expected if there are significant differences between Big 6 and local CPA firms in their attitude toward and tolerance for opportunistic use of accruals (e.g., capitalize as a deferred charge vs. expense immediately).

Although this study focuses mainly on B-share companies, it has implications for A-share companies (i.e., domestic shareholders only) as well. Because A-share financial reporting follows the same accounting standards as before-reconciliation B-share reporting, it may be inferred that earnings for A-share companies are similarly overstated vis-à-vis earnings reported under IAS. However, starting from 1998, A-share companies are likely to maintain the magnitude of overstatement, while B-share companies will reduce the reconciliation differences under the new accounting standards. This is because many requirements introduced in the new accounting standards are only voluntary for A-share companies but mandatory for B-share companies.

### CONCLUDING REMARKS

Financial reporting and auditing practices are recent developments in China compared to the U.S. and other western countries. Given that China has the third largest economy in the world, an understanding and insight of how accounting is developing is crucial in facilitating global financial markets and international harmonization of accounting standards. This paper provides an insight of how accounting is developing in China by examining four related research issues: (1) differences between the IAS and current Chinese accounting standards that lead to systematic earnings differences, (2) major contributors to these differences that can be identified in financial reports, (3) disclosure requirement differences and (4) expected effects of recently promulgated Chinese accounting standards on these differences. Empirical results indicate that the application of current Chinese GAAP for listed companies has produced accounting earnings that are consistently higher than those determined under the IAS. On average, the reported earnings determined under the Chinese GAAP are 20–30 percent greater than earnings restated under IAS. Some 15 percent of the B-share companies changed from a reported profit to a reported loss after the restatement. The differences between the two sets of earnings are caused by differences in accounting standards, financial rules, opportunistic applications of Chinese GAAP and unusual market-wide events.

The scope of disclosures for companies listed in Chinese markets are found to be increasingly comparable to those required by IAS. However, the absence of detailed requirements and clear specifications for disclosures has adversely affected the effectiveness of financial disclosures. The revised Chinese GAAP in 1998 is expected to eliminate about half of the differences observed in the last few years. Further reduction in the differences between the two sets of earnings will largely rely on changes outside Chinese GAAP. Reform of financial rules and closer monitoring by the relevant authorities to reduce opportunistic application of GAAP are two sources that could help reduce the differences. Obviously, cooperation between the Ministry of Finance, the CSRC and Chinese Institute of CPAs (CICPA) is crucial in this process. Overall, China has made remarkable progress in bridging the difference between Chinese GAAP and IAS. Although further improvements can be made, it is clear that in the near future, financial reporting practices in China are likely to become more aligned to IAS.

Narrowing the difference between the two sets of accounting rules is likely to bring added financial transparency and greater investor confidence.

Several issues and avenues for future research remain. For example, a detailed comparative analysis between U.S. GAAP and Chinese GAAP and how these differences affect financial reporting is worthy of study. Further, a comparison of earnings prepared under Chinese GAAP and IAS after 1998 is likely to shed some light on how local Chinese CPA firms differ from Big 6 in their tolerance for discretionary use of accruals.

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