

2005

The Harmonization of Chinese Accounting Standards with International Accounting Standards: An Empirical Evaluation

Songlan Peng

Virginia Commonwealth University

Follow this and additional works at: <http://scholarscompass.vcu.edu/etd>

 Part of the [Accounting Commons](#)

© The Author

Downloaded from

<http://scholarscompass.vcu.edu/etd/1189>

This Dissertation is brought to you for free and open access by the Graduate School at VCU Scholars Compass. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

**THE HARMONIZATION OF CHINESE ACCOUNTING STANDARDS WITH
INTERNATIONAL ACCOUNTING STANDARDS:
AN EMPIRICAL EVALUATION**

**A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University**

By:

**Songlan Peng
Bachelor of Economics, Xiamen University, China, 1996
Master of Administration, Renmin University of China, 1999**

**Director: Dr. Rasoul H. Tondkar
Professor, Department of Accounting**

**Virginia Commonwealth University
Richmond, Virginia
December 2005**

© Songlan Peng, 2005

All Rights Reserved

ACKNOWLEDGEMENTS

I am deeply grateful to my dissertation committee chairman, Dr. Rasoul H. Tondkar, for his time, support, and expertise, and for serving as a friend and mentor par excellence. He introduced me to the world of international accounting, an area I am especially interested in.

I would like to thank the members of my dissertation committee, Drs. Edward N. Coffman, Ruth W. Epps, David Harless, and Jayaraman Vijayakumar, for their time and insightful suggestions. I would like to give special thanks to Dr. David Harless, for his expertise on the non-parametric statistics and important input on my research.

I would also like to thank the Business School of the Virginia Commonwealth University, for giving me the opportunity to pursue PhD education in accounting. I would like to thank all professors in the Department of Accounting, who provide me continuous encouragement and support throughout the years. Many thanks to my PhD program colleagues and friends, Joyce Vandalaan Smith, Chris Hodgdon, Arinola Adebayo, Robert Ross, Chad Greenfield, and Helen Roybark, for their generous and selfless help.

Finally, I would like to thank my family members for their patience and support throughout this project. I am deeply grateful to my husband Haihao, whose continuous encouragement and great sense of humor always quickly help me out of difficult moments. I am also deeply grateful to my parents for their infinite and unconditional love and support.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES	vi
ABSTRACT	viii
INTRODUCTION	1
Development of Capital Markets and Standard Setting in China.....	3
Accounting Regulations for Chinese Listed Firms.....	10
Objective and Scope of the Study.....	13
Significance of the Study.....	15
Implications for Regulators.....	15
Contributions to Literature.....	17
Organization of the Study.....	18
LITERATURE REVIEW	19
First Stream: <i>De Jure</i> Harmonization Studies.....	20
Second Stream: Compliance Studies.....	23
Third Stream: Studies on Comparability of Accounting Choices.....	28
Fourth Stream: Studies on Comparability of Net Incomes.....	32
Summary.....	37
METHODOLOGY	38
Hypotheses Development.....	38
Hypotheses 1a and 1b	38
Hypotheses 2a and 2b	39
Hypotheses 3a and 3b	41
Hypotheses 4a and 4b.....	43
Instrument Development and Sample Selection.....	44

Instrument Development.....	44
Sample Selection.....	46
Test (Evaluation) of Hypotheses	49
Evaluation of Hypothesis 1a and Test of Hypothesis 1b	49
Test of Hypotheses 2a and 2b	52
Test of Hypotheses 3a and 3b	54
Test of Hypotheses 4a and 4b	57
PRESENTATION AND ANALYSIS OF FINDINGS.....	63
Section I: Findings on <i>De Jure</i> Harmonization	63
Research Question 1	63
Data Description	63
Evaluation of Hypothesis 1a and Test of 1b.....	66
Further Analysis and Discussion.....	69
Summary of the Findings on the First Research Question.....	74
Section II: Findings on <i>De Facto</i> Harmonization.....	75
Research Question 2.....	75
Data Description.....	75
Tests of Hypotheses 2a and 2b.....	78
Further Analysis and Discussion.....	80
Summary of the Findings on the Second Research Question.....	83
Research Question 3.....	84
Data Description.....	84
Tests of Hypotheses 3a and 3b.....	86
Further Analysis and Discussion.....	88
Summary of the Findings on the Third Research Question.....	99
Research Question 4.....	100

Data Description.....	100
Tests of Hypotheses 4a and 4b.....	103
Further Analysis and Discussion.....	105
Summary of the Findings on the Fourth Research Question.....	115
SUMMARY AND CONCLUSIONS.....	116
Summary.....	116
Limitations.....	123
Suggestions for Future Research.....	124
REFERENCES.....	126
APPENDIX I: DATA COLLECTION SHEET.....	131
APPENDIX II: SAMPLE LISTED FIRMS.....	139
APPENDIX III: COMPARISON OF CHINESE GAAP WITH IAS.....	145
APPENDIX IV: RANK OF CLOSENESS.....	165

LIST OF TABLES AND FIGURES

Table 1	Sixteen CAS Adopted in China and their IAS Equivalentents.....	7
Table 2	Convergence of CAS with IAS.....	8
Table 3	Summary of Hypotheses.....	62
Table 4	Frequency of Rank of Closeness for Each GAAP by year	64
Figure 1	Frequency of Rank of Closeness for Each GAAP by year	65
Table 5(a)	Harmonization of Chinese GAAP With IAS: Status.....	67
Table 5(b)	Harmonization of Chinese GAAP With IAS: Progress.....	68
Figure 2	Harmonization of Chinese GAAP With IAS: Progress	68
Table 6	Descriptive Statistics of the Compliance Indices.....	76
Figure 3	Histograms of the Compliance Indices	77
Table 7	Compliance of Chinese Listed Firms With Chinese GAAP and IAS.....	80
Table 8	Comparison of the Compliance Indices	81
Table 9	Descriptive Statistics of the Consistency Indices	85
Figure 4	Histograms of the Consistency Indices	86
Table 10	Comparability of Accounting Treatments Chosen By Chinese Listed Firms in Chinese GAAP and IAS-Based Annual Reports	87
Table 11	Comparison of the Consistency Indices: 1999 vs. 2002	88
Table 12	Primary Measurement Items for Which Firms' Accounting Choices Are Not Consistent With IAS	90
Table 13	Descriptive Statistics of the Conservatism Indices	102
Figure 5	Histograms of the Conservatism Indices	102
Table 14	Significance of the Net Income Differences between Chinese GAAP and IAS.....	103

Table 15	Reduction of the Net Income Differences between Chinese GAAP and IAS From 1999 to 2002.....	105
Table 16	Causes of the Net Income Differences between Chinese GAAP and IAS: Analysis of Reconciliation Items.....	107
Table 17	Materiality of the Contribution of Each Reconciliation Item to the Overall Net Income Differences between Chinese GAAP and IAS: Partial Index Analysis.....	112
Table 18	Summary of Hypotheses Test Results.....	122

Abstract

THE HARMONIZATION OF CHINESE ACCOUNTING STANDARDS WITH
INTERNATIONAL ACCOUNTING STANDARDS: AN EMPIRICAL EVALUATION

By Songlan Peng, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University

Virginia Commonwealth University, 2005

Major Director: Rasoul H. Tondkar
Professor, Department of Accounting

Using China as the case of a developing country, this study empirically evaluates whether the efforts made by China since the early 1990s to harmonize their domestic standards with IAS have been successful. Four research questions are addressed and eight hypotheses are developed to investigate the current level of harmonization and whether the extent of harmonization improves with the issuance of the most recent Chinese GAAP. Chinese 1992 GAAP, 1998 GAAP, and 2001 GAAP are reviewed and compared with IAS to evaluate *de jure* harmonization of Chinese GAAP with IAS (that is,

harmonization in standards). Firms that issue both A and B-shares in China are used to evaluate *de facto* harmonization of Chinese GAAP with IAS (that is, harmonization of practices). The final sample includes the 1999 and 2002 annual reports of 79 Chinese listed firms that issue both A and B-shares. A checklist instrument containing 77 measurement items was developed from IAS1-40. Different measures are used to evaluate harmonization, including rank of closeness, compliance index, consistency index, and conservatism index.

Overall, the findings of this study indicate that the accounting reform in China has been effective in harmonizing Chinese GAAP with IAS. Nevertheless, noticeable variances between Chinese GAAP and IAS still exist in key financial measures. The study provides strong evidence showing that the harmonization of accounting regulations is highly relevant to the harmonization of accounting practices, as improved compliance of Chinese listed firms with IAS, improved comparability of firms' accounting choices in their annual reports prepared under Chinese GAAP and IAS, and reduced earning gap between Chinese GAAP-based and IAS-based net incomes are detected with the issuance of the most recent Chinese GAAP in 2001.

Chapter 1

INTRODUCTION

It is well established in the accounting literature that accounting reporting and disclosure standards do not develop in a vacuum; rather, they reflect the particular environment in which they are developed [Adhikari and Tondkar, 1992]. Since environmental factors such as social, economic, legal, and cultural, vary in different countries, accounting standards and reporting requirements vary accordingly. Different accounting reporting and disclosure standards around the world result in a phenomenon commonly referred to as “accounting diversity”. Accounting diversity adversely affects the participants in the global capital markets, due to the lack of comparable accounting and disclosure information in different countries.

In response to the problems that are caused by accounting diversity, several international and regional organizations have taken initiatives to reduce the accounting diversity through harmonization of accounting and reporting standards. Harmonization refers to a process that entails a movement away from total diversity of practice toward a state of harmony [Tay and Parker, 1990]. In other words, it is “the process of increasing the comparability of accounting practices by setting bounds to their degree of variation” [Tang, 1994, p. 147]. The premier international organization that has undertaken a major initiative in harmonization of accounting and reporting standards is the International

Accounting Standards Board (IASB), previously known as the International Accounting Standards Committee (IASC).

The IASB was established in 1973 by the nine leading professional accountancy bodies from Australia, Canada, France, Germany, Japan, Mexico, Netherlands, the United Kingdom, and the United States. The objective of the IASB was to encourage increased international harmonization and to assist countries lacking the resources needed to develop their own standards [Fitzgerald, 1981]. By 1999, its membership was composed of accountancy bodies from more than 90 countries [Taylor and Jones, 1999].

The standards issued by the IASB are known as the International Accounting Standards (IAS)¹. The IASB has issued 41 IAS as of January 1, 2003. The efforts made by the IASB have resulted in some desirable results in both developed and developing countries. Based on Deloitte & Touche's recent report, 42 countries have adopted IAS as the primary reporting standards for listed domestic companies. In addition, 28 other countries are planning to use IAS as primary reporting standards for listed domestic companies, starting as early as 2004, but no later than 2007. Moreover, 32 countries have permitted the use of IAS for their listed domestic companies [Deloitte & Touche, 2003a]. Among the countries attempting to harmonize their accounting standards with IAS, over eighty percent are from developing countries and this trend is growing [Chamisa, 2000].

The harmonization of domestic standards with IAS is important to developing countries. In order to develop their economy, developing countries depend heavily on

¹ IAS was recently renamed as the International Financial Reporting Standards (IFRS).

inflows of foreign capital. IAS plays an important role in helping developing countries to obtain funds from international investors. The issue of converging domestic standards of developing countries with IAS has raised new questions for the IASB. Typical questions include: Are the efforts made by developing countries to harmonize local standards with IAS successful? How can the success of harmonization be evaluated? Is the harmonization with IAS possible given the insufficient resources available in developing countries? How can IAS be more useful to developing countries? Such questions have received limited attention in accounting literature.

Development of Capital Markets and Standard Setting in China

As a developing country, China started its capital markets in the beginning of the 1990s. The markets developed rapidly during the 1990s. At the end of December 2003, the total market capitalization was about \$513.0 billion, which is second only to Japan and Hong Kong² in Asia [Security Times, 2004]. The total market capitalization represents 36.42% of Gross Domestic Product (GDP)³. The number of listed firms increased from 14 at the beginning of 1990 to 1,376 at the beginning of 2004⁴.

² Hong Kong is a special administrative region of China. It was formerly a British colony which was leased by China to Britain in 1842 and returned in 1997. The Chinese capital market in this study refers only to capital market in mainland China, not capital market in Hong Kong, as the latter is generally considered as a separate independent market.

³ Chinese 2003 GDP is \$1,414 billion [China Daily, 2004].

⁴ As of February 9, 2004, the number of listed Chinese firms at Shanghai Stock Exchange is 827 and that at Shenzhen Stock Exchange is 549 [Quanjing Statistics, 2004].

The rapid market development, the desire to attract overseas capital, and the desire to improve the quality of financial reporting, provided direct incentives and pressures for China to shift the accounting practices and methods away from a government orientation (government as the end-user of accounting information) to a market orientation.

Initially, China considered adopting the traditional accounting system⁵ as the basis for market-oriented accounting reforms. Subsequently, China decided to abandon most of the traditional accounting system [Tang, 2000] and use IAS as the basis for accounting reforms. China believed that adapting IAS for the domestic accounting system should be a less costly and faster approach to achieve accounting reforms.

The Ministry of Finance (MOF), the official standard setter in China, undertook the task of Chinese accounting reforms. The MOF functions just as the Financial Accounting Standard Board (FASB) in the United States (U.S.), but unlike the FASB, the MOF is a government body and the standards it sets are mandatory.

The harmonization efforts made by the MOF to converge Chinese accounting standards with IAS are actually across all Chinese industries and for all Chinese firms. This study will only focus on harmonization efforts for Chinese listed firms. The Chinese listed firms were selected because these firms have characteristics of Western market-orientated companies, such as absentee ownership and motivations to raise money in capital markets.

⁵ The traditional Chinese accounting system served mainly as a simplified recording and reporting tool for the government's business administration [Lin, 1988].

In 1992, the MOF promulgated the *Experimental Accounting System for Joint Stock Limited Enterprises* (1992 Accounting System). This was the MOF's earliest accounting regulation for listed domestic firms⁶ and is considered a revolutionary change to Chinese accounting, because it was modeled after IAS [Chen et al., 2002].

In July 1993, the MOF implemented an accounting conceptual framework entitled *Accounting Standard for Business Enterprises* (Basic Standard). The Basic Standard stipulates accounting assumptions, accounting elements, and the general requirements for the preparation and presentation of financial standards. The issuance of the Basic Standard represented a milestone for Chinese accounting, because it proscribed a broader scope of general principles of accounting based on international practices. All enterprises regardless of the industry or the form of their ownership were required to comply with the Basic Standard. However, unlike the conceptual frameworks in more developed countries that focus on the interests of investors and creditors, the Basic Standard did not state clearly whether the interests of investors and creditors are preferable to the interests of government and management.

With funding from the World Bank in 1993, the MOF started to develop specific accounting standards aimed at converging financial reporting and accounting practices in China with IAS. The specific standards were formulated in accordance with Basic

⁶ In 1985, the MOF promulgated the *Accounting Regulations for Joint Ventures*. The 1985 regulation provided necessary accounting guidelines for joint-ventures operating in China and for attracting further foreign investment thereafter. This regulation for the first time introduced Western accounting practices to the firms operating in China, representing a radical departure from the traditional accounting [Xiang, 1998]. The regulation was replaced in 1992 by the 1992 Accounting System. Since the Chinese capital market was only established in the early 1990s represented by the establishment of the Shanghai Stock Exchange in 1990 and the Shenzhen Stock Exchange in 1991, the 1992 Accounting System is considered as the first accounting regulation that is applicable to Chinese listed firms.

Standard. Beginning in May 1997, sixteen specific standards called *Chinese Accounting Standards* (CAS) were released as final standards and many others are under active development. Table 1 lists sixteen CAS adopted in China, their IAS equivalents, and the applicability of each CAS. As shown in Table 1, among the sixteen CAS released to date, only four CAS are applicable to every enterprise in China, however, all CAS are applicable to Chinese listed firms. The lack of skilled accountants and enforcement resources prevented the MOF from requiring all enterprises to adopt CAS. Table 2 indicates the status of current convergence of CAS with IAS. As shown in Table 2, as of January 2004, the MOF has adapted sixteen IAS to CAS and plans to adapt the remaining IAS to CAS in the near future. Table 2 also shows the three IAS that are not applicable in China.

TABLE 1
SIXTEEN CAS ADOPTED IN CHINA AND THEIR IAS EQUIVALENTS

<u>CAS</u>	<u>TITLE</u>	<u>EFFECTIVE DATE</u>	<u>APPLICABILITY</u>	<u>EQUIVALENT IAS</u>
1	Disclosure of Related Party Relationships and Transactions	Jan 1, 1997	Listed enterprises	IAS 24
2	Cash Flow Statements (minor revision in January 1, 2001)	Jan 1, 1998	All enterprises	IAS 7
3	Events Occurring After the Balance Sheet Date	Jan 1, 1998	Listed enterprises	IAS 10
4	Debt Restructuring (revised significantly in January 1, 2001)	Jan 1, 1999	All enterprises	N/A
5	Revenue	Jan 1, 1999	Listed enterprises	IAS 18
6	Investments (minor revision in January 1, 2001)	Jan 1, 1999	Joint stock limited enterprises (listed enterprises only prior to Jan 1, 2001)	IAS 27 IAS 28
7	Construction Contracts	Jan 1, 1999	Listed enterprises	IAS 11
8	Changes in Accounting Policies and Estimates and Corrections of Accounting Errors (minor revision in January 1, 2001)	Jan 1, 1999	All enterprises (listed enterprises only prior to Jan 1, 2001)	IAS 8
9	Non-monetary Transactions (revised significantly in January 1, 2001)	Jan 1, 2000	All enterprises	Not Applicable
10	Contingencies	July 1, 2000	All enterprises	IAS 37
11	Intangible Assets	Jan 1, 2001	Joint stock limited enterprises	IAS 38
12	Borrowing Costs	Jan 1, 2001	All enterprises	IAS 23
13	Leases	Jan 1, 2001	All enterprises	IAS 17
14	Interim Financial Reporting	Jan 1, 2002	Listed enterprises	IAS 34
15	Inventories	Jan 1, 2002	Joint stock limited enterprises	IAS 2
16	Fixed Assets	Jan 1, 2002	Joint stock limited enterprises	IAS 16

TABLE 2
CONVERGENCE OF CAS WITH IAS

<u>IAS</u>	<u>TITLE</u>	<u>EFFECTIVE DATE</u>	<u>APPLICATION IN CHINA</u>
IAS1	Presentation of Financial Statements	July 1, 1998	Yes
IAS2	Inventories	Jan 1, 1995	Yes
IAS7	Cash Flow Statements	Jan 1, 1994	Yes
IAS8	Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies	Jan 1, 1995	Yes
IAS10	Events After the Balance Sheet Date	Jan 1, 2000	Yes
IAS11	Construction Contracts	Jan 1, 1995	Yes
IAS12	Income Taxes	Jan 1, 2001	In process
IAS14	Segment Reporting	July 1, 1998	In process
IAS16	Property, Plant and Equipment	July 1, 1999	Yes
IAS17	Leases	Jan 1, 1999	Yes
IAS18	Revenue	Jan 1, 1995	Yes
IAS19	Employee Benefits	Jan 1, 2001	Not Applicable
IAS20	Accounting for Government Grants and Disclosure of Government Assistance	Jan 1, 1984	In process
IAS21	The Effects of Changes in Foreign Exchange Rates	Jan 1, 1995	In process
IAS22	Business Combinations	July 1, 1999	In process
IAS23	Borrowing Costs	Jan 1, 1995	Yes
IAS24	Related Party Disclosures	Jan 1, 1986	Yes
IAS26	Accounting and Reporting by Retirement Benefit Plans	Jan 1, 1990	Not Applicable
IAS27	Consolidated Financial Statements and Accounting for Investments in Subsidiaries	Jan 1, 1990	Yes
IAS28	Accounting for Investments in Associates	Jan 1, 1990	Yes
IAS29	Financial Reporting in Hyperinflationary Economies	Jan 1, 1990	Not Applicable
IAS30	Disclosures in the Financial Statements of Banks and Similar Financial Institutions	Jan 1, 1991	In process
IAS31	Financial Reporting of Interests in Joint Ventures	Jan 1, 1992	In process
IAS32	Financial Instruments: Disclosure and Presentation	Jan 1, 1996	In process
IAS33	Earnings Per Share	Jan 1, 1999	In process
IAS34	Interim Financial Reporting	July 1, 1999	Yes
IAS35	Discontinuing Operations	July 1, 1999	In process
IAS36	Impairment of Assets	July 1, 1999	In process
IAS37	Provisions, Contingent Liabilities and Contingent Assets	July 1, 1999	Yes
IAS38	Intangible Assets	July 1, 1999	Yes
IAS39	Financial Instruments: Recognition and Measurement	Jan 1, 2001	In process
IAS40	Investment Property	Jan 1, 2001	In process
IAS41	Agriculture	Jan 1, 2003	In process

The *Accounting Law of China* was issued in 1995 and revised in 2000. It set out general principles of accounting for all enterprises. It empowered the MOF to administer accounting affairs and to establish accounting standards. It is the highest authority on accounting in China.

On January 1, 1998, the MOF issued the *Accounting System for Joint Stock Limited Enterprises* (1998 Accounting System) that replaced the 1992 Accounting System. This system moves Chinese accounting practice closer to the international standards issued by the IASB.

On January 1, 2001, the MOF issued the *Accounting System for Business Enterprises* (2001 Accounting System), which replaced the 1998 Accounting System. It is based on the experience of the MOF in implementing the 1998 Accounting System and on the existing individual CAS issued. The 2001 Accounting System is a significant advancement for Chinese accounting. While there are a number of accounting matters that remain to be addressed, it is considered much more in harmony with IAS as compared to prior systems.

The Chinese Securities Regulatory Commission (CSRC) also plays a pivotal role in setting accounting regulations for listed firms. The CSRC was established in 1992⁷, and its powers and operations are similar to those of the SEC in the U.S. Beginning in

⁷ Upon its establishment in 1992, the CSRC functioned as the executive branch of the State Council Securities Commission (SCSC), which was directly responsible to the State Council. The SCSC was in charge of policy decisions, while the CSRC supervised daily market operations. In 1998, the CSRC and the SCSC were merged to form one agency under the name of CSRC [Tondkar et al., 2003].

1997, the CSRC issued a series of regulations titled *Form and Content of Information for Disclosure by Companies with Securities Issued to the Public*. These mandatory rules proscribe specific disclosure requirements for listed firms.

To date, Rule Nos. 1-19 have been issued. These rules cover wide areas including disclosure requirements for periodic reporting, initial public offerings, and subsequent equity offerings. Among these rules, Rule No. 2 addresses the CSRC's disclosure requirements for annual reports. In addition to the above rules, the CSRC adopted two financial reporting pronouncements, titled *Reporting and Disclosure Requirements for Companies with Securities issued to the Public* and *Questions and Answers Relating to the Disclosure Requirements for Companies with Securities Issued to the Public*.

Chinese Generally Accepted Accounting Principles (Chinese GAAP) are both the Chinese accounting standards and regulations proscribed by law and issued by the MOF. For the listed companies, in addition to Chinese GAAP, the CSRC regulations are applicable as well.

Accounting Regulations for Chinese Listed Firms

The Chinese capital market is segmented into an A-share market and a B-share market. All listed firms can issue either A-shares or B-shares or both. A-shares are denominated in Chinese currency and can only be owned and traded by Chinese citizens, while B-shares are denominated in U.S. dollars, and can only be owned and traded by foreign investors [Tondkar et al., 2003]. As of 2002, 1,085 Chinese listed firms have issued only A-shares, 24 Chinese listed firms have issued only B-shares, and 87 Chinese

listed firms have issued both A and B-shares [CSRC, 2002]. Stockholders of A and B-shares issued by the same firm have the same voting rights.

The accounting regulations for firms that issue A-shares have evolved in the following three stages. The first stage was from 1993 to 1997. In this stage, all listed domestic A-share firms were required to follow the 1992 Accounting System and the Basic Standard issued in 1993. Furthermore, all accounting regulations promulgated by the CSRC applied to these listed domestic firms. The accounting standards and regulations used in this stage for listed A-share firms, including adopted CAS, are hereafter referred to as 1992 GAAP.

The second stage was from 1998 to 2000. This stage was represented by the adoption of the 1998 Accounting System. All listed domestic A-share firms were required to follow the 1998 Accounting System in addition to the Basic Standard. Furthermore, all accounting regulations promulgated by the CSRC applied to these listed domestic firms. The accounting standards and regulations used in this stage for listed A-share firms, including CAS, are hereafter referred to as 1998 GAAP.

The third stage began in 2001 and was designated by the adoption of the 2001 Accounting System. All listed domestic firms in China, excluding financial institutions⁸, were required to follow the new 2001 Accounting System in addition to the Basic Standard. The 2001 Accounting System includes basic concepts and definitions as well as

⁸ Listed domestic firms in the financial industry are subject to another accounting regulation that was issued by the MOF effective on January 1, 2002, titled *Accounting System for Financial Institutions*.

CAS and CSRC's requirements. The accounting standards and regulations used in this stage for listed A-share firms are hereafter referred to as 2001 GAAP.

The accounting regulations for B-share firms are different from those for A-share firms. Firms issuing B-shares are required to prepare annual reports in accordance with IAS promulgated by the IASB.

Firms that issue both A and B-shares are required to prepare two sets of annual reports. One based on Chinese GAAP and the other based on IAS. Any differences in net income based on Chinese GAAP and IAS must be reconciled. The CSRC does not dictate the direction relating to the flow of the reconciliation, but the common practice is to reconcile from Chinese GAAP-based income to IAS-based income. A summary of the reconciliation along with Chinese GAAP-based annual reports must be reported in local newspapers and posted on prescribed websites. Both sets of annual reports must be released to the public simultaneously. Chinese GAAP-based annual reports must be audited by local accounting firms approved by the CSRC, while IAS-based annual reports must be audited by major international accounting firms such as one of the Big Four⁹. An A-share firm's annual report and its auditor's report must explicitly specify that the firm's financial statements were prepared in accordance with the Basic Standard and the Accounting System that was in effect in that year. A B-share firm's annual report and its auditor's report must explicitly specify that the firm's financial statements are prepared in accordance with IAS.

⁹ The Big Four is a classification of the four major international accounting firms with headquarters in the U.S.

Objective and Scope of the Study

The study is motivated by the following two issues. First, a considerable and increasing number of developing countries have adopted or are in the process of adopting or converging with IAS. However, few studies have focused on evaluating whether these efforts have been successful. Second, China, a developing country, began its capital market and accounting reforms in the early 1990s. It is not known whether its accounting reforms, intended to harmonize with IAS, have been successful. Thus, the primary objective of this study is to empirically evaluate the success of Chinese harmonization efforts with IAS.

The success of harmonization can be evaluated from both *de jure* and *de facto* dimensions. *De jure* harmonization refers to harmonization of accounting standards and regulations while *de facto harmonization* refers to harmonization in firms' actual accounting practices [Tay and Parker, 1990]. *De facto* harmonization has been evaluated in prior literature from three perspectives: (1) compliance with accounting standards, (2) comparison of accounting treatments in firms' annual reports under different sets of accounting standards, and (3) comparison of net incomes produced by the same firm under different sets of accounting standards. This study is interested in evaluating the success of Chinese accounting harmonization with IAS from both *de jure* and *de facto* dimensions by examining the following four sets of research questions (RQs).

RQ1: To what extent has Chinese GAAP been harmonized with IAS? Has the extent of harmonization improved over time?

- RQ2:** What is the extent of Chinese listed firms' compliance with the requirements of Chinese GAAP and IAS?
- RQ3:** What is the extent of comparability¹⁰ in the allowable accounting treatments chosen by Chinese listed firms under Chinese GAAP-based and IAS-based annual reports? Has the comparability improved over time?
- RQ4:** What are the quantitative effects of the differences between Chinese GAAP and IAS on Chinese listed firms' financial statements? Specifically, are net incomes produced by the same firm under Chinese GAAP and IAS significantly different and if so have these differences been reduced over the years?

Even though all of the research questions are directed at evaluating harmonization of Chinese accounting standards and practices with IAS, the focus of each question is different. The first question focuses on evaluating how Chinese accounting standards changed over time to converge with IAS and to what extent Chinese accounting standards have been harmonized with IAS. The second question focuses on evaluating firms' compliance with the accounting standards that are applicable in China since the value of harmonization should be greatly reduced if firms did not comply with designated standards. The third and fourth questions focus on the effects of accounting standard harmonization on firms' selection of accounting treatments and firms' net income. The third question focuses on evaluating whether firms' choices of accounting treatments are comparable under Chinese GAAP-based annual reports and IAS-based annual reports. The fourth question focuses on the quantitative effects of accounting standard differences on net income in firms' financial reports.

¹⁰ Comparability is defined as the measure of the consistent application of the same accounting treatment under both Chinese GAAP-based and IAS-based annual reports of the same firm for a set of accounting measurement items.

Chinese 1992 GAAP, 1998 GAAP, and 2001 GAAP are reviewed and compared with IAS to evaluate *de jure* harmonization of Chinese GAAP with IAS. Firms that issued both A and B-shares in China are used to evaluate *de facto* harmonization of Chinese GAAP with IAS. As mentioned earlier, firms that issued both A and B-shares are required to prepare annual reports based on Chinese GAAP and IAS, respectively. Thus, their accounting practices will provide insight into *de facto* harmonization.

Significance of the Study

The findings of this study should benefit regulators and researchers in that they address some fundamental issues in understanding the harmonization status and progress in China.

Implications for Regulators

First, the IASB should benefit from the findings of this study. According to Eccher and Hearly [2000], standards developed by the IASB “are primarily based on those for countries with highly developed capital markets....It is questionable whether such standards are also optimal for developing and transitional economies that lack the infrastructure for monitoring managers’ financial reporting decisions” [p. 1].

This issue is important because “an important outgrowth of the International Accounting Standards Committee (IASC)’s [IASB’s] international accounting harmonization program is the adoption of its standards by a considerable and increasing number of accounting professional bodies in developing countries. This has taken place

against the backdrop of academic arguments suggesting that the IASC [IASB] standards are irrelevant and/or even harmful to these countries” [Chamisa, 2000, p. 267]. If IAS is to be accepted worldwide, then the IASB needs to take developing countries into consideration in the formulation of IAS. In addition, the IASB needs to accept more input from developing countries in IASB discussions to ensure that their concerns and needs are considered in any international standards that emerge. Thus, empirical studies on harmonization processes in developing countries may assist the IASB in the development of standards. The current study, by using China as a case, should help the IASB to evaluate harmonization efforts in emerging capital markets.

Standard setters in other developing countries, especially those economies in transition with emerging capital markets, should also learn from China’s experiences, because some of the same obstacles may be faced in developing countries. Examples of obstacles include lack of accounting professionals, insufficient resources for regulation and enforcement, and questionable practices of local auditors. Thus, even though the findings in this study are specifically about China, they should also be applicable to other developing countries that desire to improve financial reporting by tailoring IAS for their needs.

Finally, the results of this study should help Chinese standard setters. Many Chinese scholars and practitioners considered converging Chinese accounting standards with IAS a drastic change. Some believed that the Chinese accounting profession was not ready for such change because there were few accountants and auditors who were familiar with IAS [Tang, 2000; Eccher and Healy, 2000]. Some expressed concern with

the applicability of international standards in Chinese-unique institutional arrangements [Xiang, 1998]. The findings of this study should reveal whether Chinese standard setters' efforts to converge Chinese accounting standards with IAS are successful even given the insufficient accounting practitioners and non-optimal institutional arrangements in China. In addition, the findings of this study should also reveal harmonized areas and non-harmonized areas, which will help Chinese standard setters to identify areas in harmonization that warrant additional considerations.

Contributions to Literature

The efforts by emerging capital market countries to harmonize their standards with IAS have received little attention in empirical accounting literature. Saudagaran and Meek [1997] pointed out the fact that,

“The shift towards open market economies in countries that until recently had communist or socialist centrally-planned economic system is having a dramatic effect on their financial reporting. To attract capital from abroad, these countries are being forced to revamp their financial reporting so that foreign investors have meaningful and relevant information. This phenomenon is currently in a state of flux with different countries at different stages of drafting and adopting new standards and practices. Much of the accounting literature [on this phenomenon] is descriptive and reflects the authors' opinions as to what is likely to happen in these countries” [p. 128].

As an exploratory empirical study, the current research will provide evidence on what actually has been attained in regards with harmonization in China rather than what is likely to be achieved in China in the future.

The findings of the study will add to the debate regarding whether the IASB is successful in promoting international accounting harmonization. Early literature showed

IAS had little success in improving comparability of reporting accounting information among developed countries [Doupnik and Taylor, 1985; Emenyonu and Gray, 1992; 1996; Archer et al., 1995]. As a result, some scholars viewed harmonization of accounting standards as an unattainable goal. In contrast to this pessimism, many developing countries have begun converging their accounting standards with IAS in certain ways. More studies are needed to evaluate whether harmonization efforts are successful in developing countries.

Organization of the Study

The remainder of this dissertation is organized as follows: chapter 2 provides a review of relevant literature. Chapter 3 discusses the research design, including the hypotheses development, data collection, and methodology to test the hypotheses. Chapter 4 presents the findings and results. Chapter 5 provides a summary of the study, as well as a discussion of limitations and suggestions for future study.

Chapter 2

LITERATURE REVIEW

This review concentrates on studies that are directly related to the research questions of interest to this study¹¹. For this purpose, prior literature on harmonization is divided into four distinct streams in accordance with the four sets of research questions, and is discussed in the following four sections in this chapter.

The first section reviews studies that focus on the *de jure* harmonization of a country's accounting standards with IAS. This stream of studies is relevant to the first research question on whether Chinese GAAP is harmonized with IAS.

The second section reviews studies that focus on the compliance of firms' accounting practices with accounting standards. This stream of studies is relevant to the second research question, which is about the extent to which Chinese listed firms comply with Chinese GAAP and IAS.

The third section reviews studies that focus on the comparability of firms' accounting choices under different sets of accounting standards. This stream of studies is relevant to the third research question, which is about the extent of comparability between Chinese listed firms' accounting choices under Chinese GAAP-based annual reports and those under IAS-based annual reports.

¹¹ A review of other harmonization studies that are not discussed in the current study can be found in Meek and Saudagaran [1990], Wallace and Gernon [1991], Gernon and Wallace [1995], Prather and Rueschhoff [1996], and Saudagran and Meek [1997].

The last section reviews studies that focus on the comparability of firms' net incomes produced by the same firm under different sets of accounting standards. This stream of studies is relevant to the fourth research question, which is about the extent of the comparability of Chinese GAAP-based and IAS-based net incomes produced by Chinese listed firms in their annual reports.

First Stream: *De Jure* Harmonization Studies

The focus of this stream of research is on harmonization of a country's accounting standards with IAS. As mentioned in chapter 1, *de jure* harmonization is the harmonization of accounting standards and regulations, while *de facto* harmonization is the harmonization of firms' accounting practices. Compared to *de facto* harmonization studies, the *de jure* harmonization studies are scarce. Recently, a concern was addressed in regard to the trend that the area of *de jure* harmonization "has generally been disregarded in the existing literature" [Garrido et al., 2002, p. 1]. Garrido et al. [2002] argued that such trend should "be reversed", and more *de jure* harmonization studies should be undertaken, because such studies "can provide valuable insight for standard-setting processes, especially now that the accounting community is so conscious of the need to advance the harmonization process" [p. 1].

Important contributions in the *de jure* harmonization area have been made by the following studies: Nair and Frank [1981], McKinnon and Janell [1984], Douppnik and Taylor [1985], Douppnik [1987], and Garrido et al. [2002].

Nair and Frank [1981] assessed the success of *de jure* harmonization efforts by the IASB. The data for analyses were drawn from three Price Waterhouse (PW) surveys of accounting standards in different countries conducted in 1973, 1975, and 1979. One hundred and thirty-one financial accounting requirements that had been included in all three surveys were compared with the accounting requirements in IAS 1-10¹² for the 37 countries common to all three PW surveys. The study concluded that during the period of the IASB's existence there had been an increase in harmonization of accounting standards.

McKinnon and Janell [1984] examined the financial accounting requirements of 64 countries covered by the 1979 PW survey. Accounting standards in these countries were compared with IAS 3 and 4, and Exposure Draft (ED) 11 (IAS 21)¹³. This study concluded that the IASB has not succeeded in changing existing standards in the countries examined or setting new standards to improve harmonization.

Douplik and Taylor [1985] attempted to assess the extent to which the accounting standards in sixteen Western European countries were harmonized with a basic core of accounting requirements based on IAS 1-8 and whether the harmonization improved over time from 1979 to 1983. Their study used the PW 1979 survey and a questionnaire designed for this purpose. Non-parametric tests were used to differentiate regions and

¹² IAS 1-10 represents standards that were issued by the IASB prior to January 1, 1979.

¹³ ED11 is the Exposure Draft for IAS 21. It was released in December, 1977 and finalized as IAS 21 in July, 1983 [Deloitte and Touche, 2003b].

groups. This study suggested increased harmonization with IAS but “much diversity continues to exist among the countries of Western Europe” [p. 33].

Doupnik [1987] attempted to answer the question of how much harmonization has occurred since the establishment of the IASB in 1973. The author examined 70 financial reporting requirements in 46 countries in 1983 by using a questionnaire developed by the author. The study compared the survey results with the 1975 PW survey results. The comparison indicated that harmonization with IAS improved over the period 1975-1983.

The four previous studies used surveys. This approach was criticized by Tay and Parker [1990] due to the inherent limitation of surveys in terms of reliability. In addition, the results about harmonization are mixed. Nair and Frank [1981], Doupnik and Taylor [1985], and Doupnik [1987] observed improved harmonization, while McKinnon and Janell [1984] had conflicting results.

Garrido et al. [2002] investigated the evolution of the harmonization process of IAS by applying Euclidean Distance. In their study, Euclidean Distance was used to measure the progress the IASB has made in reducing the flexibility of firms' accounting choices allowed in its standards. The study found that the IASB had made great progress in regard to the level of harmony achieved through the accounting standards it had issued or revised across three stages since 1973¹⁴.

In the case of China, some examples of harmonization of Chinese GAAP with IAS are found in the literature. For example, Tang [1994] presented evidence of

¹⁴ The three stages identified in Garrido et al. [2002] were the “high flexibility” stage (1973-1988), the “Comparability of financial reporting” stage (1989-1995) with milestone of the Comparability Project, and the “IOSCO_IASC Agreement results” stage (1995 onwards).

harmonization of the 1992 Accounting System with IAS. The study pointed out that, even though the concept of the lower of cost and market value (LCM) is not permitted to be used for the measurement and valuation of assets, net realizable value (NRV) is allowed to be disclosed in annual reports. This was considered as a step of harmonization with IAS, because this is the first time that a measure for present value was allowed to be disclosed in the Chinese accounting system. Prior to the 1992 Accounting System, Chinese accounting standards had been strictly adhering to historical cost. Chen et al. [1999] provided evidence of harmonization of the 1998 Accounting System with IAS by pointing out that LCM is required under the 1998 Accounting System to account for inventory. This was considered as a further harmonization of Chinese accounting standards with IAS, because IAS required LCM in reporting ending inventory. However, these examples of harmonization are descriptive. No efforts had been made to measure the extent of *de jure* harmonization and the progress of improvement. This study attempts to measure the extent of *de jure* harmonization of each of the three Chinese GAAPs (i.e., 1992, 1998, and 2001 GAAP) with IAS and empirically evaluate whether the comparability of Chinese accounting standards with IAS have significantly improved over the past decade.

Second Stream: Compliance Studies

The second stream of research focuses on the compliance of firms' accounting practices with accounting standards. This stream of research was motivated by the concern that harmonized accounting standards may not lead to harmonized accounting

practices. In other words, similar accounting standards may not be comparable if firms do not comply with these standards. As a result, some studies began to review whether firms comply with designated accounting standards and whether the extent of firms' compliance with similar standards is similar. Typical studies in this stream include Street et al. [1999], Street and Bryant [2000], Chamisa [2000], Street and Gray [1999], Frost and Pownall [1994], Glaum and Street [2003], Street and Gray [2001], and Xiao [1999].

Street et al. [1999] investigated the extent of compliance with IAS revised during the 1989 Comparability Project by examining the 1996 annual reports of 49 major firms from twelve countries. The focus of compliance was on both measurement and disclosure issues. This study concluded that overall, the degree of compliance by companies claiming to comply with IAS is mixed and somewhat selective. Among 49 firms investigated, only four were from developing countries (one from Hong Kong, China, one from Malaysia, and two from South Africa), while 45 were from developed countries.

Street and Bryant [2000] examined the 1998 annual reports of companies claiming to comply with IAS. The sample included 41 companies that had U.S. listings or filings and 41 companies that did not have U.S. listings or filings. A disclosure checklist was developed for IAS 1 through 38. One of the major conclusions of the study was that the extent of compliance with IAS is greater for companies with U.S. listings or filings.

These two studies focused on whether listed firms who claimed to comply with IAS actually complied with certain IAS. Both studies provided evidence of non-compliance with IAS.

Chamisa [2,000] investigated listed Zimbabwe firms' annual reports to observe whether firms voluntarily complied with IAS. Four published annual reports (one each for 1975, 1980, 1985, and 1990) were collected for 40 listed Zimbabwe firms. These annual reports were examined for compliance with the 46 disclosure and measurement requirements of IAS 1 to 22. The study concluded that listed Zimbabwe firms appeared to voluntarily and significantly comply with certain provisions that are required by IAS but not required by the Zimbabwe Companies Act. This finding indicated that IAS had significant impact on the accounting practices of listed Zimbabwe firms. However, the study's conclusion was based on the author's judgment and was not supported by statistical tests. For more than half of the requirements evaluated in the study, the compliance rate was below 50% and the author did not explain why firms did not voluntarily comply with these standards and whether the non-compliance was significant.

Street and Gray (1999) evaluated selected listed U.S. firms' annual reports to observe whether these firms' accounting practices are in compliance with IAS. The 1996 annual reports of 38 U.S. companies listed in the 1995 Business Week Global 1,000 were examined. The study indicated that, in practice, the sample companies were essentially in compliance with IAS in many respects, notably IAS 2, 16, 18, 19, and 23. Yet, there were a number of significant exceptions driven primarily by differences between IAS and U.S. GAAP. Furthermore, where compliance was observed, it was due to consistency between IASB and U.S. GAAP rather than voluntary compliance. Street and Gray (1999) concluded that the existence of differences in practice is not insurmountable even though there are still some significant issues to be resolved.

Both of the above two studies focused on whether a country's accounting practices complied with IAS requirements. Both studies found a certain level of compliance with IAS. The following two studies focused on whether the extent of firms' compliance with like standards is similar.

Frost and Pownall [1994] tabulated the frequency of various accounting requirement items during 1989 by 107 domestic and foreign firms with securities listed in the U.S., the U.K., or both. They reported substantial noncompliance in both jurisdictions (but less in the U.S.) with the annual and interim reporting rules. Frost and Pownall [1994] also found substantial non-compliance with the rules in both countries requiring cross-jurisdictional conformity of disclosure in all markets, but they found less noncompliance in the U.S. than in the U.K. These results suggested that similar rules in the U.S. and the U.K. will not necessarily produce the same level of compliance. If the rules were not strictly enforced and firms' measurement and disclosure incentives differed between the two environments, then the level of compliance may differ.

Glaum and Street [2003] examined compliance with both IAS and U.S. GAAP for companies listed on Germany's New Market. Firms listed on this market are required to comply with either IAS or U.S. GAAP. A total of 100 sample firms that apply IAS and 100 that apply U.S. GAAP were examined. Based on an analysis of these sample firms' year 2000 annual reports, the study found that compliance levels of these firms range from 100% to 41.6%, with an average of 83.7%. The average compliance level was significantly lower for companies that apply IAS as compared to companies that apply U.S. GAAP.

In summary, the above two studies indicated that the degree of compliance with similar standards might be different. Overall, compliance with U.S. GAAP was higher than compliance with other standards such as U.K. GAAP or IAS.

There are very few compliance studies that are relevant to China. The only study that was somewhat related to the compliance of Chinese firms with IAS is by Street and Gray [2001]. This research examined the 1998/1999 annual reports of a worldwide sample of companies that refer to the use of IAS. The purpose of the study was to explore the extent of non-compliance and most importantly to provide information about the factors associated with non-compliance. The sample included 279 companies worldwide, including 63 from China. The major findings revealed different levels of compliance across countries and the factors that are associated with the level of compliance. The compliance tended to be significantly greater for companies that were domiciled in China and Switzerland while lower for companies domiciled in France, Germany, and other Western European countries.

The current study differs from Street and Gray [2001] in the selection of the sample firms and the accounting standards of interest. The sample used by Street and Gray [2001] did not differentiate the number of domestic-listed Chinese firms and the number of overseas-listed Chinese firms. The current study focuses only on domestic listed firms¹⁵. The focus of accounting standards in Street and Gray [2001] was primarily

¹⁵ Even though Street and Gray [2001] did not differentiate the number of domestic-listed firms and the number of overseas listed firms, it provided a name list of sample firms. Based on the name list provided, only about 20 of the firms were domestic listed firms that issue both A and B-shares of the 63 Chinese listed firms examined.

on the disclosure requirements of IAS, while in this study the focus is on measurement requirements of both Chinese GAAP and IAS.

Another compliance study that is relevant to China [Xiao, 1999] focused on investigating the corporate disclosure practices of Chinese listed companies and the level of compliance by the sample companies. By reviewing the 1995 annual reports of thirteen companies (including eight A-shares, one B-share, three A and B-shares, and one unknown), Xiao [1999] concluded that the level of compliance appeared to be high and attributed the observed compliance to mandatory disclosure requirements by the Chinese government.

The current study differs from Xiao [1999] in several ways. First, Xiao [1999] only used annual reports of thirteen companies due to the difficulty in obtaining data at the time. Among the thirteen firms investigated, only three firms issued both A and B-shares. The current study uses a much larger sample of 79 firms that issue both A and B-shares. Second, Xiao [1999] focused on disclosure requirements while the current study focuses on measurement requirements. Finally, the current study updates Xiao [1999] by considering the two new accounting systems that were issued in 1998 and 2001.

Third Stream: Studies on Comparability of Accounting Choices

This stream of research focuses on the comparability of firms' accounting choices under different sets of accounting standards. Studies in this area include Van der Tas [1988], Emenyonu and Gray [1992; 1996], Archer et al. [1995], Herrmann and Thomas [1997].

Van der Tas [1988] is the first known study that attempted to quantify the levels of harmonization for each measurement item in firms' annual reports by developing a concentration index. The concentration index measures the extent to which accounting treatments used by companies in different countries are comparable with the higher index value indicating the more comparable the accounting treatment. The study then applied the concentration index in an example to evaluate whether accounting choices made by firms in the U.S. and the Netherlands to account for the investment tax credit are comparable and whether the comparability of accounting choices between the two countries increased from 1978 to 1984. Using data from *Accounting Trends and Techniques* published by American Institute of Certified Public Accountants (AICPA) and a survey conducted for the Netherlands' companies during 1978 and 1984, the study concluded that the comparability of accounting choices between the two countries was low and the comparability decreased from 1978 to 1984. This study began a series of studies using a concentration index to measure accounting harmonization.

Applying the same method in the Van der Tas [1988] study, Emenyonu and Gray [1992] attempted to assess the extent to which accounting measurement practices in France, Germany, and the U.K. were harmonized in the context of the major effort that had been made to promote the European Community (EC)¹⁶ accounting harmonization. The study selected six key measurement practices (inventory valuation, depreciation, goodwill, R&D, valuation basis for fixed assets, and the treatment of extraordinary items).

¹⁶ EC is an economic federation of European countries that attempts to unify and integrate member countries by establishing common economic policies. EC was superseded in 1993 by the European Union.

The significance of differences and the extent of harmony as of the end of 1989 among the three countries were evaluated. The statistical tests showed that there were significant differences between these three countries with respect to all of the six practices evaluated. Furthermore, the concentration index used to measure the overall level of international accounting harmony across the three countries found a wide and relatively low range of values, indicating low harmonization among these countries.

Archer et al. [1995] analyzed the accounting treatments of goodwill and deferred taxation by European companies from eight countries. The study expanded the concentration index introduced by Van der Tas [1988] by taking the problem of non-disclosure into consideration. A comprehensive “disclosure-adjusted” concentration index was proposed and the concentration index was further decomposed into within-country and between-country components. The author concluded that the overall level of harmony in deferred taxes was still low even though it increased from 1986/87 to 1990/91; the overall level of harmony with goodwill treatments was also low and there was no significant increase from 1986/87 to 1990/91.

Emenyonu and Gray [1996] reviewed the annual reports of 293 large listed companies across five countries (namely, France, Germany, Japan, the U.K., and the U.S.) with headquarters in France. The purpose of their study was to evaluate the extent to which accounting measurement requirements have become more harmonized internationally since the establishment of the IASB. Key accounting measurement issues as of 1991/92 were examined and compared to the position as of 1971/72. The findings indicated that the impact of efforts to reduce international accounting diversity over

1971-1992 were quite modest. Among twenty-six practices examined, fourteen indicated increases in harmonization and twelve revealed decreases in harmonization. Even so, the study implied that the IASB's 1989 Comparability Project and subsequent changes to IAS should reduce the level of international accounting diversity identified in prior research.

Hermann and Thomas [1997] examined the level of harmonization in accounting measurement practices among eight member countries in the European Union. Adapting the Van der Tas [1988] concentration index to measure harmonization, they found that accounting for foreign currency translation of assets and liabilities, treatment of translation differences, and inventory valuation were harmonized while accounting for fixed asset valuation, depreciation, goodwill, research and development costs, inventory costing, and foreign currency translation of revenues and expenses were not harmonized.

In summary, these studies examined the extent of harmonization by comparing companies' accounting practices in different countries to find out whether similar accounting treatments have been adopted. There were some common characteristics shared in these studies. First, these studies used a concentration index to measure harmonization. Second, the findings of these studies indicated areas of low harmonization. Finally, these studies focused on progress toward a global or regional harmonization among countries.

There are several limitations with this stream of research. First, only the harmony of measurement requirements can be assessed using concentration indices. The harmony of disclosure requirements cannot be evaluated under this method, since concentration

indices measure the comparability of accounting treatments rather than the comparability of accounting disclosures. Second, the concentration index measures the comparability of accounting treatments in financial statements only on an item-by-item basis. Studies utilizing this index cannot provide a measure of overall comparability (Archer et al. 1995). Finally, a concentration index can only be used to evaluate the harmonization of accounting choices across countries. The harmonization of a particular country's accounting standards with IAS cannot be evaluated by applying the concentration index.

In the case of China, there have been no studies that addressed the harmonization of Chinese listed firms' accounting choices under Chinese GAAP-based and IAS-based annual reports. The current study is the first known study to address this issue.

Fourth Stream: Studies on Comparability of Net Incomes

This stream focuses on the comparability of net incomes produced by the same firm under two sets of accounting standards. Most studies in this stream have focused on the comparability of local GAAP-based net income and U.S. GAAP-based net income by reviewing the reconciliation schedule of Form 20-F for foreign firms listed on US stock exchanges. Major studies in this stream include Gray [1980], Weetman and Gray [1991], Cooke [1993], Norton [1995], Rueschhoff and Strupeck [1998], and Street et al. [2000].

Gray [1980] analyzed the quantitative impact of standard differences on net income in three European countries by using a conservatism index. This is the earliest study that developed the conservatism index. A conservatism index is an index to “express the relationship between disclosed and adjusted profits” and it “provides a

neutral indicator of measurement behavior of companies located in different countries” [Gray, 1980, p. 67]. Using a database provided by a research organization in Paris, the study examined the annual reports of 72 large companies from France, Germany, and the U.K. over the period 1972-1975. Gray [1980] concluded that the quantitative impact of international differences in accounting practices on profits is statistically significant with particular reference to comparisons between the U.K. and France as well as comparisons between the U.K. and Germany.

Weetman and Gray [1991] extended Gray [1980] to explore the extent to which there were material quantitative differences in profits reported in accordance with U.S. GAAP compared with profits reported in the U.K., Sweden, and the Netherlands, under their domestic GAAP. The Form 20-F reports with accounting period ending between July 1, 1988 and June 30, 1999 filed by 41 listed firms from the U.K., eight listed firms from Sweden, and eight listed firms from the Netherlands with the SEC in the U.S. were used as the basis for the analysis. The authors found that the measurements under the U.K. and the Netherlands GAAP were significantly less conservative (i.e., conservatism index is significantly greater than one) than those under U.S. GAAP, while the measurements under the Swedish GAAP tended to be more conservative (i.e., conservatism index is significantly lower than one) than those under U.S. GAAP, particularly in the area of accounting reserves.

Applying the same method used by Gray [1980] and Weetman and Gray [1991], Cooke [1993] investigated nineteen Japanese listed firms on the U.S. Stock Exchanges operating in the financial sector that were required to file Form 20-F with the SEC. They

analyzed the differences between profits reported under the local GAAP and those reported under U.S. GAAP for these firms. This study provided some evidence that the profits of financial sector companies reported in accordance with Japanese GAAP were considerably more conservative than if they should have been reported under U.S. GAAP.

Norton [1995] made a quantitative comparative analysis of differences between Australian financial reporting practices and U.S. GAAP. The data consisted of Form 20-F filings for thirteen Australian companies for the period 1985-1993. Even though prior research found evidence that U.S. GAAP was more conservative than Australian financial reporting practices, the results of Norton [1995] did not support these findings in the context of the reporting of net income. However, for the reporting of shareholders' equity, Norton [1995] found that U.S. GAAP was more conservative than Australian financial reporting practices. Specifically, the author found that the most frequent and material differences in net income related to asset measurement, equity consolidation, and accounting for intangible assets.

Rueschhoff and Strupeck [1998] analyzed reconciliation differences between local GAAP and U.S. GAAP for 92 foreign firms from 20 developing countries listed on the NYSE and AMEX during the period from 1985 to 1994. Consistent with prior studies, annual reports and Form 20-F filings were used. The findings highlighted the fact that differences in accounting principles caused extreme variations in reported net income, stockholders' equity, and equity returns for some firms in developing countries. This study suggested that the SEC should continue its current level of financial reporting

requirements for foreign issuers. Specifically, it indicated that such requirements should be particularly applicable for foreign issuers from developing countries.

Street et al. [2000] studied the change in the Form 20-F reconciliation amounts following the IASB's 1989 Comparability Project. The study examined the U.S. GAAP reconciliations by non-U.S. companies complying with IAS. The final sample had 33 companies from 17 different countries, including seven firms from China. The results indicated that the impact of accounting differences between IAS and U.S. GAAP narrowed in 1997 as compared to 1995 and 1996 and suggested that the SEC should consider accepting IAS without reconciliation. Alternatively, the SEC could endorse the use of certain IAS with additional disclosures by foreign listed companies.

In summary, these studies use the conservatism index developed by Gray [1980] to measure the differences in financial reporting numbers produced under two sets of accounting standards. These studies have made noteworthy contributions to the literature in the area of the quantitative impact of accounting diversity upon reported information, mainly upon corporate earnings.

Studies regarding China in this area include Chen et al. [1999; 2002]. Chen et al. [1999] examined the 1994-1997 reported net income of listed firms in China that issue both A and B-shares. The purpose of their examination was to identify areas of significant differences between IAS and the Chinese 1992 Accounting System. The number of firms examined each year ranged from 34 in 1994 to 50 in 1997. The study found that, on average, the reported earnings determined under Chinese GAAP were 20%-30% higher than earnings reported under IAS. After restatement from Chinese

GAAP to IAS, 15% of the B-share companies changed from a reported profit under Chinese GAAP to a reported loss under IAS.

Chen et al. [2002] examined the 1997-1999 reported income of 75 listed firms on Chinese stock exchanges that issue both A and B-shares to observe whether the overall earnings gap between IAS and Chinese GAAP was reduced in 1998 and 1999 following the release of the 1998 Accounting System. No significant reduction in the earnings gap was observed in either 1998 or 1999. They also found that the quality of the auditor was associated with the magnitude of the earnings gap in 1999. The authors conclude that harmonizing accounting standards did not reduce the reported earnings differences between Chinese GAAP and IAS.

The current study is unique and more extensive than Chen et al. [1999, 2002] in terms of scope, method, and data. First, the current study focuses on both the overall level of differences in net income as well as, the components of the differences in net income. Second, in terms of method, the current study uses both the overall and partial conservatism indices developed by Gray [1980] to measure the earnings differences. The use of both the overall and partial conservatism indices will provide more detailed information about the differences between Chinese GAAP and IAS. In addition, the current study evaluates the harmonization of Chinese GAAP with IAS from three different perspectives. Finally, the current study examines earnings reconciliations in 1999 and 2002. As the 2001 Accounting System is considered more in harmony with IAS than the 1998 Accounting System, the earnings gap is expected to be reduced for 2002

annual reports as compared to 1999 annual reports. In addition, the current study includes firms listed on either the Shanghai or Shenzhen Exchanges in China.

Summary

There is an observed trend of developing countries adopting IAS [Deloitte and Touche, 2003a]. However, among the empirical studies on comparative international accounting practices, few have evaluated the efforts of developing countries to harmonize with IAS. By examining the harmonization efforts in China, a developing country, the current research provides insight into the harmonization issue.

In addition, a majority of prior studies evaluated harmonization of accounting standards (i.e. *de jure* harmonization) using surveys or descriptive comparisons. This study attempts to quantify the extent of harmonization of accounting standards and empirically test whether harmonization of accounting standards improved over time.

In evaluating harmonization of firms' accounting practices (i.e. *de facto* harmonization), prior studies provided three approaches: compliance with accounting standards, comparability of accounting choices, and comparability of net incomes produced by the same firm under different sets of accounting standards. These approaches were used independently. None of the previous studies attempted to integrate these three approaches. As these three approaches evaluate different aspects of accounting harmonization, using one approach alone to assess harmonization does not provide a complete picture of accounting harmonization. The current study makes the first attempt to integrate these three harmonization evaluation approaches into one study.

Chapter 3

METHODOLOGY

The methodology for this study is discussed in three sections in this chapter. The first section presents hypotheses development. The second section discusses the instrument development and sample selection. The last section presents the methods utilized for testing the hypotheses.

Hypotheses Development

As discussed in Chapter 1, this study focuses on four sets of research questions. These research questions are presented below followed by the related hypotheses.

Hypotheses 1a and 1b

The first research question asks to what extent Chinese GAAP has been harmonized with IAS and whether the extent of harmonization improved over time. This question addresses *de jure* harmonization (i.e., harmonization of accounting standards) between Chinese GAAP and IAS. *De jure* harmonization is considered as the basis for *de facto* harmonization (i.e., harmonization of accounting practices) [Rahman et al. 1996]. It is believed that *de jure* harmonization provides a foundation for *de facto* harmonization because “the former provides a means of accomplishing the latter” [Wolk

and Heaston, 1992, p. 96]. As Garrido et al. [2002] stated, *de facto* harmonization “would increase as the result of a higher level of formal [*de jure*] harmonization” [p. 4].

It is generally believed that harmonization of Chinese accounting standards with IAS has greatly improved over the past decade [Chen et al., 1999; 2002] and the current Chinese GAAP has been harmonized with IAS in major aspects [Chen et al., 2002]. Thus, the following two hypotheses are developed for the first research question.

H1a: Chinese GAAP has been substantially harmonized with IAS.

H1b: The comparability of Chinese GAAP with IAS has improved over the past decade.

Hypotheses 2a and 2b

The second research question asks to what extent Chinese listed firms comply with Chinese GAAP and IAS. Prior studies found evidence of non-compliance with national accounting standards in various jurisdictions such as the U.K. and the U.S. [Frost and Pownall, 1994; Glaum and Street, 2003]. Prior studies also provided evidence of non-compliance with IAS and asserted that the degree of compliance by companies claiming to comply with IAS is very limited [Street et al., 1999; Street and Bryant, 2000]. These assertions were made with the caveat that IAS was not mandatory for many of the countries and firms examined.

In the case of China, compliance with both Chinese GAAP and IAS is mandatory for firms that issue both A and B-shares. Thus, it is reasonable to expect that these firms are in compliance with Chinese GAAP and IAS. However, “even where compliance with

standards is legally required, companies may not comply if it is perceived that the consequences of non-compliance are not serious” [Tay and Parker, 1990, p. 75].

In China, the government has had difficulty in enforcing compliance with accounting standards. Political factors and a lack of available resources can explain most of the government’s difficulties with the enforcement [Tondkar et al., 2003]. As Tang [2000] points out “compliance with a set of accounting standards depends not only on the acceptance of the constituency, but also on the competency of the audit profession that makes judgments on how they have been applied...[In China,] the independence of the CPA firms is greatly compromised” [p. 98]. There are also concerns with the competence of the preparers of the financial statements that may hinder effective compliance. For example, preparers may be reluctant to adopt new accounting standards because “most accountants working in the industries received education that is not compatible with new approaches. It is more so with the management” [Tang, 2000, p. 98].

In conclusion, compliance with accounting standards in China remains an open question. For Chinese listed firms that issue both A and B-shares, if they are not in compliance with Chinese GAAP and IAS, then the value of *de jure* harmonization will be greatly reduced. The following two hypotheses are developed based on this concern.

H2a: Chinese listed firms that issue both A and B-shares are significantly in compliance with Chinese GAAP.

H2b: Chinese listed firms that issue both A and B-shares are significantly in compliance with IAS.

Hypotheses 3a and 3b

The third research question addresses the extent of comparability between Chinese listed firms' choices of accounting treatments under Chinese GAAP-based and IAS-based annual reports and whether the comparability has improved over time. As stated previously (Chapter 1, Note 10), comparability is the measure of the consistent application of the same accounting treatment under both Chinese GAAP-based and IAS-based annual reports of the same firm for a set of accounting measurement items.

Generally speaking, if accounting standards are harmonized and complied with, then one can conclude that accounting practices are also comparable. However, this assumes that firms are not provided flexibility in the selection of accounting treatments under applicable accounting standards. If flexibility is allowed then accounting treatments may not be comparable. For example, a firm that issues both A and B-shares may be allowed under both Chinese GAAP and IAS to choose between historical cost and LCM to account for inventory. Assuming this firm selects different methods for its Chinese GAAP-based and IAS-based annual reports, then while the firm is in compliance with both Chinese GAAP and IAS, its accounting practices should not be comparable. Under this situation, compliance with accounting standards cannot guarantee comparable accounting practices. As Wolk and Heaston [1992] point out, "increased harmonization hopefully should lead to a higher degree of comparability among financial reports on an international basis but this is not necessarily the case. The underlying reason for this possible disparity between harmonization and comparability is that national financial

accounting standards, while growing more similar, could allow unwarranted choice among accounting methods in similar situations” [p. 96].

Thus, using compliance as the sole criteria to evaluate harmonization alone may be misleading. To address this issue, firms’ financial reports prepared under two sets of accounting standards should be reviewed to observe whether firms’ actual choices for accounting treatments are consistent. This gives rise to the first hypothesis developed for the third research question.

H3a: Chinese listed firms that issue both A and B-shares use consistent accounting treatments in Chinese GAAP-based and IAS-based annual reports.

As mentioned in Chapter 1, three Chinese GAAPs were issued over the past decade, namely, the 1992, 1998, and 2001 GAAP. It is expected that the comparability of accounting treatments between Chinese GAAP-based annual reports and IAS-based annual reports of Chinese listed firms be improved with the issuance of the new Chinese GAAP, as the new Chinese GAAP is expected to be more harmonized with IAS than the previous Chinese GAAP. This gives rise to the second hypothesis developed for the third research question.

H3b: The comparability¹⁷ of accounting treatments between Chinese GAAP-based and IAS-based annual reports has improved with the issuance of the new Chinese GAAP.

¹⁷ As discussed earlier, comparability measures the consistent applications of the same accounting treatment under both Chinese GAAP-based and IAS-based annual reports of the same firm for a set of measurement items.

Hypotheses 4a and 4b

The fourth research question addresses the quantitative effects of the differences between Chinese GAAP and IAS on Chinese listed firms' financial statements. This provides an additional method of evaluating the success of Chinese harmonization efforts.

As mentioned earlier, the CSRC requires firms that issue both A and B-shares to prepare annual reports based on Chinese GAAP and IAS and provide a reconciliation schedule of net income between the two sets of accounting standards. The availability of these reconciliation schedules provides for the relatively straight-forward examination of the nature and magnitude of any difference between Chinese GAAP and IAS. The magnitude of reconciled net income (i.e., the difference between Chinese GAAP-based net income and IAS-based net income) is a measure of the degree of non-comparability. This leads to hypothesis H4a.

H4a: Chinese GAAP-based and IAS-based net incomes produced by the same firm are not significantly different for Chinese listed firms that issue both A and B-shares.

Theoretically, a reduced earnings gap indicates improved harmonization in practice [Chen et al., 1999; 2002]. It is expected that the earnings gap should be reduced with the issuance of the new Chinese GAAP, as the new Chinese GAAP is expected to be more harmonized with IAS than the previous Chinese GAAP. This leads to hypothesis H4b.

H4b: For Chinese listed firms that issue both A and B-shares, the difference¹⁸ between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the new Chinese GAAP.

Instrument Development and Sample Selection

Instrument Development

A checklist instrument was developed for the purpose of evaluating the first research question and collecting data for the second and third research questions¹⁹. This checklist instrument focuses on the major measurement items for annual reports and incorporates all IAS issued by the IASB by January 1, 2002 (IAS 1-40)²⁰.

Measurement items are defined as accounting practices that have the capacity to affect an account balance. All other practices are considered to be disclosure items [Doupnik, 1987]. Examples of measurement items include methods of revenue recognition, asset valuation, and estimation. Examples of disclosure items include the financial information that should be displayed in financial statements, footnotes, and schedules. Van der Tas [1988] argued that the harmonization of both accounting practices and accounting standards can focus either on measurement issues or on disclosure issues.

¹⁸ The differences between net incomes produced by the same firm under two sets of accounting standards are also called earnings gap or earnings reconciliations in the related literature. The differences between Chinese GAAP-based and IAS-based net incomes are provided in the reconciliation schedule in the notes of annual reports prepared by Chinese listed firms that issue A- and B-shares.

¹⁹ Data for the fourth research question can be directly obtained from Chinese listed firms' annual reports.

²⁰ Only one new IAS (IAS41: Agriculture) was issued after January 1, 2002 and this standard is not of interest to the current study, since no Chinese listed firm that issue both A and B-shares is in the agriculture industry. January 1, 2002 is used as the cut-off point for IAS because annual reports of 1999 and 2002 will be reviewed to observe whether they are harmonized with IAS.

Harmonization studies examining measurement issues explore the similarity or lack thereof in accounting practices.

The objective of this study is the examination of the comparability of accounting standards and practices with a focus on measurement items. As pointed out by Tay and Parker [1990], measurement harmonization studies are ultimately concerned with the “similarity or otherwise of accounting practices and regulations” [p. 71]. It is not the intention of this study to analyze disclosure quality. Disclosure harmonization studies are ultimately concerned with “the quality of information contained in company accounts” [Tay and Parker, 1990, p. 71].

The development of the checklist instrument is based upon a thorough review of the texts of IAS. Three criteria were used to screen IAS items. First, the items had to be relevant to the measurement of assets, liabilities, equity, and profits and be required to be disclosed in the footnotes of listed firms’ annual reports under both IAS and Chinese GAAP. Second, information relating to firms’ choices about a particular accounting treatment must be commonly available from the accounting policies section of most companies’ annual reports, or can be deduced from the notes to their financial statements [Emenyonu and Gray, 1992]. Third, these items must be applicable to Chinese listed firms. Items that were not applicable to Chinese listed firms are excluded from the checklist instrument. For example, measurement requirements for pension accounting and derivatives are excluded because either they are not applicable to Chinese listed firms or they are not common practices in China. After the development of the checklist instrument, it was compared to other instruments and/or tables that have been used in

prior literature to ensure that IAS standards included in the checklist instrument were correctly addressed²¹. The final checklist instrument contains 77 items and is presented in Appendix I.

Sample Selection

The objective of the sample selection process is to identify firms that will allow for the evaluation of Chinese listed firms' *de facto* harmonization with IAS. To achieve this objective, accounting practices of Chinese listed firms that issue A-shares should be evaluated and compared with IAS. Optimally, a random sample from the entire population of firms that issue A-shares should be used since it provides a better representation of the population. However, a random sample is not an optimal sample for evaluating the success of Chinese GAAP harmonization with IAS, since a random sample limits the ways in which the success of harmonization could be analyzed.

An alternative sample is the Chinese listed firms that have issued both A and B-shares. These firms provide an excellent example to study Chinese GAAP harmonization with IAS. The essence of harmonization is that similar accounting transactions and events should be accounted for in similar manners. China provides a unique research environment to evaluate the success of *de facto* harmonization due to its unique requirement that Chinese listed firms that issue both A and B-shares prepare two sets of annual reports based on Chinese GAAP and IAS, respectively. Thus, whether the same

²¹ The following studies are referred to in developing this instrument: Graham and Wang [1995], Chamisa [2000], Street and Gray (2001), Tang [1994], Nair and Frank [1981], Doupanik [1987], Garrido et al. [2002], and Chen et al. [1999].

transactions are in fact accounted for in the same way under Chinese GAAP and IAS indicates the harmonization between the two sets of standards. Due to the above advantages, firms that have issued A and B-shares are used as sample firms of this study.

Nevertheless, as discussed in Chapter 1, firms that issue A-shares are subject to the same accounting regulations. For example, they are required to follow Chinese GAAP (rather than IAS) and they should be audited by national accounting firms (rather than international accounting firms) designated by the CSRC. As a result, the A-shares issued by the sample firms are subject to the same accounting regulations as the shares issued by A-share only firms. From this perspective, the sample firms are representative of the population of A-share only firms.

Optimally, in order to evaluate the progress of harmonization of Chinese GAAP with IAS, annual reports that were subject to the 1992, 1998, and 2001 Chinese GAAP should be used. However, complete annual reports of listed firms were not available to the public until 1999. Before 1999, the only publicly available information was in the form of a summary of the annual reports published in the CSRC designated newspapers.²² This summary included a summary of the three major financial statements (the Balance Sheet, the Income Statement, and the Statement of Cash Flows), and some important events, but did not include the notes to the statements. In 1999, this situation changed.

²²Alternatively, annual reports of listed firms might be requested directly from listed firms. However, even though this is a common practice in western countries, it is not an accepted practice in China. As Xiao [1999] pointed out, “there is no culture of co-operation between companies and researchers” and “the law does not require listed companies to distribute financial reports directly even to shareholders” [p. 350].

The CSRC required all listed firms to post their complete annual reports onto designated websites so that all investors and researchers have access to these reports.

The 1999 and 2002 annual reports of all listed firms that issued both A and B-shares in China were collected. These two years were chosen because the annual reports of 1999 were subject to 1998 GAAP while the annual reports of 2002 were subject to 2001 GAAP. As mentioned earlier, 2001 GAAP is considered an improvement over 1998 GAAP in terms of harmonization with IAS. The 1999 and 2002 annual reports were selected in order to provide one year for firms to adjust for 1998 and 2001 GAAP.

All annual reports were downloaded from the website designated by the CSRC, www.cninfo.com.cn. The initial sample contained 87 firms that issue both A and B-shares as of December 31, 2002. Eight firms were deleted from the initial sample because either these firms' A-shares or B-shares were issued after 1999. The final sample consists of 79 firms that have both 1999 and 2002 annual reports available.

Even though all sample firms were required to provide complete annual reports in both Chinese GAAP and IAS formats, some sample firms either failed to provide IAS-based annual reports or the annual reports provided by these firms were in a summary format without footnotes. Among the 79 selected sample firms, four firms failed to provide 1999 IAS-based annual reports; three firms that provided 1999 IAS-based annual reports did not provide footnotes; and twelve firms failed to provide 2002 IAS-based annual reports. As a result, these firms (seven in 1999 and 12 in 2002) were excluded from sample firms in testing H2b, H3a, and H3b. For the remaining hypotheses (H2a, H4a, and H4b), all 79 sample firms were used. The sample selection process, the number

of usable sample firms for each research question, and a list of final sample firms are given in Appendix II.

Test (Evaluation) of Hypotheses

Evaluation of Hypothesis 1a and Test of Hypothesis 1b

The two hypotheses developed earlier for the first research question are repeated as follows:

H1a: Chinese GAAP has been substantially harmonized with IAS.

H1b: The comparability of Chinese GAAP with IAS has improved over the past decade.

The following steps are utilized to evaluate these two hypotheses. First, the checklist instrument developed earlier is used to identify the requirements of Chinese GAAP and for each of the 77 items in the checklist instrument, the matching treatment in Chinese 1992, 1998, and 2001 GAAP is identified and compared to IAS.

Second, a rank value will be assigned for each item in the instrument for each stage of Chinese GAAP. The rank value (called “rank of closeness”) measures the closeness of each item at each stage to the matching IAS item in terms of the degrees of harmonization. A rank value of three is assigned if an item under Chinese GAAP is in full harmonization with IAS. For example, assume one of the 77 items in the instrument is about the reporting of ending inventory. If both IAS and Chinese GAAP (i.e., 1992, 1998,

and 2001 GAAP) require the use of LCM to report ending inventory, then a rank of three is assigned to each Chinese GAAP.

A rank value of two will be assigned if an item under Chinese GAAP is harmonized with IAS in all major aspects except one or two minor exceptions. For example, if both IAS and Chinese GAAP allow the use of specific identification, FIFO, weighted average, moving average, or LIFO to determine cost of goods sold (CGS), but IAS also requires that the specific identification method be used for dissimilar items while all other methods be used for similar items. Under such situation, a rank value of two will be assigned to this item under Chinese GAAP. Another example of a situation where a rank value of two will be assigned is when IAS requires the use of the spot rate or the average rate for the period while Chinese GAAP requires the use of the spot rate or the rate prevailing at the beginning of the month to initially recognize a foreign currency transaction.

A rank value of one will be assigned if an item under Chinese GAAP is harmonized with IAS to a certain extent with major differences between Chinese GAAP and IAS. For example, if an item under Chinese GAAP requires the use of either the cost or LCM method to account for inventory, then this item is considered to some extent harmonized with IAS, since it allows the use of LCM (which is consistent with IAS requirement) but does not forbid the use of the cost method. Finally, for items that are not in harmonization with IAS, not permitted or not addressed under Chinese GAAP, a value of zero will be assigned for this item.

Once all ranks are assigned²³ to each item for each of the three Chinese GAAPs, the first set of hypotheses is evaluated. Since no formal statistical test is available to test one-sample ordinal values, H1a is not statistically tested. Rather, a descriptive evaluation is given to determine whether the current Chinese GAAP has been substantially harmonized with IAS. As 2001 GAAP is the most recent Chinese GAAP, it is used for evaluating H1a. The frequency of each rank under 2001 GAAP is counted. Items that received a rank of closeness of 2 or 3 are considered as substantially harmonized with IAS while items that received a rank of closeness of 1 or 0 are considered not harmonized with IAS. If a majority of the ranks under 2001 GAAP is either two or three, then it is reasonable to conclude that current Chinese GAAP has been substantially harmonized with IAS.

H1b will be supported if the assigned ranks for 1992, 1998, and 2001 GAAP are significantly different. The chi-square test for symmetry, a non-parametric test, is used to test H1b. Non-parametric statistics are useful in testing for evidence of harmony when data are ordinal in nature (Tay and Parker [1990]). Since ranks are ordinal values, non-parametric tests are appropriate for the analysis of H1b.

The Chi-square test for symmetry is applied in this study to evaluate whether the observed frequency is the same for Chinese listed companies in 1999 and 2002. If there is no improvement in comparability of Chinese GAAP with IAS, then the Chi-square value will be insignificant. If there is improvement then the Chi-square value is

²³ As the assignment of rank depends on the researcher's personal judgment, it is subjective. Prior literature suggests the use of two or more persons to reduce the subjectivity. Since only one person is available in this study, subjectivity should be considered one limitation of this study.

significant. Thus H1b is supported when the Chi-square value is significant. An advantage of this technique is that it can determine if there is significant improvement in terms of harmonization of Chinese accounting standards with IAS, whether the improvement arises from the improvement between the 1992 GAAP and 1998 GAAP, or between the 1998 GAAP and 2001 GAAP, or both.²⁴

Test of Hypotheses 2a and 2b

The hypotheses developed earlier for the second research question are repeated as follows:

H2a: Chinese listed firms that issue both A and B-shares are significantly in compliance with Chinese GAAP.

H2b: Chinese listed firms that issue both A and B-shares are significantly in compliance with IAS.

The same instrument used for the first research question to compare Chinese GAAP with IAS is used to collect data for H2a and H2b. Three steps are utilized to test these two hypotheses. First, the compliance with Chinese GAAP is evaluated by comparing the Chinese GAAP-based annual reports with Chinese GAAP. Specifically, the 1999 Chinese GAAP-based annual reports are compared with 1998 GAAP while the 2002 Chinese GAAP-based annual reports are compared with 2001 GAAP²⁵. The

²⁴ A detailed description on the application of the Chi-square test for symmetry can be found in Sachs [1984, p. 488-489].

²⁵ As mentioned in the sample selection section, the 1999 and 2002 annual reports were selected to provide one year for firms to adjust for 1998 and 2001 GAAP.

compliance of 1992 GAAP-based annual reports with 1992 GAAP are not examined due to the non-availability of data as discussed earlier.

Second, the compliance with IAS will be measured by comparing 1999 IAS-based annual reports in the sample with IASs that were in effect in 1999 (IAS 1-38)²⁶ as well as comparing 2002 IAS-based annual reports in the sample with the IAS that were in effect in 2000 (IAS 1-40). A notation (*) will be used in the instrument to indicate standards that were adopted in 2002 but not in 1999 (that is, IAS 39 and IAS 40).

A compliance index is a widely used measure to evaluate a firm's compliance with accounting standards. It is the percentage of specific regulations applicable to each firm with which a listed firm complied. It ranges from zero to one. A value of one indicates full compliance while a value that diverges from one indicates non-compliance. The higher the divergence, the lower the degree of compliance. The compliance index is calculated for each firm. If a firm reported an item in accordance with the respective standard, then the item will be scored one. Non-compliance should receive a score of zero. If the item is not relevant to that company, the item is not included. A firm's compliance index is calculated by averaging compliance scores as follows,

²⁶ Among IAS 1-38, three IASs' most recent effective date are after 1999 (see Table 2). These three standards are IAS 10, Events after the Balance Sheet Date, IAS 12, Income Taxes, and IAS 19, Employee Benefits. IAS 19 is excluded from the data collection as the measurement requirements under IAS 19 were not common practices in China. IAS 10 and IAS 12 are still included in data collection, because only limited revisions were made between the old versions effective on January 1, 1998 and the new versions effective on January 1, 2000 (IAS 10) and January 1, 2001 (IAS 12). The items listed in the instrument that are relevant to IAS 10 and IAS 12 reflect the same requirements under the two versions and thus should be complied with by both 1999 and 2002 annual reports.

$$\text{A firm's compliance index} = \frac{\text{The sum of compliance scores}}{\text{The number of applicable items}} \quad (3.1)$$

By applying formula (3.1), companies will not be penalized for disclosures that are not applicable to them.

Once all compliance index values are calculated for each firm and for each standard, a non-parametric test known as the Kolmogoroff-Smirnoff goodness-of-fit test²⁷ is used to test H2a and H2b. The Kolmogoroff-Smirnoff test is useful to detect the divergence of an observed value from an expected value for a single group. H2a is supported if the mean compliance index value for 2001 (1998) GAAP is not significantly different from the expected value of one. H2b is supported if the mean compliance index value for 2001/2002 (1999) IAS is not significantly different from one.

Test of Hypotheses 3a and 3b

The two hypotheses developed earlier for the third research question are repeated as follows:

H3a: Chinese listed firms that issue both A and B-shares use consistent accounting treatments in Chinese GAAP-based and IAS-based annual reports.

²⁷ A detailed description of this test can be found in Sachs [1984, p. 330].

H3b: The comparability of accounting treatments between Chinese GAAP-based and IAS-based annual reports has improved with the issuance of the new Chinese GAAP.

The design to test the third set of hypotheses is very similar to that used to test the second set of hypotheses. The difference is that a consistency index is used instead of a compliance index. A consistency index measures the extent to which a firm's accounting choices are comparable in its annual reports prepared under different sets of accounting standards. It ranges from zero to one. An index value of one indicates comparability of accounting choices. An index value that is less than one indicates non-comparability of accounting choices with a lower index value indicating the lower the comparability in firms' accounting choices.

The consistency index developed for this current study has not been used in prior studies. It is different from the concentration index developed by Van der Tas [1988]. A concentration index measures the extent to which the accounting choices by firms from different countries under different regulations of accounting standards are comparable. The concentration index is useful to evaluate the level of harmonization in accounting choices for different firms across different countries, while the consistency index is useful to evaluate the level of harmonization in accounting choices for one firm that is required to prepare multiple sets of annual reports.

The first step to test the third set of hypotheses is to compare sample firms' 2002 (1999) Chinese GAAP-based annual reports with the 2002 (1999) IAS-based annual reports. The comparability of firms' accounting choices between 1992 GAAP-based and

IAS-based annual reports are not examined due to the non-availability of data as discussed earlier.

The same instrument used for the first and second research questions is again used to collect data for H3a and H3b. The focus in the data collection is on whether a firm made the same accounting choice in its Chinese GAAP-based and IAS-based annual reports. If the answer is yes, then a score of 1 is assigned. If the answer is no, then a score of zero is assigned. If the item was not relevant to that firm, then the item is not included.

Next, the assigned values (called consistency scores hereafter) for each applicable item are averaged over the total items that are applicable to the firm to calculate the consistency index, as shown in the following formula,

$$\text{A firm's consistency index} = \frac{\text{The sum of consistency scores}}{\text{The number of applicable items}} \quad (3.2)$$

The application of this formula (3.2) prevents sample firms from being penalized for accounting treatments that are not applicable to them.

Once all consistency index values are calculated for each firm and for each standard, the Kolmogoroff-Smirnoff goodness-of-fit test that is used to test H2a and 2b is conducted for H3a and the paired t-test is used to test H3b. H3a is supported if the mean consistency index value for all 2002 (1999) annual reports is not significantly different

from one. H3b is supported if the consistency index values for 2002 annual reports are significantly different from those for 1999 annual reports.

Test of Hypotheses 4a and 4b

The two hypotheses developed for the fourth research question are repeated as follows:

- H4a:** Chinese GAAP-based and IAS-based net incomes produced by the same firm are not significantly different for Chinese listed firms that issue both A and B-shares.
- H4b:** For Chinese listed firms that issue both A and B-shares, the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the new Chinese GAAP.

The fourth research question is evaluated by applying the conservatism index. The conservatism index was first introduced by Gray [1980] and extended by Weetman and Gray [1991]. It quantifies the measurement impact of accounting differences. It is different from the consistency index used in the third research question in the sense that the consistency index identifies the incidences of accounting treatment differences but does not quantify their impact on the financial statement numbers. In prior studies, the conservatism index was often used to compare profit measurement practices across countries. In this study, the conservatism index is used to compare net income differences between Chinese GAAP-based and IAS-based annual reports of the same firm.

As mentioned in Chapter 2, the conservatism index reveals the comparability between two accounting standards by comparing the financial numbers produced in the

financial statements, such as net incomes and owner's equity. The conservatism index ranges from zero to one. A value of one indicates full comparability of net incomes (or other financial numbers). Values less than one indicate non-comparability of net incomes (or other financial numbers) with the higher the divergence from one indicating the lower the comparability. As Chinese listed firms are only required to provide a reconciliation schedule of net incomes, the conservatism index values are calculated only for net incomes. Index values for other financial numbers are not calculated in this study.

The conservatism index has two forms: the overall conservatism index and the partial conservatism index. The overall conservatism index measures the difference in net incomes produced by the same firm under two sets of standards. The formula to calculate the overall conservatism index based on Gray [1980] is,

$$\text{Overall Index} = 1 - \frac{(\text{IAS Net Income} - \text{Chinese GAAP Net Income})}{|\text{IAS Net Income}|} \quad (3.3)$$

After obtaining each firm's overall conservatism index values, tests for H4a and H4b are conducted by using sample firms' 1999 and 2002 annual reports.²⁸ H4a is

²⁸ As mentioned earlier, the complete annual reports before 1999 are not available to public, and thus only the 1998 and 2001 GAAP are used to evaluate the *de facto* harmonization. The 1999 and 2002 annual reports are used in order to give firms one year to adjust for 1998 and 2001 GAAP, respectively. The 1999 Chinese GAAP-based annual reports should comply with 1998 GAAP. The 2002 Chinese GAAP-based annual reports should comply with 2001 GAAP.

supported if the mean conservatism index value for sample firms' 2002 (1999) annual reports is not significantly different from one. H4b is supported if the conservatism index values for sample firms' 2002 annual reports are significantly different from those for sample firms' 1999 annual reports. A t-test is used to test H4a and a paired t-test is used to test H4b. Under a paired t-test, a firm's 1999 conservatism index is first matched with the same firm's 2002 conservatism index before a t-value is calculated. H4a is supported if the t-value is not significant. H4b is supported if t-value is significant.

The partial conservatism index measures the contribution of each reconciling item to the total difference of net incomes produced by the same firm under two sets of accounting standards. It reflects the relative effect of the various individual reconciliation items (partial adjustments). The formula to calculate the partial conservatism index based on Weetman and Gray [1991] is:

$$\text{Partial Index} = 1 - \frac{\text{Partial Adjustment}}{|\text{IAS Net Income}|} \quad (3.4)$$

The relation between the overall index and the partial index can be mathematically derived from the above definitions. The relation is shown in the following manner,

$$\text{Overall index} = \text{Sum of partial index} - (n-1) \quad (3.5)$$

n = the number of adjusted items.

Following is an example to show the calculation of the overall index and the partial index. The data for the Chinese GAAP-based net income and IAS-based net income as well as, the reconciliation items for this example are provided in the following table.

	<u>Firm 1</u>	<u>Firm 2</u>	...	<u>Firm 82</u>
Chinese GAAP-based net income (RMB)	\$10,000	\$8,500	...	\$6,000
Adjustment 1 (PP&E)	2,000	1,200	...	500
Adjustment 2 (Inventory)	1,000	300	...	0
Adjustment 3 (Goodwill)	-500	0	...	0
Other	0	0	...	0
IAS-based net income (RMB)	\$12,500	\$10,000	...	\$6,500

The overall and partial conservatism index values for firm 1 are calculated as follows, by applying the formula (3.3) and (3.4).

$$\text{Overall index} = 1 - (12,500 - 10,000) / 12,500 = 0.8$$

$$\text{Partial index 1} = 1 - 2,000 / 12,500 = 0.84$$

$$\text{Partial index 2} = 1 - 1,000 / 12,500 = 0.92$$

$$\text{Partial index 3} = 1 - (-500) / 12,500 = 1.04$$

The relationship between overall and partial conservatism index values can be demonstrated as follows based on formula (3.5),

$$\text{Overall index} = 0.84 + 0.92 + 1.04 - (3-1) = 0.8$$

Both overall and partial conservatism index values for remaining firms are calculated in the same way as for firm 1, as shown in the following table.

	<u>Firm1</u>	<u>Firm 2</u>	...	<u>Firm 82</u>
Overall Index	0.80	0.85	...	0.80
Partial index I (PP&E)	0.84	0.88	...	0.80
Partial index II (Inventory)	0.92	0.97	...	n/a
Partial index III (Goodwill)	1.04	n/a	...	n/a

A t-test is used to test whether each of the partial conservatism indices is significantly different from one. Such tests provide information about which adjustment item(s) contributed to the disharmonization of net incomes, if any. For example, using the information presented above, if t-tests for the partial index I (i.e. adjustment for PP&E) are significant while t-tests for all remaining partial indices (i.e. adjustment for inventory and goodwill) are insignificant, then the following conclusion is reached: the disharmonization of net incomes is mainly caused by the different accounting treatments for PP&E between Chinese GAAP and IAS, since the t-statistics for the partial index I are significant while the t-statistics for the remaining partial indices are not.

Table 3 provides a summary of all hypotheses discussed in Chapter 3, as well as the measurement methods and the test methods.

TABLE 3
SUMMARY OF HYPOTHESES

	<u>Hypotheses</u>	<u>Measurement Methods</u>	<u>Test Methods</u>
H1a	Chinese GAAP has been substantially harmonized with IAS.	Rank of closeness	No formal statistical test. Descriptive information is provided.
H1b	The comparability of Chinese GAAP with IAS has improved over the past decade.	Rank of closeness	Chi-square test for symmetry
H2a	Chinese listed firms that issue both A and B- shares are significantly in compliance with Chinese GAAP.	Compliance index	Kolmogoroff-Smirnoff goodness-of-fit test
H2b	Chinese listed firms that issue both A and B-shares are significantly in compliance with IAS.	Compliance index	Kolmogoroff-Smirnoff goodness-of-fit test
H3a	Chinese listed firms that issue both A and B-shares use consistent treatments in Chinese GAAP-based and IAS-based annual reports.	Consistency index	Kolmogoroff-Smirnoff goodness-of-fit test
H3b	The comparability of accounting treatments between Chinese GAAP-based and IAS-based annual reports has improved with the issuance of the new Chinese GAAP.	Consistency index	Paired t-test
H4a	Chinese GAAP-based and IAS-based net incomes produced by the same firm are not significantly different for Chinese listed firms that issue both A and B-shares.	Conservatism index	t-test
H4b	For Chinese listed firms that issue both A and B-shares, the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the new Chinese GAAP.	Conservatism index	Paired t-test

Chapter 4

PRESENTATION AND ANALYSIS OF FINDINGS

The findings of the study are presented and analyzed in this chapter. The chapter is divided into two sections. Section I presents the results of the first research question which is relevant to *de jure* harmonization. Section II presents the results of the remainder of the research questions which are relevant to *de facto* harmonization. In both sections descriptive statistics are provided first for each research question, followed by a presentation and analysis of findings.

Section I: Findings on *De Jure* Harmonization

The first research question addresses *de jure* harmonization. For this research question, data are described first, followed by tests of hypotheses.

Research Question 1

Data Description

Issues on *de jure* harmonization of Chinese GAAP with IAS are reflected in the first research question. The first research question asks to what extent Chinese GAAP has been harmonized with IAS and whether the extent of harmonization improved over time. As described in Chapter 3, a checklist instrument was developed for the purpose of evaluating the first research question. For each of the 77 IAS measurement items in the checklist instrument, the matching treatment in 1992, 1998, and 2001 Chinese GAAP was

identified which then was compared to IAS. Appendix III presents the matching treatment of each Chinese GAAP with IAS for each measurement item.

In order to measure the extent of harmonization of Chinese GAAP with IAS, ranks of closeness were assigned to each measurement item for each of the three Chinese GAAPs. A detailed discussion of the rank of closeness and its assignment procedure was provided in Chapter 3. Appendix IV presents the results of the rank assignment. Table 4 presents the number (percentage) of measurement items for each rank of closeness for each GAAP by year. Figure 1 presents histograms for each rank of closeness for each GAAP by year.

TABLE 4
FREQUENCY OF RANK OF CLOSENESS FOR EACH GAAP BY YEAR

Rank of Closeness	1992 GAAP	1998 GAAP	2001 GAAP
Number (%) of items that are fully harmonized with IAS (RANK=3)	6 (8%)	24 (31%)	38 (49%)
Number (%) of items that are harmonized with IAS in major aspects (RANK=2)	8 (10%)	12 (16%)	15 (20%)
Number (%) of items that are harmonized with IAS to a certain extent with substantial differences exist between Chinese GAAP and IAS (RANK=1)	9 (12%)	18 (23%)	16 (21%)
Number (%) of items that are not harmonized with IAS at all (RANK=0)	54 (70%)	23 (30%)	8 (10%)
Total Measurement Items	77 (100%)	77 (100%)	77 (100%)
Percentages in the brackets were calculated by dividing the number of items in each cell over the total number of items (77) examined.			

As shown in Table 4 and Figure 1, among the total 77 measurement items, the number of items that are fully harmonized with IAS improved from 8% in 1992 GAAP to 31% in 1998 GAAP and further to 49% in 2001 GAAP. The number of items that are harmonized with IAS in major aspects except for one or two minor areas improved from 10% in 1992 GAAP to 16% in 1998 GAAP and further to 20% in 2001 GAAP. The items that are to some extent harmonized with IAS increased from 12% in 1992 GAAP to 23% in 1998 GAAP and decreased to 21% in 2001 GAAP. The items that are not harmonized with IAS at all decreased from 70% in 1992 GAAP to 30% in 1998 GAAP and further decreased to 10% in 2001 GAAP.

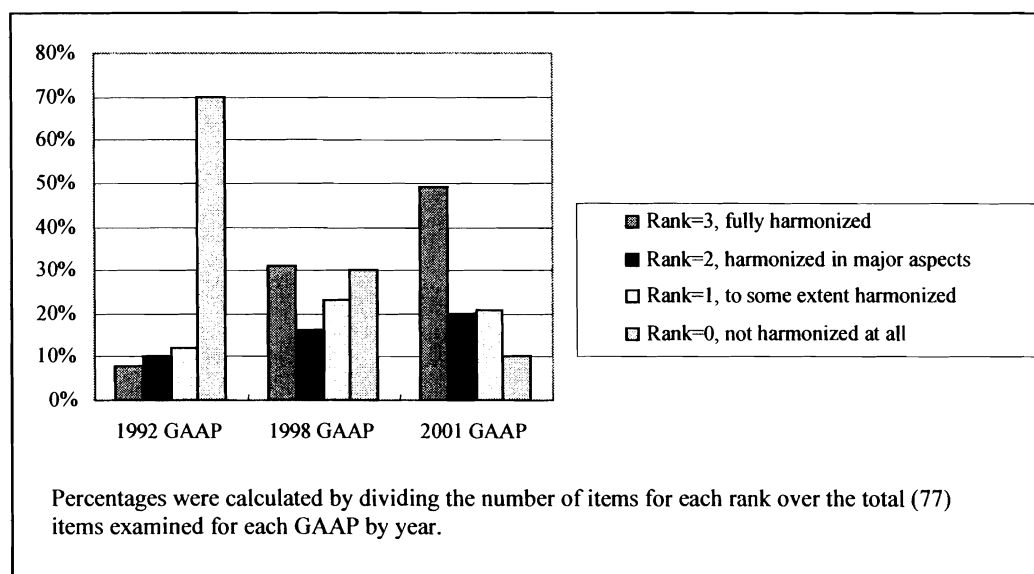


FIGURE 1
FREQUENCY OF RANK OF CLOSENESS FOR EACH GAAP BY YEAR

Evaluation of Hypothesis 1a and Test of Hypothesis 1b

H1a: Chinese GAAP has been substantially harmonized with IAS.

Table 5(a) present the number (percentage) of measurement items that are substantially harmonized with IAS for each GAAP by year. As indicated in chapter 3, items that received a rank of closeness of 2 or 3 are considered as substantially harmonized with IAS while items that received a rank of closeness of 1 or 0 are considered not harmonized with IAS. As shown on Table 5 (a), for 1992 GAAP, only 18% of the 77 measurement items examined received a rank of closeness of 2 or 3, and are therefore considered as substantially harmonized with IAS. For 1998 GAAP, the measurement items considered as substantially harmonized with IAS increased to 47%. Nevertheless, even for the most recent Chinese GAAP, 2001 GAAP, only 69% of measurement items are considered as substantially harmonized with IAS. Given the fact that approximately one third (31%) of the items examined are still not harmonized with IAS in the most recent Chinese GAAP, clearly there is a lack of substantial harmonization of Chinese GAAP with IAS. Thus, H1a is not supported.

H1b: The comparability of Chinese GAAP with IAS has improved over the past decade.

This hypothesis was tested by conducting a Chi-square test for symmetry (see Chapter 3 for more discussion). The test was first conducted to compare 1992 GAAP to 2001 GAAP to determine if there is a significant overall improvement in the extent of

harmonization with IAS over this time period. As shown in Panel A of Table 5(b), the Chi-square value is significant at the 0.001 level. Given this finding, additional Chi-square tests for symmetry were conducted by comparing 1992 to 1998 GAAP and 1998 to 2001 GAAP to determine when the significant improvement of harmonization of Chinese GAAP with IAS occurred. As shown in Panel B of Table 5(b), the results indicate that significant improvement occurred during both time periods.

Figure 2 provides visual support for the test results of H1b. As shown in Figure 2, the extent of harmonization of Chinese GAAP with IAS improved greatly from 1992 to 2001, and this improvement occurred from 1992 to 1998 and also from 1998 to 2001.

TABLE 5(a)
HARMONIZATION OF CHINESE GAAP WITH IAS: STATUS

	1992 GAAP	1998 GAAP	2001 GAAP
Number (%) of items that are substantially harmonized with IAS (RANK=2 or 3)	14 (18%)	36 (47%)	53 (69%)
Number (%) of items that are not harmonized with IAS (RANK=1 or 0)	63 (82%)	41 (53%)	24 (31%)
Total Measurement Items	77 (100%)	77 (100%)	77 (100%)

TABLE 5(b)
HARMONIZATION OF CHINESE GAAP WITH IAS: PROGRESS

Panel A: Overall progress

	<u>Test Statistics</u>
2001 GAAP vs. 1992 GAAP	57.0 ^{***} (df=6)

Panel B: Periodical progress

	<u>Test Statistics</u>
1998 GAAP vs. 1992 GAAP	39.0 ^{***} (df=6)
2001 GAAP vs. 1998 GAAP	21.0 ^{**} (df=6)

*** Significant at $p < .001$; ** Significant at $p < .01$; * Significant at $p < .05$
Chi-square test for symmetry. "df" represents "degrees of freedom."

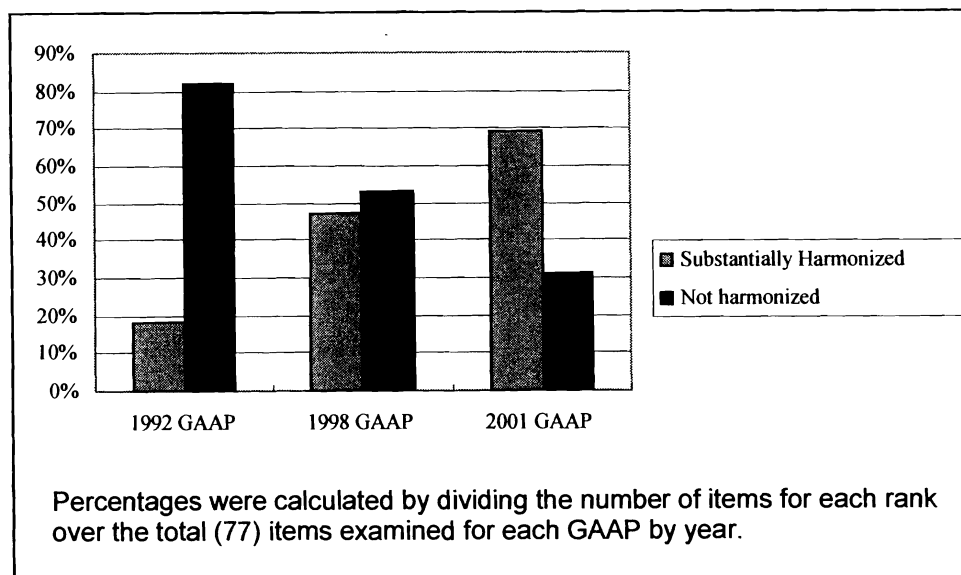


FIGURE 2
HARMONIZATION OF CHINESE GAAP WITH IAS: PROGRESS

Further Analysis and Discussion

To determine the extent of harmonization of Chinese GAAP with each individual IAS, the measurement items under each Chinese GAAP were analyzed. Of the 77 measurement items under Chinese GAAP, 15 measurement items pertain to the following IASs: IAS 2, inventories (4 items); IAS 8, changes in accounting estimates and errors (4 items); IAS 10, events after the balance sheet date (3 items); IAS 23, borrowing costs (1 item); IAS 37, provisions, contingent liabilities and contingent assets (2 items); and IAS 40, investment property (1 item). All these fifteen measurement items are substantially harmonized with IAS according to the measurement criteria developed in this study.

Of the 77 measurement items under Chinese GAAP, 17 measurement items pertain to the following IASs: IAS 12, income taxes (3 items); IAS 20, government grants (1 item); and IAS 39, financial instruments (13 items). A majority of these measurement items (two out of the three items for IAS 12, the one item for IAS 20, and eight out of the 12 items for IAS 39) are not harmonized with IAS according to the measurement criteria developed in this study. As a result, a majority of measurement items under Chinese GAAP that pertain to IAS 12, IAS 20, and IAS 39 have not been harmonized with those IASs. The major non-harmonization areas for each of these three IASs are discussed below.

IAS 12, accounting for income taxes, requires the recognition of the effect of temporary differences as deferred liabilities or assets, while Chinese GAAP allows an option of either recognizing or not recognizing the effect of such differences. Whenever there are changes in tax rates or imposition of new taxes, IAS allows only the liability

method to be used, while Chinese GAAP allows either the deferred method or the liability method.

IAS 20, accounting for government grants, requires government grants to be treated as income over the project period while Chinese GAAP requires government grants to be included as an element of stockholders' equity.

IAS 39 addresses accounting for financial instruments such as accounts receivable, short-term investments, long-term investments, and certain liabilities. The accounting treatments for accounts receivable have been fully harmonized. The major differences lie within the accounting treatment for other financial instruments. For example, both short-term investments and long-term investments (other than investments classified as held-to-maturity (HTM) securities) are reported at fair market value (FMV) under IAS, while under Chinese GAAP, short-term investments are reported at the lower of cost or market (LCM) and long-term investments are reported at cost less impairment for equity securities and amortized cost less impairment for debt securities. In addition, IAS classifies long-term investments into two categories: HTM and available for sale (AFS). Chinese GAAP does not differentiate between these two types of long-term investments. Furthermore, IAS allows charging the difference between FMV and carrying value to either net income or equity when accounting for non-HTM long-term equity investments, while Chinese GAAP only allows such differences to be charged to net income.

Measurement items under Chinese GAAP that pertain to accounting for construction contracts (IAS 11), PP&E (IAS 16), leases (IAS 17), changes in foreign exchange rates (IAS 21), business combinations (IAS 22), investments in subsidiaries

(IAS 27), investments in associates (IAS 28), investments in joint ventures (IAS 31), and intangible assets (IAS 38) are considered mostly harmonized with IAS, with a few exceptions discussed below.

Of the three measurement items under Chinese GAAP that pertain to accounting for construction contracts (IAS 11), only one item is considered as not harmonized with IAS, which is the accounting for borrowing costs incurred for construction contracts. Under IAS such costs are capitalized as costs of construction contracts while Chinese GAAP does not allow such costs to be capitalized.

Of the seven measurement items that pertain to accounting for PP&E (IAS 16), two items, accounting for PP&E received as a capital contribution, and accounting for exchange of dissimilar PP&E, are considered as not harmonized with IAS. Under IAS the asset received is measured at FMV for both the exchange of dissimilar PP&E and capital contributions. Under Chinese GAAP, the asset received in an exchange of dissimilar PP&E is measured at the carrying amount of the asset surrendered; the asset received as a capital contribution is measured at an amount agreed upon by all parties involved.

Of the nine measurement items that pertain to accounting for intangible assets (IAS 38), three items, accounting for intangible assets received as a capital contribution, accounting for intangible assets received in a non-monetary transaction, and accounting for pre-operating expenses, are considered not harmonized with IAS. Similar to PP&E, under IAS the asset received is measured at FMV for both non-monetary transactions and capital contributions, while under Chinese GAAP, the asset received in a non-monetary transaction is measured at the carrying amount of the asset surrendered and the asset

received as a capital contribution is measured at an amount agreed upon by all parties involved. The accounting for pre-operating expenses is also different. Rather than being charged to expense when incurred as required by IAS, under Chinese GAAP the expenses are recorded as a deferred asset until the entity's first month of operation at which time they are charged to expense.

Measurement items that pertain to accounting for leases (IAS 17) are considered mostly harmonized with three major exceptions in the accounting for finance leases. First, IAS requires the leased asset to be reported at the lower of the lessor's FMV or the present value (PV) of the minimum lease payment (MLP), while Chinese GAAP requires the leased assets to be reported at the lower of the lessor's *carrying amount* or the PV of the MLP. Second, the discount rate used to measure the PV of MLP in a finance lease under IAS is the rate that discounts the MLP and unguaranteed residual value back to the FMV of the leased asset, while under Chinese GAAP, the discount rate is the rate that discounts the MLP and unguaranteed residual value back to the *carrying amount* of the leased asset. Finally, IAS requires the lessee to use the effective interest method to allocate unrecognized finance charges of a finance lease to periods during the lease term while Chinese GAAP allows the lessee to use the straight-line method and the sum-of-the-years' digit method in addition to the effective interest method.

Accounting for changes in foreign exchange rates is mostly harmonized between Chinese GAAP and IAS 21 with one exception that is considered as only to some extent harmonized with IAS. IAS allows non-monetary items on the balance sheet to be either reported at FMV or historical cost. For non-monetary items carried at FMV, IAS requires

the use of the foreign exchange rate that existed when the valuations are made; for non-monetary items carried at historical cost, IAS requires the use of the spot rate on the transaction date. Chinese GAAP only allows non-monetary items on the balance sheet to be reported at historical cost using the spot rate on the transaction date.

Accounting for business combinations is mostly harmonized between Chinese GAAP and IAS 22 except for the following differences. The most distinctive difference is the measurement of goodwill. Under IAS, goodwill is measured as the difference between the price paid for the acquisition and the acquiring firm's share of the FMV of the identifiable assets acquired less liabilities assumed. Under Chinese GAAP, carrying value rather than FMV is used to determine the value of identifiable assets acquired. The period to amortize goodwill is also different. IAS allows no more than a 20-year amortization period while Chinese GAAP allows no more than a 10-year amortization period.

The accounting for investments in subsidiaries, associates, and joint ventures in China is mostly harmonized with IAS 27, 28, and 31. The major difference arises from the gain on "deemed disposal" of a subsidiary as a result of issuance of additional shares by the subsidiary to third parties. IAS generally recognizes a gain while Chinese GAAP treats the gain as an equity contribution.

In summary, it appears that there are two major sources of differences between Chinese GAAP and IAS. First, Chinese GAAP has not adopted the FMV concept. Unlike IAS, which allows a broader use of the FMV concept, Chinese GAAP requires historical cost to be used in most cases. This finding suggests that Chinese standard setters are

concerned more about reliability (verification of information) rather than the relevance of financial information. Second, Chinese GAAP is more likely to require certain items to be capitalized rather than expensed as required under IAS. For example, pre-operating expenses is first recorded as a deferred asset under Chinese GAAP until the entity's first month of operation at which time they are charged to expense.

Summary of the Findings on the First Research Question

In summary, the harmonization of Chinese GAAP with IAS significantly improved from 1992 to 2001. This significant shift occurred not only from 1992 GAAP to 1998 GAAP, but also from 1998 GAAP to 2001 GAAP.

For 2001 GAAP (the most recent Chinese GAAP), 69% (53 items) of the 77 measurement items have been substantially harmonized with IAS, while 31% (24 items) are not harmonized with IAS. Of the 53 items that are substantially harmonized, 72% (38) are fully harmonized (rank=3) and 28% (15) are harmonized with IAS in major aspects (rank=2). Of the 24 items that are not harmonized with IAS, 67% (16) are harmonized with IAS to a certain extent with major differences between Chinese GAAP and IAS (rank=1), and the remaining 33% (8) are not harmonized with IAS at all (rank=0). The non-harmonization between Chinese GAAP and IAS is from two sources. First, Chinese GAAP has not accepted the FMV concept. Second, Chinese GAAP is more likely to require certain items to be capitalized rather than expensed as required under IAS.

Section II: Findings on *De Facto* Harmonization

The second through the fourth research questions address *de facto* harmonization. For each research question, data are described first, followed by tests of hypotheses.

Research Question 2

Data Description

The instrument developed to evaluate the first research question was used to calculate the compliance index for the second research question. This index is calculated as the percentage of specific Chinese and IAS regulations applicable to a firm with which that firm complied. The specific calculation of the compliance index is provided in Chapter 3.

Table 6 presents descriptive statistics of the compliance indices. CPL99GAAP and CPL02GAAP represent compliance indices of the 79 sample firms with Chinese GAAP in their 1999 and 2002 annual reports, respectively. CPL99IAS and CPL02IAS represent compliance indices of the 79 sample firms with IAS in their 1999 and 2002 annual reports, respectively.

As shown in Table 6, the overall mean level of compliance with Chinese GAAP is 0.967 for the 1999 annual reports and 0.969 for the 2002 annual reports. The overall mean level of compliance with IAS is 0.858 for the 1999 annual reports and 0.900 for the 2002 annual reports. The range of compliance is 0.854 to 1 for 1999 Chinese GAAP-based annual reports and 0.824 to 1 for 2002 Chinese GAAP-based annual reports.

TABLE 6
DESCRIPTIVE STATISTICS OF THE COMPLIANCE INDICES

	<u>N</u>	<u>Mean</u>	<u>Std.</u> <u>Dev.</u>	<u>Min.</u>	<u>10th</u>	<u>25th</u>	<u>40th</u>	<u>50th</u>	<u>60th</u>	<u>75th</u>	<u>90th</u>	<u>Max.</u>
CPL99 GAAP	79	0.967	0.038	0.854	0.912	0.946	0.972	0.974	1.000	1.000	1.000	1.000
CPL02 GAAP	79	0.969	0.039	0.824	0.911	0.953	0.973	0.976	1.000	1.000	1.000	1.000
CPL99 IAS	72 ^a	0.858	0.106	0.414	0.699	0.776	0.801	0.826	0.842	0.872	0.929	0.967
CPL02 IAS	67 ^b	0.900	0.070	0.667	0.793	0.865	0.900	0.919	0.932	0.950	0.974	0.976

Compliance index
= Number of items a firm complied / Number of items applicable to this firm

N - Number of sample firms; Std. Dev. – Standard Deviation

Min. – Minimum; Max.- Maximum;

10th, 25th, ...,90th – Percentiles (indicate percentage of firms whose compliance indices are below a specified value)

CPL99GAAP - Compliance with Chinese GAAP (1998 GAAP) in 1999 annual reports

CPL02GAAP - Compliance with Chinese GAAP (2001 GAAP) in 2002 annual reports

CPL99IAS - Compliance with IAS in 1999 annual reports

CPL02IAS - Compliance with IAS in 2002 annual reports

^a The number of sample firms should be 79, but in 1999, seven firms did not provide the IAS-based annual reports.

^b The number of sample firms should be 79, but in 2002, twelve firms did not provide the IAS-based annual reports.

Comparably, the range of compliance is 0.414 to 0.967 for 1999 IAS-based annual reports and 0.667 to 0.976 for 2002 IAS-based annual reports. The percentile distribution reveals that, among the 79 sample firms, for 1999 and 2002, at least forty percent of firms (31 firms) are in full compliance with Chinese GAAP, as the compliance indices with Chinese GAAP (CPL99GAAP and CPL02GAAP) became 1.000 starting from the 60th

percentile. However, none of the firms are in full compliance with IAS, as the maximum level of compliance with IAS is 0.967 in 1999 and 0.976 in 2002.

Figure 3 presents the histograms of the distribution of index values for each compliance index. As shown in Figure 3, the distribution of each compliance index is highly asymmetric and thus parametric statistical tests, such as t-tests, are not appropriate.

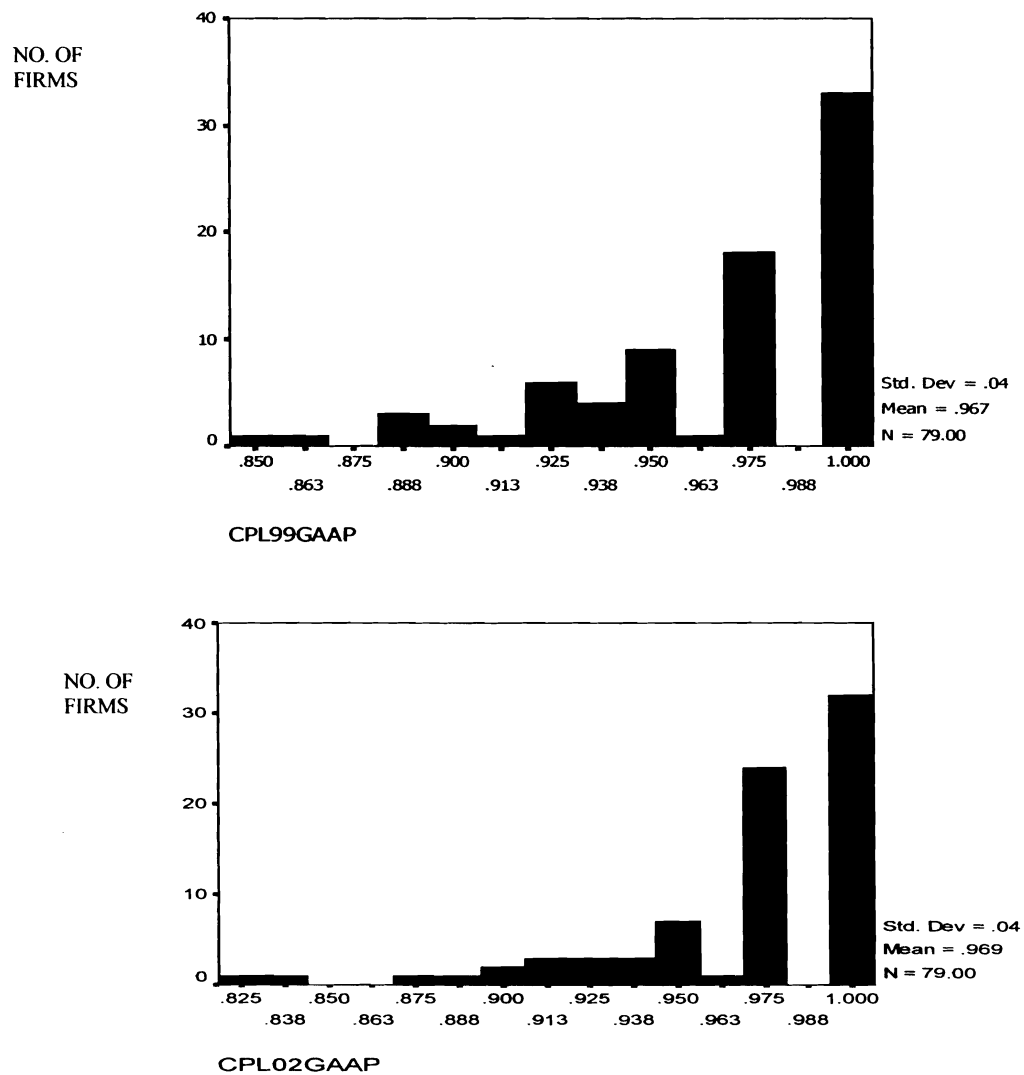


FIGURE 3
HISTOGRAMS OF THE COMPLIANCE INDICES

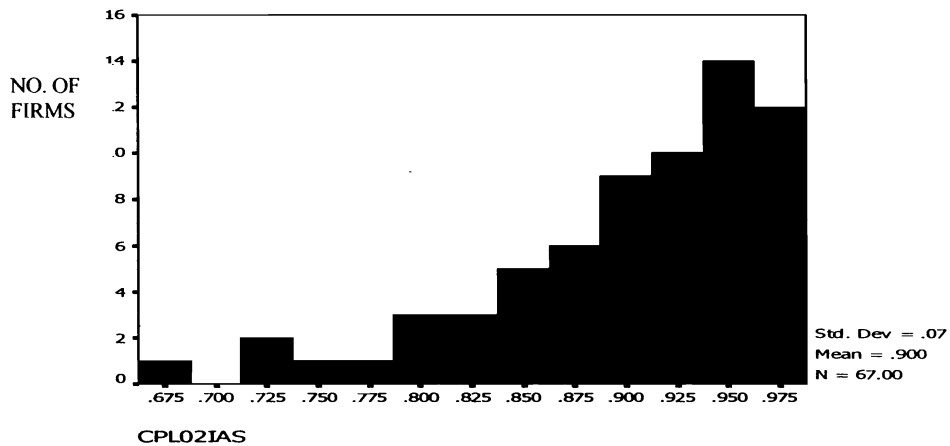
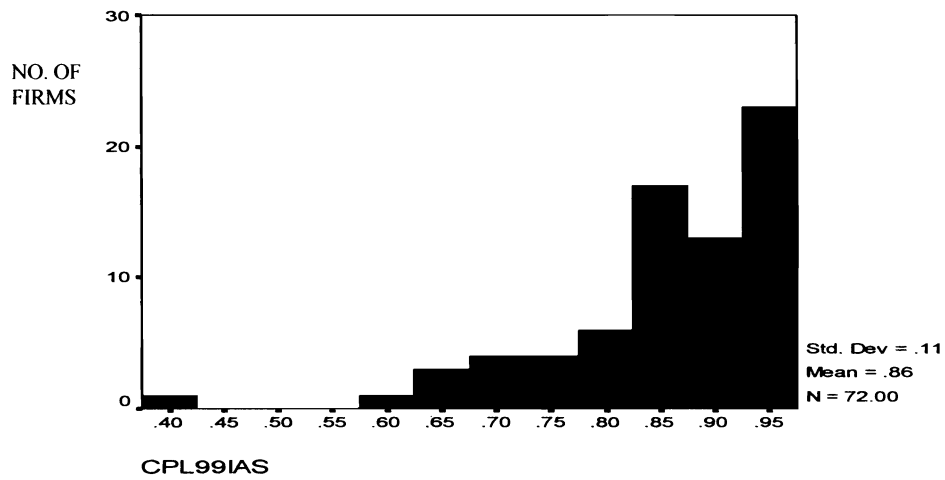


FIGURE 3 (CONT'D)
HISTOGRAMS OF THE COMPLIANCE INDICES

Tests of Hypotheses 2a and 2b

H2a: Chinese listed firms that issue both A and B-shares are significantly in compliance with Chinese GAAP.

H2b: Chinese listed firms that issue both A and B-shares are significantly in compliance with IAS.

H2a was evaluated by examining sample firms' compliance with 1998 Chinese GAAP in their 1999 Chinese-GAAP based annual reports as well as their compliance with 2001 GAAP in their 2002 Chinese-GAAP based annual reports. H2a is supported if the mean compliance index value for 1998 (2001) GAAP is not significantly different from one. H2b is evaluated by examining the compliance of sample firms with 1999 IAS in their 1999 IAS-based annual reports as well as their compliance with 2002 IAS in their 2002 IAS-based annual reports. H2b is supported if the mean compliance index value for 1999 (2002) IAS is not significantly different from one.

The Kolmogoroff-Smirnoff (KS) goodness-of-fit test is used to test hypotheses H2a and H2b. This test is distribution-free and is useful to detect the divergence of an observed value from its expected value for a single group. For example, for variable CPL99GAAP the expected compliance value is one and the observed value is the calculated index value for each firm. If the test statistic is smaller than the critical value, then the null hypothesis that the observed value is not significantly different from the expected value is supported. As mentioned in Chapter 3, a detailed description of this test can be found in Sachs [1984, p. 330]. Table 7 presents the statistical results of the KS goodness-of-fit test for H2a and H2b.

As shown in Table 7, both H2a and H2b are supported at the 5% significance level. These results indicate that Chinese listed firms that issue A and B-shares

significantly complied with both Chinese GAAP and IAS in their 1999 and 2002 annual reports.

TABLE 7
COMPLIANCE OF CHINESE LISTED
FIRMS WITH CHINESE GAAP AND IAS

	<u>Test Statistics</u>	<u>Critical Value</u>	<u>Conclusion</u>
CPL99GAAP	0.0301	0.1539	Supported
CPL02GAAP	0.0312	0.1539	Supported
CPL99IAS	0.1421	0.1612	Supported
CPL02IAS	0.0996	0.1671	Supported
Kolmogoroff-Smirnoff goodness-of-fit test, 5% significance level			
CPL99GAAP - Compliance with Chinese GAAP (1998 GAAP) in 1999 annual reports			
CPL02GAAP - Compliance with Chinese GAAP (2001 GAAP) in 2002 annual reports			
CPL99IAS - Compliance with IAS in 1999 annual reports			
CPL02IAS - Compliance with IAS in 2002 annual reports			

Further Analysis and Discussion

A further review of the descriptive results in Table 6 reveals a few interesting findings. First, it appears that the mean and percentiles of CPL99GAAP are higher than those of CPL99IAS and that the mean and percentiles of CPL02GAAP are higher than those of CPL02IAS. This may imply that sample firms' compliance with Chinese GAAP, on average, is higher than their compliance with IAS in 1999 and 2002. Second, the mean and percentiles of CPL02IAS are higher than the mean and percentiles of CPL99IAS. This implies that sample firms' compliance with IAS, on average, improved from 1999 to

2002. Finally, the mean of CPL02GAAP is slightly higher than the mean of CPL99GAAP, which implies that sample firms' compliance with Chinese GAAP, on average, increased from 1999 to 2002. To determine whether these findings are statistically significant, a Wilcoxon two-sample test was conducted and the results are presented in Table 8. The Wilcoxon two-sample test evaluates whether two related samples are statistically different from each other. It is similar to a paired t-test, but unlike a paired t-test which requires a normal distribution, the Wilcoxon two-sample test is a non-parametric test that is distribution-free.

TABLE 8
COMPARISON OF THE COMPLIANCE INDICES

Panel A: 1999 vs. 2002		
<u>Test Statistics</u>	<u>CPL02GAAP vs. CPL99GAAP</u>	<u>CPL02IAS vs. CPL99IAS</u>
Z	-0.063	3.732
p-value	0.475	0.000
Panel B: Chinese GAAP vs. IAS		
<u>Test Statistics</u>	<u>CPL99GAAP vs. CPL99IAS</u>	<u>CPL02GAAP vs. CPL02IAS</u>
Z	6.990	5.865
p-value	0.000	0.000
Wilcoxon two-sample test, 5% significant level, one-tailed		
CPL99GAAP - Compliance with Chinese GAAP (1998 GAAP) in 1999 annual reports		
CPL02GAAP - Compliance with Chinese GAAP (2001 GAAP) in 2002 annual reports		
CPL99IAS - Compliance with IAS in 1999 annual reports		
CPL02IAS - Compliance with IAS in 2002 annual reports		

Panel A of Table 8 presents the results of the Wilcoxon two-sample analyses testing whether firms' compliance with Chinese GAAP and IAS significantly improved from 1999 to 2002. First, the results show that there is no significant improvement in compliance with Chinese GAAP from 1999 to 2002. Even though the mean of CPL02GAAP is slightly higher than the mean of CPL99GAAP, as shown on Table 6, the difference is not statistically significant. Second, there is a significant improvement in compliance with IAS from 1999 to 2002, Z-statistic equal to 3.732 at the $p < .000$ level. The average improvement in magnitude is 4.2%, from 0.858 to 0.900²⁹. This significant improvement may be due to the increased harmonization of Chinese GAAP with IAS. As Chinese GAAP and IAS converged, Chinese listed firms became more familiar with IAS, thus, compliance with IAS improved.

Panel B of Table 8 reveals whether there exist significant differences between Chinese listed firms' compliance with Chinese GAAP and their compliance with IAS. The results show that the compliance level with Chinese GAAP is significantly higher than that with IAS. This conclusion holds true for both the 1999 and 2002 annual reports examined, since the Z-statistics are positive for both years at $p < .000$ level. Specifically, the average level of compliance with Chinese GAAP is 10.9%³⁰ higher in magnitude than that with IAS in the 1999 annual reports and is 6.9%³¹ higher in magnitude than that with

²⁹ According to Table 6, the mean level of CPL02IAS is 0.900 while the mean level of CPL99IAS is 0.858. The spread is 0.042 (4.2%).

³⁰ According to Table 6, the mean level of CPL99GAAP is 0.967 while the mean level of CPL99IAS is 0.858. The spread is 0.109 (10.9%).

IAS in the 2002 annual reports. The higher levels of compliance with Chinese GAAP than with IAS in both 1999 and 2002 may imply that the enforcement to comply with Chinese GAAP is more rigorous than that to comply with IAS in China.

Summary of the Findings on the Second Research Question

There are three strong suggestions that arise from the empirical analysis of the second research question. First, Chinese listed firms that issue A and B-shares complied significantly with both Chinese GAAP and IAS both in 1999 and 2002. This finding is consistent with Street and Gray [2001], which indicated that Chinese listed firms' compliance with IAS is high.

Second, the sample firms' compliance with Chinese GAAP is significantly higher than the compliance with IAS. This finding may imply that the enforcement to comply with Chinese GAAP is more rigorous than that to comply with IAS in China.

Finally, Chinese listed firms' compliance with IAS increased from 1999 to 2002 with the change of Chinese GAAP from 1998 GAAP to 2001 GAAP³². This finding implies that Chinese accounting reform may be an important source in improving firms' compliance with IAS. That is, an increase in compliance with IAS was observed for

³¹ According to Table 6, the mean level of CPL02GAAP is 0.969 while the mean level of CPL02IAS is 0.900. The spread is 0.069 (6.9%).

³² Larson and Kenny (1999) examined the compliance with IAS in 37 countries using the Price Waterhouse survey from 1991 to 1995 and found that Chinese firms were not in compliance with IASs in more than half of the accounting areas the study examined. Their study provided evidence that Chinese listed firms' compliance with IAS was very low before 1998 Chinese GAAP was promulgated. Furthering the findings from the Larson and Kenny study, the findings from the current study provide evidence that Chinese listed firms' compliance with IAS improved after the issuance of Chinese 1998 GAAP.

Chinese listed firms both after the issuance of 1998 Chinese GAAP and 2001 Chinese GAAP.

Research Question 3

Data Description

The data used for the third research question utilizes the same instrument developed to evaluate the first research question. Using this data a consistency index was calculated as the percentage of specific regulations consistent between Chinese GAAP and IAS that were used by a firm to the total regulations that are applicable to that firm (that is, the sum of consistent items over the number of applicable items). A detailed discussion of the data collection for the third research question and the calculation of the consistency index were provided in Chapter 3.

In calculating the index, a value of one, indicating consistency, is assigned to an item only when the item satisfies the following condition: the firms have used the same accounting treatment in both Chinese GAAP and IAS-based annual reports and the treatment is in compliance with IAS. Based on the above criteria, if a firm used the same accounting treatment in both Chinese GAAP-based and IAS-based annual reports, but the treatment is not in compliance with IAS, a value of zero is assigned. For example, IAS requires that short-term investment to be reported at FMV while 2001 Chinese GAAP requires the use of LCM. If a firm adopts LCM under both Chinese-GAAP and IAS-based 2002 annual reports, then the firm is using a treatment that is not in compliance with IAS. Thus, a value of zero is assigned in this situation.

Table 9 presents the descriptive statistics of the consistency indices for the 1999 and 2002 annual reports for the sample firms. CONSYS99 and CONSYS02 represent the consistency index in 1999 and 2002, respectively. As shown in Table 9, in 1999, the overall mean level of consistency between Chinese GAAP and IAS is 0.690 with a range from 0.594 to 0.900. In 2002, the overall mean level of consistency between Chinese GAAP and IAS is 0.764 with a range from 0.657 to 0.882. The medians (the 50th percentiles) are close to the mean in both years, indicating a central tendency. The histograms presented in Figure 4 are sufficiently symmetric as to allow the use of parametric tests such as the t-test and paired t-test.

TABLE 9
DESCRIPTIVE STATISTICS OF THE CONSISTENCY INDICES

	<u>N</u>	<u>Mean</u>	<u>Std.</u> <u>Dev.</u>	<u>Min.</u>	<u>25th</u>	<u>50th</u>	<u>75th</u>	<u>Max.</u>
CONSYS99	72 ^a	0.690	0.080	0.594	0.636	0.673	0.747	0.900
CONSYS02	67 ^b	0.764	0.050	0.657	0.727	0.763	0.793	0.882

CONSYS99 – Consistency index based on 1999 annual reports
 CONSYS02 – Consistency index based on 2002 annual reports
 Consistency index
 = Number of consistent items for a given firm/ Number of items applicable to this given firm
 N - Number of sample firms; Std. Dev. – Standard Deviation
 Min. – Minimum; Max.- Maximum;
 25th, 50th, 75th – Percentiles (indicate percentage of firms whose consistency indices are below a specified value)

^a The number of sample firms should be 79, but in 1999, seven firms did not provide the IAS-based annual reports.
^b The number of sample firms should be 79, but in 2002, twelve firms did not provide the IAS-based annual reports.

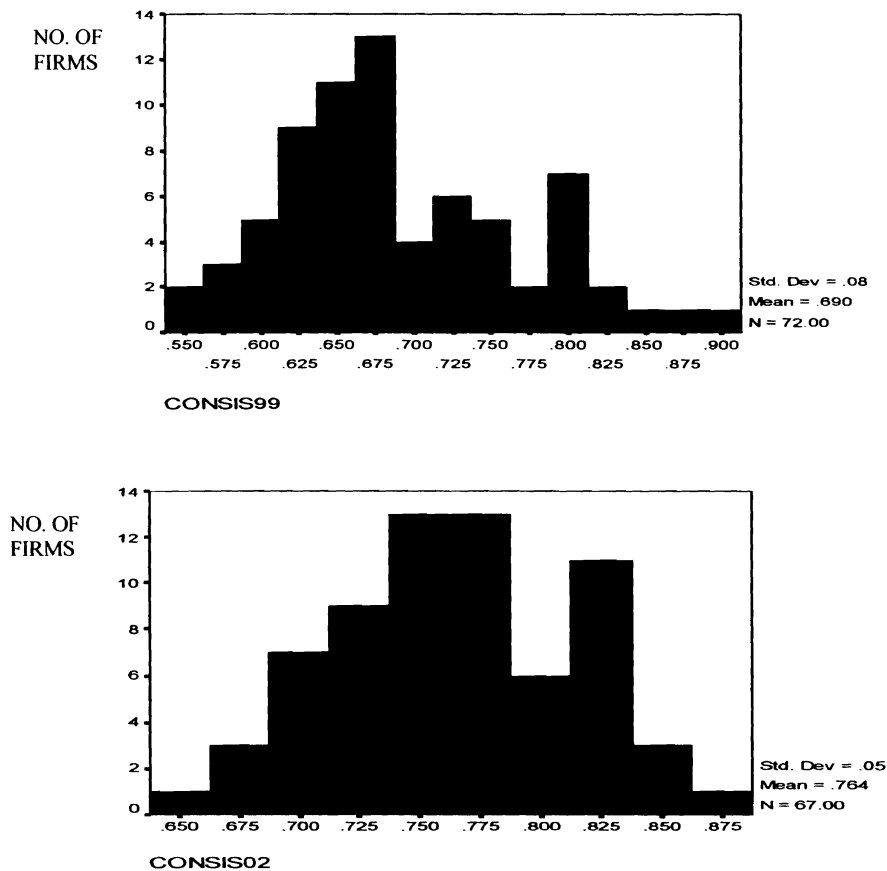


FIGURE 4
HISTOGRAMS OF THE CONSISTENCY INDICES

Tests of Hypotheses 3a and 3b

H3a: Chinese listed firms that issue both A and B-shares use consistent accounting treatments in Chinese GAAP-based and IAS-based annual reports.

The null hypothesis is that the consistency index is not significantly different from one. The Kolmogoroff-Smirnoff (KS) goodness-of-fit test is used to test this hypothesis.

As mentioned earlier, this test is useful to detect the divergence for an observed value from its expected value for a single group. Table 10 presents the statistical results of the KS test for 1999 and 2002 annual reports, separately.

TABLE 10
COMPARABILITY OF ACCOUNTING TREATMENTS CHOSEN BY CHINESE LISTED FIRMS IN CHINESE GAAP AND IAS-BASED ANNUAL REPORTS

	<u>Test Statistics</u>	<u>Critical Value</u>	<u>Conclusion</u>
CON SIS99	0.3096	0.1612	Rejected
CON SIS02	0.2056	0.1671	Rejected
Kolmogoroff-Smirnoff goodness-of-fit test, 5% significance level			
Comparability of accounting treatments is measured by consistency index			
CON SIS99 – Consistency index based on 1999 annual reports			
CON SIS02 – Consistency index based on 2002 annual reports			

As shown in Table 10, H3a is rejected at the 5% level for both 1999 and 2002 annual reports. This indicates that for Chinese listed firms that issue both A and B- shares, the accounting treatment used for the Chinese GAAP-based annual reports is not consistent with that used for the IAS-based annual reports. The causes of non-consistency are discussed under the “Further Analysis and Discussion” section.

H3b: The comparability of accounting treatments between Chinese GAAP-based and IAS-based annual reports has improved with the issuance of the new Chinese GAAP.

A one-tailed paired t-test was used to test H3b and the results are presented in Table 11. The null hypothesis states that with the issuance of the new Chinese GAAP (2001 GAAP), there is no significant improvement in terms of the consistency of accounting treatments between Chinese GAAP-based and IAS-based annual reports. The 1999 and 2002 annual reports were used to test H3b.

TABLE 11
COMPARISON OF THE CONSISTENCY INDICES: 1999 VS. 2002

	<u>Mean</u>	<u>Std. Dev.</u>	<u>t</u>	<u>df</u>	<u>p-value</u>
CONSIS02 VS. CONSIS99	0.073	0.072	7.843	59	0.000
Paired t-test with 5% significance level, one-tailed					
CONSIS99 – Consistency index based on 1999 annual reports					
CONSIS02 – Consistency index based on 2002 annual reports					

As shown in Table 11, the null hypothesis is rejected at the 5% level with $p < .000$, which means that H3b is supported. This implies that even though the accounting treatments under Chinese GAAP and IAS for the same firm are not consistent in both 1999 and 2002, the consistency improved significantly from 1999 to 2002.

Further Analysis and Discussion

The consistency index was used to measure whether the accounting treatments selected by a firm for Chinese GAAP-based annual reports and IAS-based annual reports are consistent with the IAS requirements. Table 12 presents an analysis of the primary

measurement items in the checklist that are not consistent with IAS in 1999 and 2002, respectively. Panel A, Table 12 presents the level of inconsistency for each item for each year. As shown in Panel A, more than 70% of the firms chose accounting treatments inconsistent with IAS for items 16, 19, 42, 55, and 58 in their 1999 annual reports and for items 16, 42, 58, 65, 67, and 68 in their 2002 annual reports.

Panel B, Table 12 presents a further analysis of the causes of inconsistency for each item for each year. Theoretically, there are three possible causes of inconsistency: (1) differences in standards, (2) non-compliance with IAS in firms' B-share reports, and (3) non-compliance with Chinese GAAP in firms' A-share reports. The results in Panel B, Table 12 reveal that, the lack of consistency is due to two causes: differences in standards and non-compliance with IAS. Non-compliance with Chinese GAAP is not a main cause of inconsistency. Panel C, Table 12 provides a summary of the inconsistencies caused by differences between Chinese GAAP and IAS for these items.

An item by item discussion is provided below to provide more insight into firms' accounting choices between Chinese GAAP and IAS and their implications on *de facto* accounting harmonization.

TABLE 12
PRIMARY MEASUREMENT ITEMS FOR WHICH
FIRMS' ACCOUNTING CHOICES ARE NOT CONSISTENT WITH IAS

Panel A: Level of Inconsistency								
IAS	Items on the Checklist	Item description	1999			2002		
			Number of firms that chose accounting treatments inconsistent with IAS in their 1999 reports	Total Applicable Firms	Percentage of firms that chose accounting treatments inconsistent with IAS in their 1999 reports	Number of firms that chose accounting treatments inconsistent with IAS in their 2002 reports	Total Applicable Firms	Percentage of firms that chose accounting treatments inconsistent with IAS in their 2002 reports
IAS 12	16	Treatment for deductible temporary differences	65	71	92%	61	67	91%
IAS 16	19	PP&E and construction in process (CIP) on balance sheet date	66	71	93%	Not Applicable ^b		
IAS 22	42	Measurement of goodwill	29	29	100%	43	43	100%
IAS 38	55	Intangible assets on balance sheet date	47	50	94%	Not Applicable ^b		
IAS 38	58	Pre-operating expenses	47	53	89%	30	31	97%
IAS 39	65	Short-term investments on balance sheet date	Not Applicable ^a			36	49	73%
IAS 39	67	Long-term investments in equity securities on balance sheet date	Not Applicable ^a			54	64	84%
IAS 39	68	Long-term investments in debt securities on balance sheet date	Not Applicable ^a			35	45	78%

a. Item excluded for analysis for 1999, as IAS 39 was not in effect in 1999.

b. Item excluded for analysis for 2002, as an overwhelming majority of firms making accounting choices consistent with IAS for this item in 2002, thus is no longer applicable to be reported in Table 12.

TABLE 12 (CONT'D)

Panel B: Causes of Inconsistency								
IAS	Items on the Checklist	Item description	1999			2002		
			Total number of firms that chose accounting treatments inconsistent with IAS in their 1999 reports	Inconsistency due to differences in Chinese GAAP and IAS (% of inconsistency accounted for)	Inconsistency due to non-compliance with IAS (% of inconsistency accounted for)	Total number of firms that chose accounting treatments inconsistent with IAS in their 2002 reports	Inconsistency due to differences in Chinese GAAP and IAS (% of inconsistency accounted for)	Inconsistency due to non-compliance with IAS (% of inconsistency accounted for)
IAS 12	16	Treatment for deductible temporary differences	65	63 (97%)	2 (3%)	61	59 (97%)	2 (3%)
IAS 16	19	PP&E and CIP on balance sheet date	66	52 (79%)	14 (21%)	Not Applicable ^b		
IAS 22	42	Measurement of goodwill	29	29 (100%)	0 (0%)	43	43 (100%)	0 (0%)
IAS 38	55	Intangible assets on balance sheet date	47	41 (87%)	6 (13%)	Not Applicable ^b		
IAS 38	58	Pre-operating expenses	47	33 (70%)	14 (30%)	30	29 (97%)	1 (3%)
IAS 39	65	Short-term investments on balance sheet date	Not Applicable ^a			36	29 (81%)	7 (19%)
IAS 39	67	Long-term investments in equity securities on balance sheet date	Not Applicable ^a			54	25 (46%)	29 (54%)
IAS 39	68	Long-term investments in debt securities on balance sheet date	Not Applicable ^a			35	19 (54%)	16 (46%)

a. Item excluded for analysis for 1999, as IAS 39 was not in effect in 1999.

b. Item excluded for analysis for 2002, as an overwhelming majority of firms making accounting choices consistent with IAS for this item in 2002, thus is no longer applicable to be reported in Table 12.

TABLE 12 (CONT'D)

Panel C: Summary of Differences in Accounting Treatments Specified by Chinese GAAP and IAS

<u>IAS</u>	<u>Items on the Checklist</u>	<u>Item description</u>	<u>1998 Chinese GAAP</u>	<u>2001 Chinese GAAP</u>	<u>IAS</u>
IAS 12	16	Treatment for deductible temporary differences	Either Tax Payable Method or Tax Effect Accounting Method	Either Tax Payable Method or Tax Effect Accounting Method	Tax Effect Accounting Method
IAS 16	19	PP&E and CIP on balance sheet date	Amortized cost	Amortized cost less impairment	Amortized cost less impairment [B]; A revalued amount (being the asset's FMV) less subsequent depreciation and impairment. [A]
IAS 22	42	Measurement of goodwill	Same as the IAS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer's share of FMV of identifiable net assets are used.	Same as the IAS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer's share of FMV of identifiable net assets are used.	Measured as the difference between the cost of the acquisition and the acquiring enterprise's share of the FMV of the identifiable assets acquired less liabilities assumed. [R]
IAS 38	55	Intangible assets on balance sheet date	Amortized cost	Amortized cost less impairment	Amortized cost less impairment [B]; A revalued amount (being the asset's FMV) less subsequent depreciation and impairment. [A]

[R]: required treatment for all companies complying with IAS

[B]: benchmark treatment that is recommended or preferred according to IAS

[A]: allowed treatment that is not required or forbidden by IAS

[F]: forbidden treatment that is not permitted by IAS

TABLE 12 (CONT'D)

Panel C: Summary of Differences in Accounting Treatments Specified by 1998 Chinese GAAP, 2001 Chinese GAAP, and IAS (Cont'd)					
<u>IAS</u>	<u>Items on the Checklist</u>	<u>Item description</u>	<u>1998 Chinese GAAP</u>	<u>2001 Chinese GAAP</u>	<u>IAS</u>
IAS 38	58	Pre-operating expenses	Deferred as an asset until the entity begins operations. Then amortize in no more than five years. If the amount is not material, charged to expense at the first month of operation.	Deferred as an asset until the entity begins operations. Then charged to expense at the first month of operation.	Charged to expense when incurred [R]
IAS 39	65	Short-term investments on balance sheet date	Measured at either cost or LCM. If measured at LCM, any write-down is recognized in net profit or loss.	Measured at LCM with a write-down recognized in net profit or loss.	Measured at FMV. Changes in FMV are recognized in net profit or loss. [R]
IAS 39	67	Long-term investments in equity securities on balance sheet date	Measured at cost less impairment with a write-down recognized in net profit or loss.	Measured at cost less impairment with a write-down recognized in net profit or loss.	Measured at FMV with changes in FMV recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]
IAS 39	68	Long-term investments in debt securities on balance sheet date	Measured at amortized cost subject to impairment, with a write-down recognized in net profit or loss.	Measured at amortized cost subject to impairment, with a write-down recognized in net profit or loss.	If classified as held to maturity, measured at amortized cost subject to impairment. If classified as available for sale, measured at FMV with value changes recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]

Item 16 (IAS 12) addresses the accounting treatment for deductible temporary differences for income taxes. In both 1999 and 2002, IAS 12 required that the effect of a temporary difference be recognized as a deferred tax asset or liability (tax effect accounting method), while Chinese GAAP allowed temporary differences to be either recognized (tax effect accounting method) or not recognized (tax payable method). Under the tax payable method, Chinese GAAP allows the amount of income tax expense to be equal to the amount of income tax payable with no deferred taxes recognized. An examination of the sample firms' 1999 (2002) annual reports reveals that, as shown in Panel B of Table 12, a total of 63 (59) firms selected the tax payable method for their A-share annual reports, an option allowed under Chinese GAAP, and the tax effect accounting method for their B-share annual reports, prepared in accordance with IAS. Two firms in both 1999 and 2002 selected the tax payable method for both A and B-shares, which is a violation of IAS. Only six firms in both 1999 and 2002 selected the tax effect accounting method for both A and B-shares which is consistent with IAS.

This finding should be of interest to standard setters in China. Chinese standard setters allowed only the tax payable method in 1992 Chinese GAAP. As a step toward *de jure* harmonization with IAS, 1998 and 2001 Chinese GAAPs allowed the choice between the tax payable method and the tax effect accounting method. However, a majority of firms, that is, 65 out of 71 (92%) in 1999 and 61 out of 67 (91%) in 2002, as shown in Panel A of Table 12, continued to use the tax payable method, ignoring the information signals by the new Chinese GAAP to harmonize with IAS. Thus, *de facto* harmonization is not achieved for this standard.

Item 19 (IAS 16), “PP&E and construction in process (CIP) on balance sheet date”, and item 55 (IAS 38), “Intangible assets on balance sheet”, discuss the balance sheet date reporting for PP&E, CIP, and intangible assets. The benchmark treatment of IAS is to report these assets at amortized cost less impairment. As an alternative treatment under IAS, these assets can also be reported at a revalued amount (i.e., FMV) less impairment. In comparison, 2001 Chinese GAAP required the use of amortized cost less impairment, which is consistent with the benchmark treatment of IAS. However, both 1992 and 1998 Chinese GAAP required the use of amortized cost without considering impairment, which is considered as not harmonized with IAS.

As shown in Panels B of Table 12, in 1999, a total of 52 firms (accounting for 79% of the inconsistency) selected amortized cost for A-share reports while amortized cost less impairment for B-share reports to account for PP&E. A total of 14 firms (accounting for 21% of the inconsistency) selected amortized cost for both A and B-share reports, which represents compliance with Chinese GAAP but a violation of IAS. This means that the inconsistency of firms’ accounting choices between A and B-share reports for this item mainly arise from difference in standards. In 2002, with the harmonization of Chinese GAAP with IAS for this standard, an overwhelming majority of firms (99% or 66 out of 67)³³ selected amortized cost less impairment for both A and B- share reports. The pattern of firms’ accounting choices to account for intangible assets on the balance sheet is almost the same as that for PP&E in both 1999 and 2002.

³³ This data, which represents the number (percentage) of firms making accounting choices consistent with IAS, is not reported in Table 12. Table 12 focuses on primary measurement items for which firms’ accounting choices are not consistent with IAS.

These findings provide strong support for the argument that national standard setters play an important role in propelling local firms toward harmonizing their accounting practices with IAS. With the harmonization of standards from 1999 to 2002 to account for these assets, the *de facto* harmonization improved as an overwhelming majority of firms made the same accounting choices consistent with IAS in their A and B-share reports. Thus, to improve the level of harmonization, the IASB should increase its efforts to coordinate with local standard setters.

Like the pattern of firms' accounting choices for item 16 (deductible differences for income taxes), 19 (PP&E and CIP on balance sheet date), and 55 (intangible assets on balance sheet date) discussed earlier, the pattern of firms' accounting choices for item 42 (goodwill) and 58 (pre-operating expenses) also reflects high levels of inconsistency, and the inconsistency is mainly due to differences in standards between Chinese GAAP and IAS.

Under IAS, goodwill (Item 42) is defined as the difference between the price paid for the acquisition and the acquiring firms' share of the FMV of the identifiable assets acquired less liabilities assumed. The requirement under 1998 and 2001 Chinese GAAP is the same as that for IAS, except that the carrying value rather than FMV is used when determining the value of the identifiable assets when 100% of the shares are not acquired. The treatment for goodwill is inconsistent between A-share and B-share reports for 29 firms (100%) in 1999 and 43 firms (100%) firms in 2002 because of the above mentioned difference in the standard.

Item 58 covers accounting for pre-operating expenses. IAS requires immediate recognition of pre-operating expenses. In contrast, both 1998 and 2001 Chinese GAAP require capitalization of pre-operating expenses. The 1998 Chinese GAAP allowed either amortization of capitalized pre-operating costs over no more than five years or a charge to expense during the first month of operation if the amount is immaterial. The 2001 GAAP requires capitalized costs to be charged to expense during the first month of operation. A total of 33 firms (accounting for 70% of the inconsistency) in 1999 chose to amortize the capitalized pre-operating expenses over five years for A-share reports and chose immediate recognition for B-share reports. Such inconsistency is caused by the difference in standards. The remaining 30% of the inconsistency is caused by 14 firms' non-compliance with IAS in their B-share annual reports. These firms chose to capitalize and amortize pre-operating expenses over five years rather than to expense them immediately as required by IAS. In 2002, 97% of the inconsistency is caused by the difference in standards, while the remaining 3% of the inconsistency is caused by firms' violation of IAS.

Items 65, 67, and 68 are all relevant to IAS 39. They pertain to short-term and long-term investments. The findings as to firms' real accounting choices in their 2002³⁴ annual reports on these items are quite interesting. Unlike the items discussed earlier for 2002, the inconsistency mainly being caused by differences in standards, items 65, 67, and 68 show another cause of inconsistency, non-compliance with IAS.

³⁴ As IAS 39 was not in effect in 1999, these three items are excluded from analysis in 1999. See Chapter 1 for more details.

As shown in Panel C of Table 12, the 2001 Chinese GAAP has not been harmonized with IAS for these three items. IAS requires short-term and long-term investments to be reported at FMV unless the long-term investments in debt securities are classified as held to maturity (HTM). If classified as HTM, long-term investments in debt securities should be recognized at amortized cost subject to impairment. Under IAS, for short-term investments, changes in FMV are recognized in net profit or loss; for long-term investments other than investments that are classified as HTM, changes in FMV are recognized either (a) in net profit or loss or (b) in equity until the investment is sold. The 2001 Chinese GAAP requires recognition of short-term investments at LCM with a write-down in net profit or loss. Recognition of long-term investment in debt securities is at amortized cost subject to impairment with a write-down in net profit or loss, without distinguishing between HTM and other types of investments, and recognition of long-term investment in equity securities is at cost less impairment with a write-down recognized in net profit or loss.

As shown in Panels A and B of Table 12, in 2002, the differences in standards still act as the main cause of the inconsistency, accounting for 81%, 46%, and 54% of the inconsistency for items 65, 67, and 68, respectively. But at the same time, one thing that is of particular interest is another cause of inconsistency, especially for items 67 and 68. About 50% of the inconsistency (54% for item 67 and 46% for item 68) for these two items is caused by firms' non-compliance with IAS. This finding is interesting because a significant number of firms, in their B-share reports, did not use the method that is in compliance with IAS as these firms and their auditors claimed in their B-share reports,

but chose to use the method that is in compliance with Chinese GAAP. Such phenomenon also exists for item 19 (21%), 55 (13%), and 58 (30%) in 1999, and for item 65 (19%) in 2002. Such phenomenon also existed for many other items that are not reported in Table 12³⁵.

Why firms chose to comply with Chinese GAAP in their B-share reports and why such practices are pervasive are unknown and need further research. It is possible that companies did this just for convenience. Even though firms that issue A and B-shares are required to prepare two sets of annual reports based on Chinese GAAP and IAS, respectively, they do not have to use two sets of record keeping systems. If the firms perceive the cost of compliance with certain IAS is high, it is likely that firms will choose a method that complies with Chinese GAAP but violates IAS in their B-share reports.

Summary of the Findings on the Third Research Question

Overall, the degree of consistency between IAS and Chinese GAAPs is mixed, ranging from 0.594 to 0.900 in the 1999 annual reports and from 0.657 to 0.882 in the 2002 annual reports (See Table 9). The inconsistency between Chinese GAAP and IAS is significant. The lack of consistency is due to two causes: (1) differences in standards and (2) non-compliance with IAS. An interesting finding is that a considerable number of firms chose accounting treatments in their B-share reports that are in compliance with

³⁵ Table 12 presents primary measurement items for which firms' accounting choices are not consistent with IAS. If the items were not considered as *primary* measurement items (due to a lower percentage of occurrence of inconsistency), they were not reported in Table 12.

Chinese GAAP but in violation of IAS. The cause of this phenomenon needs further exploration in future research.

Nevertheless, a significant improvement occurred from 1999 to 2002 in the consistency of accounting choices made by firms on Chinese GAAP and IAS-based annual reports. The improvement appears to be caused by the harmonization between Chinese GAAP and IAS.

Research Question 4

Data Description

The fourth research question addresses the quantitative effects of the differences between Chinese GAAP and IAS on Chinese listed firms' financial statements. Net incomes based on Chinese GAAP and IAS and the schedule of reconciliation of Chinese GAAP-based net income to IAS-based net income were obtained from the notes of annual reports prepared by Chinese listed firms that issue both A and B- shares.

The overall conservatism index was calculated for each firm in the following manner (see Chapter 3 for more details):

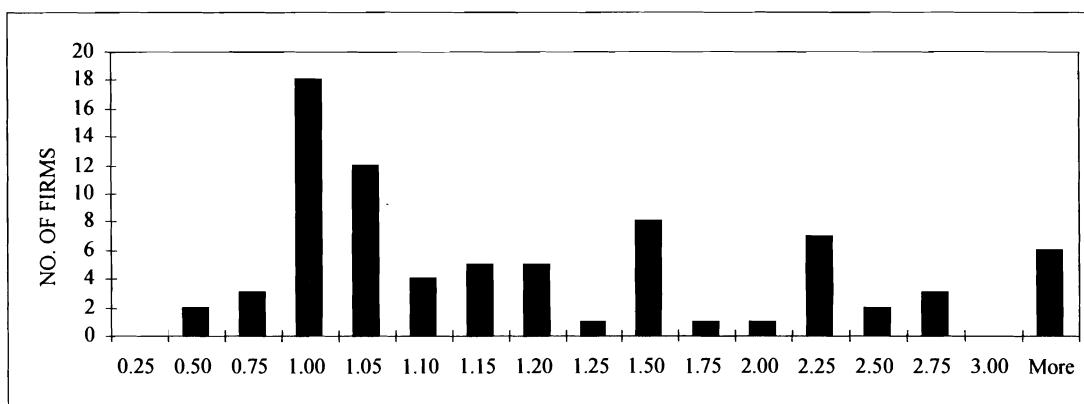
$$\text{Overall Index} = 1 - \frac{(\text{IAS Net Income} - \text{Chinese GAAP Net Income})}{|\text{IAS Net Income}|}$$

Descriptive statistics of the conservatism indices for 1999 and 2002 are presented in Table 13. CONSER99 and CONSER02 represent the conservatism index in 1999 and 2002, respectively. The relevant histograms are presented in Figure 5. Both descriptive statistics and histograms provide evidence that the distributions of the indices in 1999 and 2002 are not normal. As shown in Table 13, the mean and median (50th percentile) of the conservatism index for 1999 are 1.883 and 1.073, respectively. The mean and median of conservatism index for 2002 are 1.357 and 1.000, respectively. In both years the mean and median are divergent, indicating a lack of central tendency.

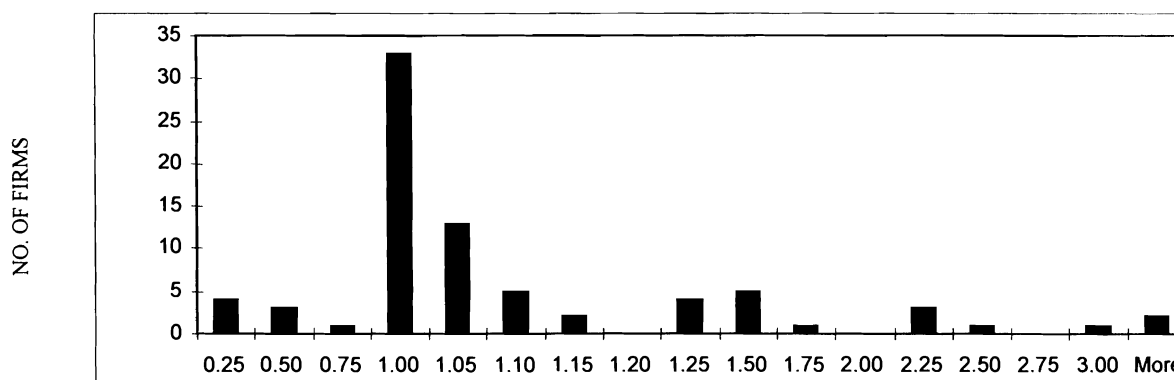
TABLE 13
DESCRIPTIVE STATISTICS OF THE CONSERVATISM INDICES

	N	Mean	Min.	25th	50th	75th	Max.
CONSER99	79	1.883	0.355	0.994	1.073	1.641	27.490
CONSER02	79	1.357	0.048	0.912	1.000	1.098	21.091

CONSER99 – Conservatism index for 1999
 CONSER02 – Conservatism index for 2002
 N. – Number of sample firms; Min. – Minimum value; Max. – Maximum value
 25th, 50th, 75th – Percentiles (indicate percentage of firms whose conservatism indices are below a specified value)



CONSER99



CONSER02

FIGURE 5
HISTOGRAMS OF THE CONSERVATISM INDICES

Tests of Hypotheses 4a and 4b

H4a: Chinese GAAP-based and IAS-based net incomes produced by the same firm are not significantly different for Chinese listed firms that issue both A and B-shares.

Given the lack of a normal distribution for the conservatism index, the t-test is not appropriate to test H4a since such test requires a normal distribution. As an alternative, a non-parametric approach, Wilcoxon one-sample test, is used to test H4a with the null hypothesis that the median conservatism index value for sample firms' 1999 and 2002 annual reports is not significantly different from one. The Wilcoxon test is distribution-free and is considered as "one of the most powerful nonparametric tests" because it is "a rather complicated function of the mean, the kurtosis, and the skewness" [Sachs, 1984, p.299]. The test results are reported in Table 14.

TABLE 14
SIGNIFICANCE OF THE NET INCOME
DIFFERENCES BETWEEN CHINESE GAAP AND IAS

<u>Year</u>	<u>N</u>	<u>Actual</u> <u>Median</u>	<u>Estimated</u> <u>Median</u>	<u>Wilcoxon</u> <u>Statistics</u>	<u>p-value</u>
1999	79	1.073	1.000	4,858	0.000
2002	79	1.000	1.000	6,201	0.767

Wilcoxon one-sample test, two-tailed, 5% significance level

As shown in Table 14, hypothesis H4a is rejected at the 5% level for the 1999 conservatism index values with $p < .000$ and supported at the 5% level for the 2002 conservatism index values with $p = 0.767$. These results imply that net income produced by the same firm under Chinese GAAP was substantially different from that produced under IAS in 1999 and that the income difference between Chinese GAAP and IAS was reduced to a relatively small and insignificant level in 2002.

H4b: For Chinese listed firms that issue both A and B-shares, the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the new Chinese GAAP.

For the same reason stated in testing H4a, the paired t-test is not appropriate to test H4b given the lack of normality in the distribution of the data. Instead, a non-parametric Wilcoxon two-sample test (Sachs, 1984) is used to test H4b using sample firms' 1999 and 2002 annual reports. The null hypothesis is that there is no significant reduction from 1999 to 2002 in the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm. The test is a one-tailed test because only one direction, that is, reduction of net income differences from 1999 to 2002, is expected. The results are reported in Table 15.

TABLE 15
REDUCTION OF THE NET INCOME DIFFERENCES
BETWEEN CHINESE GAAP AND IAS FROM 1999 TO 2002

	<u>N</u>	<u>Wilcoxon</u> <u>Statistics</u>	<u>p-value</u>
CONSER02 vs. CONSER99	79	-2.9760	0.001
CONSER99 – Conservatism index for 1999			
CONSER02 – Conservatism index for 2002			
N – Number of sample firms			
Wilcoxon two-sample test, one-tailed, 5% significance level			

As shown in Table 15, the sign of Wilcoxon statistic is negative, which is consistent with the expectation of the hypothesis. The p-value is 0.001 based on a 5% significance level. The null hypothesis is rejected, indicating that there is a significant reduction in the net income differences between Chinese GAAP and IAS from 1999 to 2002.

Further Analysis and Discussion

This section first analyzes the major causes of the net income differences between Chinese GAAP and IAS by reviewing reconciliation items disclosed in firms' annual reports. Next, the contribution of each reconciliation item to the total difference in net income is evaluated by calculating and analyzing partial indexes.

Causes of Net income differences between Chinese GAAP and IAS

An examination of reconciliation items was conducted to identify where the net income differences between Chinese GAAP-based and IAS-based annual reports arise. There are a total of 53 reconciliation adjustments in sample firms' 1999 annual reports and 58 reconciliation adjustments in sample firms' 2002 annual reports. These adjustments are compressed into 23 items for each year.³⁶ The adjustments were compressed due to the small incidences of occurrence or because they arose from the same accounting standards. For example, provision for PP&E, intangible assets, and CIP are compressed into one item as "adjustment for provision for PP&E, CIP, and intangible assets", based on the fact that the accounting treatment differences under Chinese GAAP and IAS are the same for these three categories. The description for each reconciliation item as well as the incidences of occurrence for the 79 sample firms in year 1999 and 2002 is presented in Table 16. Each reconciliation item is coded as "R01", "R02"... and "R23", based on the order of incidences of occurrence in 1999.

³⁶ Even though numerous studies focused on comparing the net income differences produced by the same firm under two different set of standard (see Chapter 2 Literature Review, the Fourth Stream), few studies attempted to analyze the reconciliation items that consist of net income differences. Rueschhoff and Strupeck (1998), Norton (1995), Cooke (1993), and Street et al. (2000) are the four known studies that attempted to analyze the reconciliation items. All these four studies compressed earnings reconciliation items into certain categories (items) for data analysis purpose.

TABLE 16
CAUSES OF THE NET INCOME DIFFERENCES BETWEEN
CHINESE GAAP AND IAS: ANALYSIS OF RECONCILIATION ITEMS

	Reconciliation Items	Incidences of occurrence 1999	Incidences of occurrence 2002
R01	Others*	50	42
R02	Adjustment for provision for doubtful accounts	47	11
R03	Adjustment for provision for inventory	28	4
R04	Adjustment for PP&E depreciation expense	27	26
R05	Adjustment for over(under)statement of expenses	26	23
R06	Adjustment for profits of associates/subsidiaries	22	34
R07	Adjustment for recognition and amortization of goodwill and negative goodwill	20	34
R08	Adjustment for provision for long-term investments	19	9
R09	Adjustment for recognition of profit from disposal of subsidiary and associated companies	19	10
R10	Adjustment for deferred tax	15	26
R11	Adjustment for minority interests	11	20
R12	Adjustment for pre-operating expense amortization	11	11
R13	Adjustment for foreign currency transactions	11	5
R14	Adjustment for staff welfare fund	10	11
R15	Adjustment for government grants	9	15
R16	Adjustment for provisions for PP&E, CIP , and intangible assets	8	8
R17	Adjustment for interest capitalization	8	7
R18	Adjustment for differences in basis of sales recognition	7	3
R19	Adjustment for unearned profit from related-party transactions	6	11
R20	Adjustment for land use right	5	4
R21	Adjustment for short-term investments	4	4
R22	Adjustment for debt restructuring	3	11
R23	Adjustment for investment properties	2	4

* "Others" is a reconciliation item that was reported by Chinese listed firms in their reconciliation schedule; however, no explanation was provided for this category.

There are several observations that can be made from Table 16. First, the most frequently used reconciliation item used by the 79 sample firms is “Others”. A total of 50 firms in 1999 and 42 firms in 2002 used this adjustment in their reconciliation schedule to reconcile the net income difference between Chinese GAAP-based and IAS-based annual reports. This indicates that more than 50% of Chinese listed firms either are unable to fully explain the net income difference by specifying the sources of all differences or believe the amount is immaterial to be accounted for. The exact reason is not clear, as no explanation was provided by these firms. Other top areas of adjustments with incidences of occurrence for more than 20 firms include R02-R07 in 1999 and R04-07, R10, and R11 in 2002.

Of particular concern among these adjustments, is the adjustment for provision for doubtful accounts (R02) and adjustment for provision for inventory (R03). As the second and third most frequently occurring source of adjustment in 1999, these adjustments are associated with what appears to be management’s opportunistic use of allowed flexibility in the standards. A total of 47 firms, approximately 60% of the sample firms, reported a provision for doubtful accounts as an adjustment item when reconciling the net income differences between Chinese GAAP and IAS. A total of 27 (34%) firms reported a provision for inventory in 1999. In 2002, such phenomenon continues to exist but the incidences of occurrence declined significantly from 28 to 4 with causes that need to be further explored. A puzzling fact is that the reconciliation adjustment does not appear to arise from differences in the standards in relation to accounting for doubtful accounts and inventory. The accounting treatment under Chinese GAAP and IAS for the provision for

doubtful accounts and inventory has been harmonized since 1998. Both standards allow management the flexibility to decide the amount of provision for doubtful accounts based on a firm's economic reality. Both standards require the recognition of the difference between the cost and the net realizable value of inventory as the provision for inventory. A further examination of results from the third research question indicates that firms claimed the same accounting treatment under Chinese GAAP and IAS in their annual reports in determining the provision for doubtful accounts and inventory. If firms' accounting choices in determining the provision are the same for A-share and B-share reports, then a reconciliation item due to this provision should not exist. A possible explanation is management's opportunistic use of this standard in the two sets of annual reports. It appears that management, when preparing Chinese GAAP-based annual reports and IAS-based annual reports, perceived differently the amount of doubtful accounts and obsolete inventory under the two sets of annual reports. That is, the amount of the provision for doubtful accounts and inventory reported in the A-share reports is different from that reported in the B-share reports and the difference is not due to differences in accounting standards.

Along the same line of reasoning, what appears to be managements' opportunistic compliance with standards is also reflected in R08, "Adjustment of provision for long-term investments", and R16, "Adjustment for provision for PP&E, CIP, and intangible assets" for the year 2002, since the standards were harmonized for these two reconciliation items and firms claimed to choose the same accounting choice in their

A and B-share reports (that is, firms claimed to have complied with these standards), thus net income differences should not arise from differences in standards.

Another concern regarding the reconciliation adjustment items reported in Table 16 is the lack of information in annual reports to explain the reconciliation differences. For example, some reconciliation adjustments were simply stated as “Adjustment for over (under) statement of expenses” (R05), without describing the expenses. As a result, there is no way to determine whether such adjustments arise from differences in the standards or from managements’ opportunistic use of reconciliation adjustments. Other examples include “Adjustment for profits of associates/subsidiaries” (R06), “Adjustment for staff welfare fund” (R14), and “Adjustment for interest capitalization” (R17). Again, no explanation was given as to how treatments for these accounting events cause the net income difference between Chinese GAAP and IAS. All other reconciliation items listed in Table 16 appear to arise from standard differences.

Contribution of Each Reconciliation Item to Overall Net Income Differences:

Partial Index Analysis

In order to measure the materiality of the contribution of each reconciliation category to the overall net income difference, a partial index was calculated for each reconciliation item using the following formula (see Chapter 3 for more discussion).

$$\text{Partial Index} = 1 - \frac{\text{Partial Adjustment}}{|\text{IAS Net Income}|}$$

Table 17 presents descriptive statistics and test results for the partial index. Note that the incidences of occurrence for any category that is below 8 (i.e., 10% of the number of total sample firms) were removed from the partial index calculation as the event under such category did not occur with sufficient frequency to allow statistical analysis. The Wilcoxon one-sample test³⁷ is used to test the null hypothesis that the median of a partial index is not significantly different from one. If the null is rejected, then the contribution of the reconciliation category associated with the partial index to the overall differences of net income is considered significant.

³⁷ A t-test is not appropriate here since the descriptive results shown on Table 17 indicate that the distributions of all partial indices are asymmetric.

TABLE 17
MATERIALITY OF THE CONTRIBUTION OF EACH
RECONCILIATION ITEM TO THE OVERALL NET INCOME DIFFERENCES
BETWEEN CHINESE GAAP AND IAS: PARTIAL INDEX ANALYSIS

Panel A: Partial Index of 1999								
<u>Reconciliation</u>	<u>Incidences</u>							
<u>Item</u>	<u>of</u>	<u>p-value</u>	<u>Mean</u>	<u>Min.</u>	<u>25th</u>	<u>50th</u>	<u>75th</u>	<u>Max.</u>
	<u>Occurrence</u>							
R01	50	0.065	0.998	-1.502	0.988	1.001	1.027	2.31
R02	47	0.001***	1.711	-1.362	0.982	1.06	1.256	19.292
R03	28	0.02*	1.034	0.694	0.987	1.023	1.084	1.449
R04	27	0.081	1.078	0.873	0.99	1.032	1.172	1.593
R05	26	0.611	1.177	0.528	0.986	1.012	1.059	4.149
R06	22	0.581	0.379	-13.565	0.953	1.013	1.153	1.487
R07	20	0.083	0.95	0.196	0.938	0.995	1.004	1.266
R08	19	0.008***	1.18	0.391	0.985	1.067	1.374	2.501
R09	19	0.767	1.257	-0.367	0.636	0.976	1.138	5.701
R10	15	0.319	0.894	0.193	0.884	0.989	1.045	1.074
R11	11	0.247	0.959	0.444	0.974	0.99	1.035	1.137
R12	11	0.247	0.905	-0.03	0.965	0.997	1.016	1.064
R13	11	0.247	1.436	0.905	0.972	1.013	1.294	4.439
R14	10	0.015**	1.132	0.976	1.001	1.054	1.209	1.641
R15	9	0.000***	1.306	1.015	1.018	1.03	1.622	2.369
R16	8	0.007***	1.076	0.999	1.009	1.057	1.15	1.213
R17	8	1	1.196	0.87	0.981	1.008	1.117	2.543
R18	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R19	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R20	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R21	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R22	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R23	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

(1) Partial index is calculated for each reconciliation item each year. It is calculated by using the formula (3.4) that was provided in chapter 3 and re-printed on the previous page.
(2) Wilcoxon one-sample test at 5% significance level, two-tailed
(3) Min. – Minimum, Max. – Maximum, 25th, 50th, 75th - Percentiles
(4) *** Significant at p<0.001; ** Significant at p<0.01; * Significant at p<0.05
(5) N/A: Excluded from statistical analysis due to low incidences of occurrence.

TABLE 17 (CONT'D)
MATERIALITY OF THE CONTRIBUTION OF EACH
RECONCILIATION ITEM TO THE OVERALL NET INCOME DIFFERENCES
BETWEEN CHINESE GAAP AND IAS: PARTIAL INDEX ANALYSIS

Panel B: Partial Index of 2002								
<u>Reconciliation</u>	<u>Incidences</u>							
<u>Item</u>	<u>of</u>	<u>p-value</u>	<u>Mean</u>	<u>Min.</u>	<u>25th</u>	<u>50th</u>	<u>75th</u>	<u>Max.</u>
	<u>Occurrence</u>							
R01	42	0.422	0.988	0.535	0.991	0.999	1.003	1.059
R02	11	0.044*	0.887	-0.094	0.936	0.989	1.033	1.161
R03	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R04	26	0.127	1.105	0.566	0.942	1.01	1.108	2.423
R05	23	0.015**	0.978	0.54	0.953	0.987	1.004	1.761
R06	34	0.075	1.471	0.358	0.98	1.007	1.074	15.083
R07	34	0.000***	0.742	-7.258	0.958	0.988	1.003	1.187
R08	9	0.203	1.474	0.751	0.929	1.065	1.683	3.778
R09	10	0.015**	0.897	0.414	0.642	0.962	1.026	1.395
R10	26	1	1.016	0.713	0.938	0.997	1.048	1.486
R11	20	1	1.024	0.793	0.992	1	1.051	1.342
R12	11	0.044*	1.108	0.979	0.997	1.01	1.102	1.895
R13	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R14	11	0.001***	1.096	0.98	1.002	1.021	1.063	1.673
R15	15	0.003**	0.849	0.031	0.905	0.976	1	1.084
R16	8	0.369	0.932	0.319	0.793	0.997	1.068	1.287
R17	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R18	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R19	11	0.7	1	0.678	0.986	1.011	1.11	1.282
R20	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R21	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R22	11	0.001***	2.558	0.943	0.96	0.986	1	18.354
R23	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A

(1) Partial index is calculated for each reconciliation item each year. It is calculated by using the formula (3.4) that was provided in chapter 3 and re-printed on the previous page.
(2) Wilcoxon one-sample test at 5% significance level, two-tailed
(3) Min. – Minimum, Max. – Maximum, 25th, 50th, 75th - Percentiles
(4) *** Significant at p<0.001; ** Significant at p<0.01; * Significant at p<0.05
(5) N/A: Excluded from statistical analysis due to low incidences of occurrence.

As shown in Table 17, among all reconciliation items that are subject to statistical analysis, the partial index calculated for reconciliation item R02, “Adjustment for provision for doubtful accounts”, R03, “Adjustment for provision for inventory”, R08, “Adjustment for provision for long-term investments”, R14, “Adjustment for staff welfare fund”, R15, “Adjustment for government grants”, and R16, “Adjustment for provision for PP&E, CIP, and intangible assets” are significant in 1999. The partial index calculated for reconciliation item R02, “Adjustment for provision for doubtful accounts”, R05, “Adjustment for over(under) statement of expenses”, R07, “Adjustment for recognition and amortization of goodwill and negative goodwill”, R09, “Adjustment for recognition of profit from disposal of subsidiary and associated company”, R12, “Adjustment for pre-operating expense amortization”, R14, “Adjustment for staff welfare fund”, R15, “Adjustment for government grants”, and R22, “Adjustment for debt restructuring” are significant in 2002. That is, these are driving factors that contribute significantly to the overall net income differences between Chinese GAAP and IAS in the year 1999 and 2002, separately.

This finding, along with the analysis of the causes of net income differences between Chinese GAAP and IAS, raises a serious concern on the usefulness of the reconciliation schedule required to be provided by Chinese listed firms issuing A and B-shares to reconcile the net income difference between Chinese GAAP and IAS. Most of the reconciliation items that have significant contributions to the overall net income difference were not caused by differences in standards. In 1999, five out of six significant reconciliation items (R02, R03, R08, R14, and R16) were not caused by differences in

standards. Only one significant reconciliation item (R15) is caused by differences in standards in 1999. In 2002, the situation improved, as only three out of eight significant reconciliation items (R02, R05 and R14) were not caused by differences in standards. The remaining five significant items (R07, R09, R12, R15 and R22) were caused by differences in standards.

Of those items that were not caused by differences in standards, some of them were caused by what appears to be managements' opportunistic use of standards, such as the item R02 in 1999 and 2002, and R03, R08, and R16 in 1999. In other instances, there are adjustment items made without proper disclosures as to why those adjustments were made, such as the item R14 in 1999 and R05 and R14 in 2002.

Summary of the Findings on the Fourth Research Question

First, the net income differences between Chinese GAAP-based and IAS-based annual reports of the same firm are significant in 1999 but not significant in 2002. Second, there is a significant reduction in net income differences between Chinese GAAP-based and IAS-based annual reports of the same firm from 1999 to 2002. Finally, a number of reconciliation items made a significant contribution to the net income differences between Chinese GAAP-based and IAS-based annual reports. These differences appear to arise from differences in standards, managements' opportunistic application of standards, or reasons not accounted for by listed firms in their annual reports. It appears that the usefulness of the reconciliation schedule prepared by Chinese listed firms in their annual reports is low.

Chapter 5

SUMMARY AND CONCLUSIONS

This chapter presents a brief summary of the study followed by a discussion of limitations. Finally, recommendations are made for future research.

Summary

This study provides a comprehensive assessment of the harmonization of Chinese GAAPs issued in 1998 and 2001, with IAS, and the effects of such harmonization efforts on accounting practices of Chinese listed firms issuing A-shares and B-shares. The study has two objectives. First, the study explores whether and to what extent Chinese GAAP has been harmonized with IAS (*de jure* harmonization) since the beginning of Chinese accounting reforms in 1990. Second, this study explores whether the *de facto* harmonization (accounting practices) has been improved with *de jure* harmonization and whether the accounting reform in China has been effective. Both *de jure* and *de facto* harmonization could be assessed by examining harmonization across countries and/or harmonization of an individual country's accounting standard with higher level standards, such as IAS. This study focuses on the latter, that is, the harmonization of Chinese GAAP with IAS. In this study, *de jure* harmonization of Chinese GAAP with IAS is evaluated first followed by an assessment of *de facto* harmonization.

To assess *de jure* harmonization, Chinese GAAPs issued in 1992, 1998, and 2001 were compared with IAS by using an instrument that contains 77 items of financial accounting measurement requirements. For each measurement item under each Chinese GAAP, a rank is assigned indicating the extent of harmonization. The frequency is then calculated for each rank and each GAAP, and the change in frequency of each rank is evaluated to determine the current status of harmonization and the progress of harmonization. The results revealed that China has made great progress toward *de jure* harmonization with IAS through the accounting standards it has issued or revised over the past decade, namely, 1992, 1998, and 2001 Chinese GAAP. The significant improvement in harmonization occurred between 1992 and 1998 Chinese GAAP and between 1998 and 2001 Chinese GAAP.

The overall level of harmonization is high with more than two thirds of the financial accounting measurement requirements being substantially harmonized with IAS. Nevertheless, this study also points to the need for the Chinese standard setters to continue working towards greater *de jure* harmonization, since noticeable variances between Chinese GAAP and IAS still exist in key financial measures. It appears that current differences between Chinese GAAP and IAS mainly arise from two sources: (1) Chinese GAAP does not allow the use of the fair value concept. Unlike IAS, which requires the use of fair market value in valuation of certain assets, the Chinese GAAP does not allow the use of fair market value in valuation of assets. (2) Chinese GAAP is more likely to capitalize certain income/expense items as reserves rather than charge

them directly to income/expense as required under IAS. Accounting for pre-operating expenses falls into this category.

To assess *de facto* harmonization, the 1999 and 2002 annual reports of 79 Chinese firms that issue both A and B-shares were reviewed. These two years were chosen to assess whether the harmonization with IAS improved with the issuance of the new Chinese GAAP in 1998 and 2001. A compliance index, consistency index, and conservatism index were calculated based on information collected from these two years' annual reports. The three types of indices measure the extent of harmonization from different perspectives and together provide a comprehensive picture of the extent of *de facto* harmonization of Chinese GAAP with IAS.

The compliance index measures the extent of Chinese listed firms' compliance with Chinese GAAP and IAS. This index serves as an indirect measurement of *de facto* harmonization, on the premise that harmonized accounting standards must be followed in order to be considered as harmonized in practice. The findings provide strong support that sample firms comply significantly with both Chinese GAAP and IAS. Nevertheless, the level of compliance with Chinese GAAP is significantly higher than that with IAS in both 1999 and 2002. This may imply that the enforcement in China to comply with Chinese GAAP is more rigorous than that to comply with IAS. The tests of the compliance index also reveal that Chinese listed firms' compliance with IAS improved from 1999 to 2002. Without any evidence that the enforcement to comply with IAS improved from 1999 to 2002, this finding may imply that Chinese accounting reform has been an important source to propel firms to comply with IAS. In summary, the above

findings provide indirect evidence that the harmonization of accounting standards is highly relevant to the harmonization of accounting practices. However, the significantly lower compliance with IAS compared to compliance with Chinese GAAP raises a concern as to the enforceability of IAS in China.

The consistency index examines whether the firms that issue A and B-shares make the same accounting choice under Chinese GAAP and IAS and whether such accounting choice is in compliance with IAS. The findings from the consistency index analysis show that, first, there exist significant differences between the accounting choices made under Chinese GAAP and IAS by the same firm for A-share and B-share annual reports. This lack of consistency arises from two sources: differences in standards and non-compliance with IAS. Second, the lack of consistency is significantly reduced from 1999 to 2002. Again, this serves as evidence that the harmonization of accounting standards is highly relevant to the harmonization of accounting practices. The descriptive analysis presented in Chapter 4 on the non-harmonized areas in 1999 and 2002 also provides strong support for the argument that national standard setters play an important role in motivating local firms to harmonize with IAS. Thus, to improve the level of harmonization, the IASB should coordinate its harmonization efforts with national standard setters. Another interesting finding is that a considerable number of firms selected accounting treatments in their B-share reports that are actually in compliance with Chinese GAAP but in violation of IAS. The cause of such phenomenon is unknown and is an area for future research.

The conservatism index measures the net income differences produced under Chinese GAAP-based annual reports and IAS-based annual reports in this study. In previous literature, this index has been used for two purposes: (1) to measure the quantitative effects of the *de jure* harmonization, and (2) to evaluate whether net income under one standard is consistently lower than net income under the another standard, that is, whether one standard is more conservative than the other standard. The current study focuses on the use of conservatism index for the first purpose. The findings on the conservatism index provide evidence that (1) the differences in net incomes produced by the same firm under Chinese GAAP and IAS were significant in 1999 but not significant in 2002; (2) there exists a significant reduction in net income differences from 1999 to 2002. A further analysis of the reconciliation items reveals that the net income differences between Chinese GAAP and IAS are significantly associated with certain reconciliation adjustments. These significant reconciliation adjustments are associated more with the seemingly opportunistic use of standards by firms, or reasons not disclosed by listed firms in their reports, than with the differences in standards. This finding raises a concern about the usefulness of the reconciliation schedules prepared by Chinese listed firms. This last finding also suggests that, the conservatism index, as a measure of *de facto* harmonization, should be used prudently in future harmonization research, as the differences between two income figures produced under the two sets of accounting standards may be due to not only standard differences, but also violations of standards and/or management's opportunistic use of standards.

Table 18 presents a summary of the hypotheses test results. Overall, the findings of this study indicate that the accounting reform in China has been effective in harmonizing the accounting standards. This study also provides support for the argument that research on the level of *de jure* harmonization is highly valuable. As argued by Garrido et al. [2002], *de jure* harmonization may lead to higher *de facto* harmonization. This argument is supported by this study. The higher *de jure* harmonization detected in this study concurred with the higher *de facto* harmonization as evidenced by the significant increases in compliance index, consistency index, and conservatism index from 1999 to 2002.

This finding may be of interest to accounting policy makers as it sheds light on the future direction of harmonization efforts. International standard setters such as the IASB should work closely with national standard setters, especially those from developing countries, such as China, in the development of IAS. The IASB should also provide support to these standard setters, since as shown in this study, these standard setters play a crucial role in the harmonization of firm' practices with IAS.

TABLE 18
SUMMARY OF HYPOTHESES TEST RESULTS

	<u>Hypotheses</u>	<u>Measurement Methods</u>	<u>Test Methods</u>	<u>Results</u>
H1a	Chinese GAAP has been substantially harmonized with IAS.	Rank of closeness	No formal statistical test. Descriptive information is provided.	Not supported
H1b	The comparability of Chinese GAAP with IAS has improved over the past decade.	Rank of closeness	Chi-square test for symmetry	Supported
H2a	Chinese listed firms that issue both A and B- shares are significantly in compliance with Chinese GAAP.	Compliance index	Kolmogoroff-Smirnoff goodness-of-fit test	Supported
H2b	Chinese listed firms that issue both A and B-shares are significantly in compliance with IAS.	Compliance index	Kolmogoroff-Smirnoff goodness-of-fit test	Supported
H3a	Chinese listed firms that issue both A and B-shares use consistent treatments in Chinese GAAP-based and IAS-based annual reports.	Consistency index	Kolmogoroff-Smirnoff goodness-of-fit test	Not supported
H3b	The comparability of accounting treatments between Chinese GAAP-based and IAS-based annual reports has improved with the issuance of the new Chinese GAAP.	Consistency index	Paired t-test	Supported
H4a	Chinese GAAP-based and IAS-based net incomes produced by the same firm are not significantly different for Chinese listed firms that issue both A and B-shares.	Conservatism index	Wilcoxon one-sample test	Not Supported in 1999; Supported in 2002
H4b	For Chinese listed firms that issue both A and B-shares, the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the new Chinese GAAP.	Conservatism index	Wilcoxon two-sample test	Supported

Limitations

Certain limitations should be considered when interpreting the results of this study. One limitation of the study is that subjectivity is unavoidable in the selection of the accounting measurement treatments included in the instrument as well as the professional judgment made during the data collection process. Even so, the subjectivity is minimized by specifying the criteria used for selection and by applying such criteria consistently (as explained in Chapter 3).

Another limitation of the study is the small sample size. Only 79 firms were investigated. Even though they represent a full sample that simultaneously issued A and B-shares, generalization of results to firms that issue A-shares only may not be possible. Finally, this study is subject to the limitation of certain firms' non-disclosures. Generally, when a firm fails to disclose a certain standard that is applied in the preparation of annual reports, a value of "9", designating "not applicable", was used in this study. In these situations, the results may not truly reflect the degree of harmonization. This limitation is common in the harmonization study literature.

Notwithstanding these limitations, the findings of this study, as discussed earlier, has policy implications and should be of interest to the IASB and standard setters in emerging economies such as China in their efforts in harmonizing accounting standards with IAS.

Suggestions for Future Research

As an extension of current study, there are several avenues for future research. First, the current research only examined accounting measurement treatments. Future research may consider including disclosure requirements. In addition, the current research only included domestic Chinese firms that issue both A and B-shares. Future research may also investigate firms listed in Hong Kong and firms listed overseas. All these firms are required to provide two sets of annual reports. The variance between firms listed domestically and firms listed overseas may provide further insight to harmonization issues. Next, a review of the annual reports of firms that issue A-shares only may be another approach to investigate the harmonization of Chinese listed firms with IAS.

Second, the current research focuses only on evaluating the current status of harmonization of Chinese GAAP with IAS. Future research may further investigate what factors may cause or may be associated with the findings in this study. For example, firms are required to comply with IAS when preparing their B-share annual reports. However, why did many firms who claimed to comply with IAS in their B-share annual reports actually choose accounting treatments that are in compliance with Chinese GAAP but in violation of IAS?

Finally, the findings in this study reveal a possibility of earnings management through accounting and financial disclosure by listed companies in China. This topic is also worthy of further study. Research questions such as whether firms manage Chinese GAAP-based earnings as well as IAS-based earnings and whether the extent of earnings management is the same are interesting questions to explore.

In sum, the movement in China to harmonize its national accounting standards and practices with IAS provides an attractive setting to research harmonization issues. Continued observation of this situation should benefit regulators and practitioners.

REFERENCES

- Adhikari, A. and R. H. Tondkar (1992). "Environmental factors influencing accounting disclosure requirements of global stock exchange." Journal of International Financial Management & Accounting 4(2): 75-105.
- Archer, S., P. Delvaille and S. McLeay (1995). "The measurement of harmonization and the comparability of financial statement items: within-country and between-country effects." Accounting and Business Research 25(98): 67-80.
- Chamisa, E. E. (2000). "The relevance and observance of the IASC standards in developing countries and the particular case of Zimbabwe." The International Journal of Accounting 35(2): 267-286.
- Chen, C. J. P., F. A. Gul and X. Su (1999). "A comparison of reported earnings under Chinese GAAP vs. IAS: evidence from the Shanghai Stock Exchange." Accounting Horizons 13(2): 91-111.
- Chen, S., Z. Sun and Y. Wang (2002). "Evidence from China on whether harmonized accounting standards harmonizes accounting practices." Accounting Horizons 16(3): 183-197.
- China Daily (2004). "China: GDP growing 9.1% in 2003." (January 20): 1.
- Chinese Securities Regulatory Commission (CSRC) (2002). "CSRC statistical report system - summary by shares categories." www.csrc.gov.cn.
- Cooke, T. E. (1993). "The impact of accounting principles on profits: the US versus Japan." Accounting and Business Research 23(92): 460-476.
- Deloitte & Touche (2003a). "Use of IFRS for reporting by domestic listed companies, by country." www.iasplus.com/country/useias.html.
- Deloitte & Touche (2003b). "History of IAS21." www.iasplus.com/standard/ias21.html.
- Doupnik, T. S. (1987). "Evidence of international harmonization of financial reporting." The International Journal of Accounting Education and Research 23(1): 47-67.
- Doupnik, T. S. and M. E. Taylor (1985). "An empirical investigation of the observance of IASC standards in Western Europe." Management International Review 25(1): 27-33.

- Dumontier, P. and B. Raffournier (1998). "Why firms comply voluntarily with IAS: an empirical analysis with Swiss data." Journal of International Financial Management & Accounting 9 (3): 216-.
- Eccher, E. A. and P. M. Hearly (2000). "The role of International Accounting Standards in transitional economies: a study of the people's republic of china." Unpublished Working Paper.
- Emenyonu, E. N. and S. J. Gray (1992). "EC accounting harmonization: An empirical study of measurement practices in France, Germany and the UK." Accounting and Business Research 23(89): 49-58.
- Emenyonu, E. N. and S. J. Gray (1996). "International accounting harmonization and the major developed stock market countries: an empirical study." The International Journal of Accounting 31(3): 269-279.
- Fitzgerald, R. D. (1981). "International harmonization of accounting and reporting." The International Journal of Accounting Education and Research 17(1): 21-32.
- Frost, C. A. and G. Pownall (1994). "Accounting disclosure practices in the United States and the United Kingdom." Journal of Accounting Research 32(1): 75-102.
- Garrido, P., A. Leon and A. Zorio (2002). "Measurement of formal harmonization progress: the IASC experience." The International Journal of Accounting 37(1): 1-26.
- Gernon, H. and R. S. O. Wallace (1995). "International accounting research: a review of its ecology, contending theories and methodologies." Journal of Accounting Literature 14(1): 54-106.
- Glaum, M. and D. L. Street (2003). "Compliance with the disclosure requirements of Germany's new market: IAS versus US GAAP." Journal of International Financial Management & Accounting 14(1): 64-100.
- Graham, R. C. and C. C. Wang (1995). "Taiwan and international accounting standards: a comparison." The International Journal of Accounting 30(2): 149-167.
- Gray, S. J. (1980). "The impact of international accounting differences from a security-analysis perspective: some European evidence." Journal of Accounting Research 18(1): 64-76.
- Herrmann, D. and W. B. Thomas (1997). "Geographic segment disclosures: theories, findings, and implications." International Journal of Accounting 32(4): 487-501.

- Larson, R. K. and S. Y. Kenny (1999). "The harmonization of international accounting standards: progress in the 1990s?" Multinational Business Review 7 (1): 1-12.
- Lin, Z. (1988). "A survey of current developments in Chinese accounting." Advances in International Accounting 2: 99-110.
- McKinnon, S. M. and P. Janell (1984). "The international accounting standards committee: a performance evaluation." The International Journal of Accounting, Education and Research 19 (2): 19-46.
- Meek, G. K. and S. M. Saudagaran (1990). "A survey of research on financial reporting in a transnational context." Journal of Accounting Literature 9: 145-182.
- Nair, R. D. and W. G. Frank (1981). "The harmonization of international accounting standards, 1973-1979." The International Journal of Accounting Education and Research 17(1): 61-77.
- Norton, J. (1995). "The impact of financial accounting practices on the measurement of profit and equity: Australia versus the United States." Abacus 31(2): 178-200.
- Pownall, G. and K. Schipper (1999). "Implications of accounting research for the SEC's consideration of international accounting standards for U.S. Securities offerings." Accounting Horizons 13(3): 259-280.
- Prather, J. and N. G. Rueschhoff (1996). "An analysis of international accounting research in U.S. academic accounting journals, 1980 through 1993." Accounting Horizons 10(1): 1-17.
- Quanjing Statistics (2004). "Market statistics as of January 20, 2004." www.p5w.net.
- Rahman, A., H. Perera and S. Ganeshanandam (1996). "Measurement of formal harmonization in accounting: an exploratory study." Accounting and Business Research 26(4): 325-339.
- Rueschhoff, N. G. and C. D. Strupeck (1998). "Equity returns: local GAAP versus U.S. GAAP for foreign issuers from developing countries." The International Journal of Accounting 33(3): 377-389.
- Sachs, L. (1984). "Applied statistics: a handbook of techniques." Springer-Verlag (New York).

- Saudagaran, S. M. and G. K. Meek (1997). "A review of research on the relationship between international capital markets and financial reporting by multinational firms." Journal of Accounting Literature **16**: 127-159.
- Security Times (2004). "Market capitalization of Shanghai and Shenzhen Stock Exchange increased by 10% last years." (January 2): 1, in Chinese.
- Street, D. L. and S. M. Bryant (2000). "Disclosure level and compliance with IASs: a comparison of companies with and without U.S. Listings and filings." The International Journal of Accounting **35**(3): 305-329.
- Street, D. L. and S. J. Gray (1999). "How wide is the gap between IASC and U.S. GAAP? Impact of the IASC comparability project and recent international development." Journal of International Accounting Auditing & Taxation **8**(1): 133-164.
- Street, D. L. and S. J. Gray (2001). "Observance of international accounting standards: Factors explaining non-compliance." The Association of Chartered Certified Accountants (ACCA) Research Report: No. 74.
- Street, D. L., S. J. Gray and S. M. Bryant (1999). "Acceptance and observance of international accounting standards: An empirical study of companies claiming to comply with IASs." The International Journal of Accounting **34**(1): 11-48.
- Street, D. L., N. B. Nichols and S. J. Gray (2000). "Assessing the acceptability of international accounting standards in the US: an empirical study of the materiality of U.S. GAAP reconciliations by non-U.S. companies complying with IASC standards." The International Journal of Accounting **35**(1): 27-63.
- Tang, Q. (1994). "Economic consequences of the international harmonization of accounting standards: theory and its Chinese application." The International Journal of Accounting **29**(2): 146-160.
- Tang, Y. (2000). "Bumpy road leading to internationalization: a review of accounting development in china." Accounting Horizons **14**(1): 93-102.
- Tay, J. S. and R. H. Parker (1990). "Measuring international harmonization and standardization." Abacus **26**(1): 71-88.
- Taylor, M. E. and R. A. Jones (1999). "The use of International Accounting Standards terminology: a survey of IAS compliance disclosure." The International Journal of Accounting **34**(4): 557-570.

- Tondkar, R. H., S. Peng and C. Hodgdon (2003). "The Chinese Securities Regulatory Commission and the regulation of capital markets in china." Advances in International Accounting **16**: 153-174.
- Van der Tas, L. G. (1988). "Measuring harmonization of financial reporting practice." Accounting and Business Research **18**(70): 157-169.
- Wallace, R. S. O. and H. Gernon (1991). "Frameworks for international comparative financial accounting." Journal of Accounting Literature **10**: 209-264.
- Weetman, P. and S. J. Gray (1991). "A comparative analysis of the impact of accounting principles on profits: the USA versus the UK, Sweden, and the Netherlands." Accounting and Business Research **21**(84): 363-379.
- Wolk, H. I. and P. H. Heaston (1992). "Toward the harmonization of accounting standards: an analytical framework." The International Journal of Accounting **27**(2): 95-111.
- Xiang, B. (1998). "Institutional factors influencing China's accounting reforms and standards." Accounting Horizons **12**(2): 105-119.
- Xiao, Z. (1999). "Corporate disclosures made by Chinese listed companies." The International Journal of Accounting **34**(3): 349-373.

APPENDIX I DATA COLLECTION SHEET

[R]: required treatment for all companies complying with IAS

[B]: benchmark treatment that is recommended or preferred according to IAS

[A]: allowed treatment that is not required or forbidden by IAS

[F]: forbidden treatment that is not permitted by IAS

IAS2: Inventories

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
1	Determination of Cost of Goods Sold (CGS)	Dissimilar items: specific identification [R]; Similar items: FIFO and Weighted Average [B]; LIFO [A].
2	Determination of ending inventory cost	Use LCM method. [R]
3	Recognition of Inventory impairment and reversal of impairment	Recognized as the difference between the cost and NRV in the income statement in which the impairment occurs. [R]
4	Determination of CGS of Low value inventories	Same as determination of CGS of other inventories. That is, for dissimilar items, specific costs are attributed to the specific individual items of inventory [R]. For similar items, use FIFO and Weighted Average. [B] LIFO. [A]

IAS 8: Accounting Policies, Changes in Accounting Estimates, and Errors

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
5	Non-mandated changes in accounting policy	Restate prior financial statements by adjusting opening accumulated profits and restating comparatives; If impractical to restate prior periods, apply prospectively [B]. Include as a cumulative effect in net profit and loss in the current financial statements, comparatives are not restated, but additional pro forma information reflecting the effect as if the benchmark treatment had been adopted is required to be disclosed, unless it is impracticable to do so [A].
6	Mandatory changes in accounting policy	Applied retroactively unless otherwise proscribed by regulators or unless it is impractical to do so. [R]
7	Change in accounting estimates	The effect of such a change is included in the net profit or loss in the current period and any affected future periods. [R]

APPENDIX I (CONT'D)

8	Prior period fundamental errors	Treat the correction of a fundamental accounting error as an adjustment of the opening balance of retained earnings and to restate comparative information.[B] The amount of the correction is included in net profit or loss for the current period, comparatives are not restated, but additional pro forma information reflecting the effect as if the benchmark treatment had been adopted is required to be disclosed, unless it is impracticable to do so. [A]
---	---------------------------------	--

IAS 10: Events after the Balance Sheet Date

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
9	Adjusting event and non-adjusting event	Financial statements should be adjusted for adjusting event, while not be adjusted for non-adjusting event. Non-adjusting event should be disclosed if such events affect user decisions.
10	Sales return and sales cut-off	Considered as adjusting event.
11	Dividends declared	Both cash and stock dividends are considered as non-adjusting events.

IAS11: Construction Contracts

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
12	Contract revenue	Use percentage-of-completion method if total revenue and cost as well as stage of completion can be reliably estimated. Otherwise recognize revenue only to the extent that contract costs incurred are expected to be recoverable, and contract costs should be expensed as incurred [R]. Completed-contract method [F].
13	Expected loss on a construction contract	Recognized as an expense as soon as such loss is probable. [R]
14	Borrowing costs incurred for construction contracts	Included as costs of construction contracts if the company's policy is to capitalize borrowing costs.

IAS12: Income Taxes

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
15	Recognition of tax expense or income	Recognized as income or expense and included in net profit or loss for the period, except to the extent that the tax arises from: (1) a transaction or event that is recognized directly in equity; or (2) a business combination accounted for as an acquisition. [R]
16	Treatment for deductible temporary differences	Use the tax effect accounting method.

APPENDIX I (CONT'D)

- 17 Treatment for timing difference when there are changes in tax rates or imposition of new taxes. Use liability method. [R]

IAS16: Property, Plant and Equipment (PP&E)

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
18	Determination of depreciation method, estimated useful life, and residual value of PP&E	Determined by management and should reflect the pattern in which the asset's economic benefits are consumed by the enterprise. [R]
19	PP&E and construction in process (CIP) on balance sheet date	Report the asset as cost less accumulated depreciation and accumulated impairment losses. [B] Report the asset at a revalued amount, being its FMV at the date of revaluation less subsequent depreciation and impairment. Revaluations should be carried out regularly, so that the carrying amount of an asset does not differ materially from its FMV at the balance sheet date. [A]
20	Recognition of impairment of PP&E and CIP	Impairment is recognized as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. Recoverable amount is the higher of net selling price and the value in use. [R]
21	Accounting for reversal of impairment	Recognized when a previously recognized impairment loss may have decreased on balance sheet date and reported as a profit in the income statement. [R]
22	PP&E received as a capital contribution	Measured at FMV. [R]
23	Exchange of dissimilar PP&E	Measured at FMV of the asset acquired. Gain or loss is recognized. [R]
24	Exchange of similar PP&E	Measured at carrying value of the asset surrendered, no gain or loss recognized. However, if the FMV of the asset acquired is less than carrying value of the asset surrendered, an impairment loss should be recognized. [R]

IAS17 Leases

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
25	Operating lease incomes/payments	Recorded as income/expense on straight-line basis over the lease term. [R]

APPENDIX I (CONT'D)

26	Depreciation method for a leased asset	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]
27	Lessee measurement of assets and related liability acquired from a finance lease	Record PP&E at lower of FMV or present value (PV) of minimum lease payment (MLP). Record liability as long-term liability at MLP. Record the difference as unrecognized finance charge. [R]
28	Discount rate used to measure the PV of MLP in a finance lease	Use the rate that discounts the MLP and unguaranteed residual value back to the FMV of the leased asset. If that is unknown, use lessee's incremental borrowing rate.
29	Amortization of unrecognized finance charge of a finance lease by lessee	Amortized over lease term using effective interest method. [R]
30	Initial direct costs of a finance lease by lessee	Expensed. [R]
31	Initial direct costs of a finance lease by lessor	Either expensed or amortized over the lease term. [R]
32	Lessor measurement of a finance lease	Recorded as a receivable, at an amount equal to the net investment in the lease. [R]
33	Lessor measurement of income from a finance lease	Based on pattern reflecting a constant periodic rate of return of the lessor's net investment outstanding in respect of the finance lease. [R]

IAS20 Accounting for Government Grants and Disclosure of Government Assistance

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
34	Government grant received to fund a specific project	Recognized as income over project period.

IAS21: The Effects of Changes in Foreign Exchange Rates

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
35	Initial recognition of foreign currency transaction	Use spot rate on transaction date. [R] Use average rate of the period if they are a reasonable approximation of actual. [A]
36	Monetary items reported on balance sheet date	Use closing rate on balance sheet date. [R]
37	Exchange differences in the normal operation	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]

APPENDIX I (CONT'D)

38	Non-monetary items reported on balance sheet date	Either reported at FMV or historical cost. For non-monetary items carried at FMV, use the rate that existed when the values were determined. For non-monetary items carried at historical cost, use spot rate on transaction date. [R]
39	Method of translating financial statement of foreign operations	Use closing rate on balance sheet date for assets and liabilities; Use spot rate on transaction date for incomes, expenses, and equity items other than retained earnings. Retained earnings are carried forward from prior period. [R]
40	Treatment of translation difference	Recognized as a separate component of equity if a foreign operation is not integral to the parent's operations. Otherwise recognized as net profit or loss.[R]

IAS22: Business Combinations

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
41	Recognition of goodwill	As an asset [R]; As an adjustment to shareholders equity [F].
42	Measurement of goodwill	Measured as the difference between the cost of the acquisition and the acquiring enterprise's share of the FMV of the identifiable assets acquired less liabilities assumed. [R]
43	Amortization of goodwill	Amortized over its estimated useful life on a straight-line basis, which is presumed to be no more than 20 years. [R]
44	Amortization of negative goodwill	To the extent related to expected future losses, if such losses are identified in the acquisition plan, amortized as the losses are incurred. Then, an excess of negative goodwill, to the extent allocated to the fair values of acquired identifiable non-monetary assets, amortized over the average life of the non-monetary assets. Any remaining excess recognized as income immediately.[R]
45	Measurement of minority interest	Measured as the minority's proportion of the pre-acquisition carrying amounts of the assets and liabilities [B]. Measured as the minority's interest being stated at its proportion of the FMV of the assets and liabilities. [A]

IAS23: Borrowing Costs

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
46	Accounting for borrowing costs	Charged to expense in the period in which they are incurred. [B] Capitalized as part of the cost of the relevant asset if borrowing costs are related to the acquisition, construction or production of a qualifying asset. A qualifying asset is an asset that takes a substantial period of time to get ready for its intended use. [A]

APPENDIX I (CONT'D)

IAS27: Consolidated and Separate Financial Statements

IAS28: Investments in Associates.

IAS31: Interests in Joint Ventures

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
47	Consolidation	Required when ownership is greater than 50% or there is substance control over the investee enterprises. [R]
48	Accounting for investments in subsidiaries and associates	May use cost , equity, or available-for-sale method. [R]
49	Recognition for impairment of subsidiaries and associates	Recognized impairment as a loss on the income statement. Impairment is measured as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. [R]
50	Investor has joint control	Use proportionate consolidation method. [B] Use equity method. [A]
51	Gain on disposal of a subsidiary as a result of issuance of additional shares by the subsidiary to third parties	Usually recognized as gain. [R]

IAS37: Provisions, Contingent Liabilities and Contingent Assets

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
52	Measurement of provisions	Discounted present value of the best estimate to settle the obligation.
53	Measurement of contingent assets and liabilities	Contingent assets and liabilities are not recognized. They are disclosed in the footnote where an inflow of economic benefits is probable. [R]

IAS38: Intangible Assets

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
54	Amortization of intangible assets	Amortize over the estimated useful life, which is presumed to no more than 20 years. [R]
55	Intangible assets on balance sheet date	Carried at cost less any amortization and impairment losses. [B] Carried at a revalued amount (based on FMV) less any amortization and impairment losses. Revaluation of intangible assets is permitted only if fair value can be determined by reference to an active market. Such markets are expected to be rare for intangible assets. [A]

APPENDIX I (CONT'D)

56	Recognition of impairment	Recognized as the difference between the asset's carrying amount and its recoverable amount on balance sheet date and reported as a loss in the income statement. Recoverable amount is the higher of net selling price and the value in use. [R]
57	Accounting for reversal of impairment	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
58	Pre-operating expenses	Charged to expense when incurred. [R]
59	Research and development (R&D) costs	Expense all research costs. Capitalize development costs if certain criteria are met.
60	Intangible asset received as a capital contribution	Measured at FMV. [R]
61	Intangible asset received in a non-monetary transaction	Measured at FMV. [R]
62	Land use rights	Treated as prepaid lease payment and accounted for as and operating lease. Reported as cost less accumulated amortization and impairment losses on balance sheet.

IAS39: Financial Instruments: Recognition and Measurement*

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
63	Criteria for the determination of bad debt allowance	Based on the criteria determined by the company. [R]
64	Carrying value of accounts receivable on balance sheet date	Carried at net realizable value (NRV) with a write-down recognized in net profit or loss.
65	Short-term investments on balance sheet date	Measured at FMV. Changes in FMV are recognized in net profit or loss. [R]
66	Dividends received on short-term investments	Recognized as revenue when receivable.
67	Long-term investments in equity securities on balance sheet date	Measured at FMV with changes in FMV recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]
68	Long-term investments in debt securities on balance sheet date	If classified as held to maturity, measured at amortized cost subject to impairment. If classified as available for sale, measured at FMV with value changes recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]

APPENDIX I (CONT'D)

69	Amortization of premium or discount on long-term debt investments	Use effective interest rate method. [R]
70	Carrying value of financial instruments	Measured at original recorded amount less principal repayments and amortization of discounts and premiums, unless otherwise required. [R]
71	Investment securities received as a capital contribution from owner	Measured at FMV. [R]
72	Investment securities received in a non-monetary transaction	Measured at FMV. [R]
73	Recognition of impairment of financial instruments	Recognized as the difference between the asset's carrying amount and its recoverable amount on balance sheet date and reported as a loss in the income statement. Recoverable amount is the higher of net selling price and the value in use. [R]
74	Accounting for reversal of impairment of financial instruments	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
75	Debt restructuring	The difference between the carrying amount of the debt and the restructured amount of the debt is generally recognized as income.

IAS40: Investment Property*

<u>Item</u>	<u>Topic</u>	<u>IAS Description</u>
76	Measurement on balance sheet date	Measured either at cost or FMV. Once method is selected, it must be used for all investment property. Change of method is permitted only if this results in a more appropriate presentation. [R]
Other		
77	Initial recognition of an asset	Measured at cost.

* IASs that were adopted in 2002 but not adopted in 1999.

APPENDIX II SAMPLE LISTED FIRMS

Panel A: Sample Selection

	<u>Shenzhen</u> <u>Stock Exchange</u> <u>(SZSE)</u>	<u>Shanghai</u> <u>Stock Exchange</u> <u>(SHSE)</u>	<u>Total</u>
Initial Sample Firms	43	44	87
Minus: Shares issued after 1999	-4	-4	-8
Final Sample Firms	39	40	79

Panel B: The Number of Usable Sample Firms for Each Research Question

	<u>Chinese GAAP-</u> <u>based 1999</u> <u>Annual Reports</u>	<u>IAS-based 1999</u> <u>Annual reports</u>	<u>Chinese GAAP-</u> <u>based 2002</u> <u>Annual reports</u>	<u>IAS-based 2002</u> <u>Annual reports</u>
RQ1	Not Applicable	Not Applicable	Not Applicable	Not Applicable
RQ2	79	72	79	67
RQ3	72	72	67	67
RQ4	79	79	79	79

APPENDIX II (CONT'D)

Panel C: Sample Firm Profile

	<u>Firm Code</u>	<u>Firm Name</u>	<u>Issue Date (A-Shares)</u>	<u>Issue Date (B-shares)</u>	<u>Industry</u>	<u>Stock Exchange</u>
1	200002	CHINA VANKE CO LTD	1988-12-28	1993-04-06	Real Estate	SZSE
2	200011	SHENZHEN PROPS & RES DEV	1991-10-01	1991-12-18	Real Estate	SZSE
3	200012	CSG HOLDING CO LTD	1991-11-25	1991-12-18	Industrial	SZSE
4	200013	SHENZHEN PETROCHEMICAL IND	1991-12-11	1992-02-13	Basic Materials	SZSE
5	200016	KONKA GROUP CO LTD	1991-12-17	1991-12-18	Consumer, Cyclical	SZSE
6	200017 ^{ac}	SHENZHEN CHINA BICYCLE HOLDING	1991-11-22	1991-12-18	Consumer, Cyclical	SZSE
7	200018	SHENZHEN VICTOR ONWARD TEX	1991-12-28	1992-03-27	Consumer, Cyclical	SZSE
8	200019 ^{ac}	SHENZHEN SHENBAO INDUS CO	1991-11-22	1992-06-25	Consumer, Non-cyclical	SZSE
9	200020	SHENZHEN HUAFA ELECTRONICS	1992-01-16	1992-02-18	Industrial	SZSE
10	200022	SHENZHEN CHIWAN WHARF HLDG	1993-02-18	1993-02-18	Consumer, Non-cyclical	SZSE
11	200024	CHINA MERCH SHEKOU HLDGS CO	1993-03-15	1993-03-15	Consumer, Cyclical	SZSE
12	200025 ^{ac}	SHENZHEN TELLUS HOLDING CO	1993-04-15	1993-03-11	Consumer, Cyclical	SZSE
13	200026	SHENZHEN FIYTA HOLDINGS	1993-03-10	1993-03-15	Consumer, Cyclical	SZSE
14	200028	SHENZHEN ACCORD PHARMACEUT	1993-05-06	1993-05-05	Consumer, Non-cyclical	SZSE
15	200029	SHENZHEN SPECIAL ECON ZONE	1993-06-21	1993-11-30	Real Estate	SZSE
16	200030	GUANGDONG SUNRISE HOLDINGS	1993-06-28	1993-07-15	Real Estate	SZSE
17	200037	SHENZHEN NANSHAN POWER ST	1994-01-03	1994-11-11	Utilities	SZSE

APPENDIX II (CONT'D)

Panel C: Sample Firm Profile (Cont'd)

	<u>Firm Code</u>	<u>Firm Name</u>	<u>Issue Date (A-Shares)</u>	<u>Issue Date (B-shares)</u>	<u>Industry</u>	<u>Stock Exchange</u>
18	200039 ^{ac}	CHINA INTL MARINE CONTAINERS	1994-02-01	1994-01-26	Industrial	SZSE
19	200045	SHENZHEN TEXTILE HLDG	1994-05-28	1994-07-18	Consumer, Cyclical	SZSE
20	200055	CHINA FANGDA GROUP CO LTD	1996-03-29	1995-10-27	Industrial	SZSE
21	200056	SHENZHEN INTL ENTERPRISE	1996-06-21	1995-09-20	Real Estate	SZSE
22	200058	SHENZHEN SEG CO LTD	1996-12-12	1996-06-25	Industrial	SZSE
23	200413	SHIJIAZHUANG BAOSHI ELEC	1996-09-11	1996-06-13	Industrial	SZSE
24	200418	WUXI LITTLE SWAN CO	1997-03-18	1996-07-01	Consumer, Cyclical	SZSE
25	200429	GUANGDONG PROVINCIAL EXPR	1998-01-09	1996-07-26	Consumer, Non-cyclical	SZSE
26	200505	HAINAN PEARL RIVER HLDGS	1992-01-16	1995-04-12	Industrial	SZSE
27	200513	LIVZON PHARMACEUTICAL INC	1993-09-16	1993-06-07	Consumer, Non-cyclical	SZSE
28	200521	HEFEI MEILING CO LTD	1993-08-30	1996-08-14	Consumer, Cyclical	SZSE
29	200530	DALIAN REFRIGERATION CO	1993-10-18	1998-02-27	Industrial	SZSE
30	200539	GUANGDONG ELECTRIC POWER	1993-10-10	1995-05-30	Utilities	SZSE
31	200541	FOSHAN ELECTRICAL & LIGHT	1993-10-06	1995-07-14	Industrial	SZSE
32	200550	JIANGLING MOTORS CORP LTD	1993-10-17	1995-09-13	Consumer, Cyclical	SZSE
33	200553 ^{ac}	HUBEI SANONDA CO LTD	1993-10-28	1997-04-29	Industrial	SZSE
34	200570	CHANGCHAI CO LTD	1994-03-15	1996-08-27	Industrial	SZSE
35	200581	WEIFU HIGH-TECHNOLOGY CO	1998-06-29	1995-08-16	Consumer, Cyclical	SZSE

APPENDIX II (CONT'D)

Panel C: Sample Firm Profile (Cont'd)

	<u>Firm Code</u>	<u>Firm Name</u>	<u>Issue Date (A-Shares)</u>	<u>Issue Date (B-shares)</u>	<u>Industry</u>	<u>Stock Exchange</u>
36	200596	ANHUI GUJING DISTILLERY CO	1996-09-02	1996-04-29	Consumer, Non-cyclical	SZSE
37	200613 ^{ac}	HAINAN DADONGHAI TROURISM	1997-01-13	1996-09-16	Consumer, Cyclical	SZSE
38	200625	CHONGQING CHANGAN AUTOMOBI	1997-05-23	1996-10-16	Consumer, Cyclical	SZSE
39	200761	BENGANG STEEL PLATES CO	1997-11-03	1997-06-10	Basic Materials	SZSE
40	900901	SVA ELECTRON CO LTD	1987-01-05	1992-01-20	Industrial	SHSE
41	900902	SHANGHAI ERFANGJI CO LTD	1992-03-07	1992-06-08	Industrial	SHSE
42	900903	DAZHONG TRANSPORTATION GRP	1992-06-13	1992-06-20	Industrial	SHSE
43	900904 ^{bc}	SHANGHAI WINGSUNG DATA TEC	1992-06-20	1992-06-05	Technology	SHSE
44	900905	CHINA FIRST PENCIL CO	1992-06-13	1992-07-07	Consumer, Cyclical	SHSE
45	900906	CHINA TEXTILE MACHINERY	1992-06-13	1992-06-29	Industrial	SHSE
46	900907 ^{bc}	SHANGHAI SANJIU TECH	1992-06-13	1992-06-18	Consumer, Non-cyclical	SHSE
47	900908	SHANGHAI CHLOR-ALKALI CHEM	1992-06-13	1992-06-29	Basic Materials	SHSE
48	900909	SHANGHAI TYRE & RUBBER CO	1992-06-13	1992-07-14	Consumer, Cyclical	SHSE
49	900910 ^{bc}	SHANGHAI HIGHLY GROUP CO	1992-06-20	1992-12-17	Industrial	SHSE
50	900911	SHANGHAI JINQIAO EXPORT PRO	1992-06-16	1993-05-07	Real Estate	SHSE
51	900912	SHANGHAI WAIGAOQIAO FREE	1992-06-19	1993-06-29	Real Estate	SHSE
52	900913 ^{bc}	SHANGHAI LIANHUA FIBRE	1992-06-13	1993-09-18	Basic Materials	SHSE

APPENDIX II (CONT'D)

Panel C: Sample Firm Profile (Cont'd)

	<u>Firm Code</u>	<u>Firm Name</u>	<u>Issue Date (A-Shares)</u>	<u>Issue Date (B-shares)</u>	<u>Industry</u>	<u>Stock Exchange</u>
53	900914 ^{bc}	SHANGHAI JINJIANG INTL	1992-07-15	1993-10-07	Consumer, Cyclical	SHSE
54	900915	SHANGHAI FOREVER CO LTD	1993-08-06	1993-10-27	Consumer, Cyclical	SHSE
55	900916 ^{bc}	PHOENIX CO LTD	1993-09-22	1993-11-11	Consumer, Cyclical	SHSE
56	900917 ^{bc}	SHANGHAI HAIXIN GROUP CO	1993-11-01	1993-11-23	Consumer, Cyclical	SHSE
57	900918 ^{bc}	SHANGHAI YAOHUA PILKINGTON	1993-08-08	1993-11-24	Industrial	SHSE
58	900919	SHANGHAI DAJIANG GROUP	1993-08-10	1993-11-30	Consumer, Non-cyclical	SHSE
59	900920	SHANGHAI DIESEL ENGINE CO	1993-10-10	1993-12-10	Industrial	SHSE
60	900921	DAYING MODERN AGRICULTURAL	1993-10-08	1993-12-08	Consumer, Non-cyclical	SHSE
61	900922 ^{bc}	SHANGHAI FRIENDSHIP GROUP	1993-08-16	1993-12-13	Consumer, Cyclical	SHSE
62	900923	SHANGHAI FRIENDSHIP GROUP	1993-10-10	1993-12-15	Consumer, Cyclical	SHSE
63	900924	SHANGGONG CO LTD	1993-10-10	1994-01-08	Industrial	SHSE
64	900925	SHANGHAI ELECTRIC CO LTD	1993-08-06	1994-01-25	Industrial	SHSE
65	900926	SHANGHAI BAOSIGHT SOFTWARE	1993-10-08	1994-03-04	Technology	SHSE
66	900927	SHANGHAI MATERIAL TRADING	1993-10-08	1994-03-14	Consumer, Cyclical	SHSE
67	900928	SHANGHAI AUTOMATION INSTR	1993-10-08	1994-04-11	Industrial	SHSE
68	900930	SHANGHAI POSTS & TELECOM	1993-08-05	1994-09-30	Communications	SHSE

APPENDIX II (CONT'D)

Panel C: Sample Firm Profile (Cont'd)

	<u>Firm Code</u>	<u>Firm Name</u>	<u>Issue Date (A-Shares)</u>	<u>Issue Date (B-shares)</u>	<u>Industry</u>	<u>Stock Exchange</u>
69	900932	SHANGHAI LUJIAZUI FIN&TRAD	1992-06-19	1994-11-08	Real Estate	SHSE
70	900933	HUAXIN CEMENT CO LTD	1993-11-06	1994-11-28	Industrial	SHSE
71	900934	SHANGHAI JINJIANG INTERNAT	1996-09-13	1994-12-01	Consumer, Cyclical	SHSE
72	900937	HEILONGJIANG ELEC POWER CO	1996-06-11	1996-04-01	Utilities	SHSE
73	900938	TIANJIN MARINE SHIPPING CO	1992-07-21	1996-04-02	Industrial	SHSE
74	900940	SHANGHAI WORLDBEST CO LTD	1997-06-24	1996-07-02	Consumer, Cyclical	SHSE
75	900941 ^{bc}	EASTERN COMMUNICATIONS CO	1996-11-14	1996-07-12	Communications	SHSE
76	900942 ^{bc}	HUANGSHAN TOURISM DEVELOP	1997-04-17	1996-10-31	Consumer, Cyclical	SHSE
77	900945 ^{bc}	HAINAN AIRLINES CO	1998-10-11	1997-06-16	Consumer, Cyclical	SHSE
78	900946	JINAN QINGQI MOTORCYCLE	1993-10-17	1997-05-29	Consumer, Cyclical	SHSE
79	900952	JINZHOU PORT CO LTD	1999-05-07	1998-05-05	Consumer, Non- cyclical	SHSE

a. Seven Firms that did not provide 1999 IAS-based annual reports or the annual reports provided were incomplete.

b. Twelve Firms that did not provide 2002 IAS-based annual reports.

c. Nineteen Firms that did not provide complete annual reports for either 1999 or 2002, or both.

**APPENDIX III
COMPARISON OF CHINESE GAAP WITH IAS**

[R]: required treatment for all companies complying with IAS

[B]: benchmark treatment that is recommended or preferred according to IAS

[A]: allowed treatment that is not required or forbidden by IAS

[F]: forbidden treatment that is not permitted by IAS

IAS2: Inventories

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
1	Determination of Cost of Goods Sold (CGS)	Specific identification, FIFO, Weighted Average, Moving Average, or LIFO.	Specific identification method, Weighted Average, Moving Average, or LIFO.	Specific identification, FIFO, Weighted Average, Moving Average, or LIFO.	Dissimilar items: specific identification [R]; Similar items: FIFO and Weighted Average [B]; LIFO [A].
2	Determination of ending inventory cost	Use cost method.	Use either cost or LCM (the lower of cost and net realizable value (NRV) method. ¹	Same as IAS.	Use LCM method. [R]
3	Recognition of Inventory impairment and reversal of impairment	Not addressed.	Same as IAS.	Same as IAS.	Recognized as the difference between the cost and NRV in the income statement in which the impairment occurs. [R]

APPENDIX III (CONT'D)

4	Determination of CGS of Low value inventories	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Same as determination of CGS of other inventories. That is, for dissimilar items, specific costs are attributed to the specific individual items of inventory [R]. For similar items, use FIFO and Weighted Average. [B] LIFO. [A]
---	---	---	---	---	--

IAS 8: Accounting Policies, Changes in Accounting Estimates, and Errors

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
5	Non-mandated changes in accounting policy	Adjust opening accumulated profits. Not required to restating prior financial statements and comparatives.	Only benchmark treatment in the IAS is allowed.	Only benchmark treatment in the IAS is allowed.	Restate prior financial statements by adjusting opening accumulated profits and restating comparatives; If impractical to restate prior periods, apply prospectively [B]. Include as a cumulative effect in net profit and loss in the current financial statements, comparatives are not restated, but additional pro forma information reflecting the effect as if the benchmark treatment had been adopted is required to be disclosed, unless it is impracticable to do so [A].
6	Mandatory changes in accounting policy	Adjust opening accumulated profits. Not required to restating prior financial statements and comparatives.	Same as IAS	Same as IAS	Applied retroactively unless otherwise proscribed by regulators or unless it is impractical to do so. [R]

APPENDIX III (CONT'D)

7	Change in accounting estimates	Same as IAS.	Same as IAS	Same as IAS.	The effect of such a change is included in the net profit or loss in the current period and any affected future periods. [R]
8	Prior period fundamental errors	Adjust opening accumulated profits. Not required to restating prior financial statements and comparatives.	Only benchmark treatment in the IAS is allowed.	Only benchmark treatment in the IAS is allowed.	Treat the correction of a fundamental accounting error as an adjustment of the opening balance of retained earnings and to restate comparative information.[B] The amount of the correction is included in net profit or loss for the current period, comparatives are not restated, but additional pro forma information reflecting the effect as if the benchmark treatment had been adopted is required to be disclosed, unless it is impracticable to do so. [A]

IAS 10: Events after the Balance Sheet Date

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
9	Adjusting event and non-adjusting event	Not addressed.	Same as IAS.	Same as IAS.	Financial statements should be adjusted for adjusting event, while not be adjusted for non-adjusting event. Non-adjusting event should be disclosed if such events affect user decisions.
10	Sales return and sales cut-off	Not addressed.	Same as IAS.	Same as IAS.	Considered as adjusting event.

APPENDIX III (CONT'D)

11	Dividends declared	Not addressed.	Not addressed.	Cash dividends are considered as adjusting events. Stock dividends are considered as non-adjusting events.	Both cash and stock dividends are considered as non-adjusting events.
----	--------------------	----------------	----------------	--	---

IAS11: Construction Contracts

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
12	Contract revenue	Either percentage-of-completion method or completed-contract method.	Same as IAS, but did not explicitly forbidden completed-contract method.	Same as IAS, but did not explicitly forbidden completed-contract method.	Use percentage-of-completion method if total revenue and cost as well as stage of completion can be reliably estimated. Otherwise recognize revenue only to the extent that contract costs incurred are expected to be recoverable, and contract costs should be expensed as incurred [R]. Completed-contract method [F].
13	Expected loss on a construction contract	Not addressed.	Same as IAS.	Same as IAS.	Recognized as an expense as soon as such loss is probable. [R]
14	Borrowing costs incurred for construction contracts	Not addressed.	Not included as costs of construction contracts.	Not included as costs of construction contracts.	Included as costs of construction contracts if the company's policy is to capitalize borrowing costs.

APPENDIX III (CONT'D)

IAS12: Income Taxes

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
15	Recognition of tax expense or income	Same as IAS, but does not list inapplicable situations.	Same as IAS, but does not list inapplicable situations.	Same as IAS, but does not list inapplicable situations.	Recognized as income or expense and included in net profit or loss for the period, except to the extent that the tax arises from: (1) a transaction or event that is recognized directly in equity; or (2) a business combination accounted for as an acquisition. [R]
16	Treatment for deductible temporary differences	Use tax payable method (i.e., the effect of time differences is not recognized. That is, income tax expense equals income tax payable for the current period).	Use either tax payable method or tax effect accounting method (i.e., the effect of temporary differences should be recognized).	Use either tax payable method or tax effect accounting method.	Use the tax effect accounting method.
17	Treatment for timing difference when there are changes in tax rates or imposition of new taxes.	Not addressed.	Use either liability method (i.e., adjustments should be made to the income tax amounts originally recognized with respects to temporary differences. Any reversal of the effect on income tax in respect of temporary differences should be made at the current tax rate) or deferred method (i.e., no adjustment should be made. Any reversal should be made at the original tax rate).	Use either liability method or deferred method	Use liability method. [R]

APPENDIX III (CONT'D)

IAS16: Property, Plant and Equipment (PP&E)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
18	Determination of depreciation method, estimated useful life, and residual value of PP&E	Determined by the government.	Same as IAS.	Same as IAS.	Determined by management and should reflect the pattern in which the asset's economic benefits are consumed by the enterprise. [R]
19	PP&E and construction in process (CIP) on balance sheet date	Carried at cost less accumulated depreciation.	Carried at cost less accumulated depreciation.	Same as IAS benchmark treatment.	Report the asset as cost less accumulated depreciation and accumulated impairment losses. [B] Report the asset at a revalued amount, being its FMV at the date of revaluation less subsequent depreciation and impairment. Revaluations should be carried out regularly, so that the carrying amount of an asset does not differ materially from its FMV at the balance sheet date. [A]
20	Recognition of impairment of PP&E and CIP	Not addressed.	Not allowed.	Same as IAS.	Impairment is recognized as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. Recoverable amount is the higher of net selling price and the value in use. [R]

APPENDIX III (CONT'D)

21	Accounting for reversal of impairment	Not addressed.	Not allowed.	Same as IAS.	Recognized when a previously recognized impairment loss may have decreased on balance sheet date and reported as a profit in the income statement. [R]
22	PP&E received as a capital contribution	Measured at carrying value of invested assets. If reevaluated value is larger than carrying value, then reevaluated value should be used.	Measured at carrying value or appraisal value.	Measured at an amount agreed by all parties involved.	Measured at FMV. [R]
23	Exchange of dissimilar PP&E	Not addressed.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at FMV of the asset acquired. Gain or loss is recognized. [R]
24	Exchange of similar PP&E	Not addressed.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at carrying value of the asset surrendered, no gain or loss recognized. However, if the FMV of the asset acquired is less than carrying value of the asset surrendered, an impairment loss should be recognized. [R]

IAS17 Leases

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
25	Operating lease incomes/payments	Not addressed.	Same as IAS.	Same as IAS.	Recorded as income/expense on straight-line basis over the lease term. [R]

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
26	Depreciation method for a leased asset	Not addressed.	Consistent with that for owned assets.	Same as IAS.	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]
27	Lessee measurement of assets and related liability acquired from a finance lease	Measured at the price listed in agreement plus expenditures that get the asset ready for use.	Measured at the price listed in agreement plus expenditures that get the asset ready for use.	Same as IAS except that PP&E is reported at lower of lessor's carrying amount and PV of MLP. The asset could also be reported at undiscounted MLP if leased asset are 30% or less of total assets.	Report PP&E at lower of FMV or present value (PV) of minimum lease payment (MLP). Report liability as long-term liability at MLP. Report the difference as unrecognized finance charge. [R]
28	Discount rate used to measure the PV of MLP in a finance lease	Not addressed.	Not addressed.	Use the rate that discounts the MLP and unguaranteed residual value back to the lessor's carrying amount of the leased asset. If that is unknown, use the discount factor specified in the lease agreement. If both are unknown, use the lessee's bank borrowing rate.	Use the rate that discounts the MLP and unguaranteed residual value back to the FMV of the leased asset. If that is unknown, use lessee's incremental borrowing rate.

APPENDIX III (CONT'D)

29	Allocation of unrecognized finance charge of a finance lease by lessee	Not addressed.	Not addressed.	Allocated over lease term using either effective interest method, straight line method, or sum-of-the-years' digit method.	Allocated over lease term using effective interest method. [R]
30	Initial direct costs of a finance lease by lessee	Not addressed.	Not addressed.	Same as IAS.	Expensed. [R]
31	Initial direct costs of a finance lease by lessor	Not addressed.	Not addressed.	Expensed.	Either expensed or amortized over the lease term. [R]
32	Lessor measurement of a finance lease	Not addressed.	Not addressed.	Same as IAS.	Recorded as a receivable, at an amount equal to the net investment in the lease. [R]
33	Lessor measurement of income from a finance lease	Not addressed.	Not addressed.	Same as IAS.	Based on pattern reflecting a constant periodic rate of return of the lessor's net investment outstanding in respect of the finance lease. [R]

IAS20 Accounting for Government Grants and Disclosure of Government Assistance

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
34	Government grant received to fund a specific project	Not addressed.	Recognized as equity upon the completion of the project.	Recognized as equity upon the completion of the project.	Recognized as income over project period.

APPENDIX III (CONT'D)

IAS21: The Effects of Changes in Foreign Exchange Rates

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
35	Initial recognition of foreign currency transaction	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date. [R] Use average rate of the period if they are a reasonable approximation of actual. [A]
36	Monetary items reported on balance sheet date	Same as IAS.	Same as IAS.	Same as IAS.	Use closing rate on balance sheet date. [R]
37	Exchange differences in the normal operation	Recognized as income/expense in the period in which they arise for both monetary and non-monetary items.	Same as IAS.	Same as IAS.	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]
38	Non-monetary items reported on balance sheet date	Only historical cost is allowed.	Only historical cost is allowed.	Only historical cost is allowed.	Either reported at FMV or historical cost. For non-monetary items carried at FMV, use the rate that existed when the values were determined. For non-monetary items carried at historical cost, use spot rate on transaction date. [R]

APPENDIX III (CONT'D)

39	Method of translating financial statement of foreign operations	Not addressed.	Same as IAS except that average rate during the accounting period is used for incomes and expenses.	Same as IAS except that average rate during the accounting period is used for incomes and expenses.	Use closing rate on balance sheet date for assets and liabilities; Use spot rate on transaction date for incomes, expenses, and equity items other than retained earnings. Retained earnings are carried forward from prior period. [R]
40	Treatment of translation difference	Not addressed.	Recognized as a component of equity.	Recognized as a component of equity.	Recognized as a separate component of equity if a foreign operation is not integral to the parent's operations. Otherwise recognized as net profit or loss.[R]

IAS22: Business Combinations

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
41	Recognition of goodwill	Not addressed.	Same as IAS.	Same as IAS.	As an asset [R]; As an adjustment to shareholders equity [F].
42	Measurement of goodwill	Not addressed.	Same as the IAS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer' share of FMV of identifiable net assets are used.	Same as the IAS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer' share of FMV of identifiable net assets are used.	Measured as the difference between the cost of the acquisition and the acquiring enterprise's share of the FMV of the identifiable assets acquired less liabilities assumed. [R]

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
43	Amortization of goodwill	Not addressed.	Amortized over the period specified in the acquisition plan. If no period is specified, amortized over no more than 10 years.	Amortized over the period specified in the acquisition plan. If no period is specified, amortized over no more than 10 years.	Amortized over its estimated useful life on a straight-line basis, which is presumed to be no more than 20 years. [R]
44	Amortization of negative goodwill	Not addressed.	Amortized over the investment period specified in the purchase contract. If no investment period is specified, amortized over no less than 10 years.	Amortized over the investment period specified in the purchase contract. If no investment period is specified, amortized over no less than 10 years.	To the extent related to expected future losses, if such losses are identified in the acquisition plan, amortized as the losses are incurred. Then, an excess of negative goodwill, to the extent allocated to the fair values of acquired identifiable non-monetary assets, amortized over the average life of the non-monetary assets. Any remaining excess recognized as income immediately.[R]
45	Measurement of minority interest	Not addressed.	Only benchmark treatment of IAS is allowed.	Only benchmark treatment of IAS is allowed.	Measured as the minority's proportion of the pre-acquisition carrying amounts of the assets and liabilities [B]. Measured as the minority's interest being stated at its proportion of the FMV of the assets and liabilities. [A]

APPENDIX III (CONT'D)

IAS23: Borrowing Costs

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
46	Accounting for borrowing costs	Not addressed.	Same as IAS except that qualifying asset is generally limited to fixed assets. Borrowing costs for qualifying inventory and intangible assets are not capitalized.	Same as IAS except that qualifying asset is generally limited to fixed assets. Borrowing costs for qualifying inventory and intangible assets are not capitalized.	Charged to expense in the period in which they are incurred. [B] Capitalized as part of the cost of the relevant asset if borrowing costs are related to the acquisition, construction or production of a qualifying asset. A qualifying asset is an asset that takes a substantial period of time to get ready for its intended use. [A]

IAS27: Consolidated and Separate Financial Statements

IAS28: Investments in Associates

IAS31: Interests in Joint Ventures

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
47	Consolidation	Required when ownership is greater than 50%.	Same as IAS.	Same as IAS.	Required when ownership is greater than 50% or there is substance control over the investee enterprises. [R]
48	Accounting for investments in subsidiaries and associates	Must use equity method.	Must use equity method.	Must use equity method.	May use cost, equity, or available-for-sale method [R]

APPENDIX III (CONT'D)

49	Recognition for impairment of subsidiaries and associates	Not addressed.	Same as IAS.	Same as IAS.	Recognized impairment as a loss on the income statement. Impairment is measured as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. [R]
50	Investor has joint control	Not addressed.	Not addressed.	Must use proportionate consolidation method.	Use proportionate consolidation method. [B] Use equity method. [A]
51	Gain on disposal of a subsidiary as a result of issuance of additional shares by the subsidiary to third parties	Not addressed.	Not addressed.	Recognized into equity. Recognition of gain is not permitted.	Usually recognized as gain. [R]

IAS37: Provisions, Contingent Liabilities and Contingent Assets

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
52	Measurement of provisions	Not addressed.	Not addressed.	Undiscounted amount of the best estimate to settle the obligation.	Discounted present value of the best estimate to settle the obligation
53	Measurement of contingent assets and liabilities	Not addressed.	Not required.	Same as IAS.	Contingent assets and liabilities are not recognized. They are disclosed in the footnote where an inflow of economic benefits is probable. [R]

APPENDIX III (CONT'D)

IAS38: Intangible Assets

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
54	Amortization of intangible assets	Amortized over the life specified in the law. If the life is not specified in the law, amortized over useful life. If the useful life is not specified, amortized in no less than 10 years.	Amortized over the shorter of the life specified in the law and the life specified in the acquisition contract. If the useful life is not specified in contract or law, amortized over the estimated useful life in no more than 10 years.	Amortized over the shorter of the life specified in the law and the life specified in the acquisition contract. If the useful life is not specified in contract or law, amortized over the estimated useful life in no more than 10 years.	Amortize over the estimated useful life, which is presumed to no more than 20 years. [R]
55	Intangible assets on balance sheet date	Carried at cost less amortization. Recognition of impairment loss is not allowed.	Carried at cost less amortization. Recognition of impairment loss is not allowed.	Same as IAS benchmark treatment.	Carried at cost less any amortization and impairment losses. [B] Carried at a revalued amount (based on FMV) less any amortization and impairment losses. Revaluation of intangible assets is permitted only if fair value can be determined by reference to an active market. Such markets are expected to be rare for intangible assets. [A]
56	Recognition of impairment	Not addressed.	Not addressed.	Same as IAS.	Recognized as the difference between the asset's carrying amount and its recoverable amount on balance sheet date and recorded as a loss in the income statement. Recoverable amount is the higher of net selling price and the value in use. [R]

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
57	Accounting for reversal of impairment	Not addressed.	Not addressed.	Same as IAS.	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
58	Pre-operating expenses	Deferred as an asset until the entity begins operations. Then amortize in no less than five years.	Deferred as an asset until the entity begins operations. Then amortize in no more than five years. If the amount is not material, charged to expense at the first month of operation.	Deferred as an asset until the entity begins operations. Then charged to expense at the first month of operation.	Charged to expense when incurred. [R]
59	Research and development (R&D) costs	All development costs are capitalized.	Only registration and legal costs of intangible assets are capitalized. All other R&D costs are expensed.	Only registration and legal costs of intangible assets are capitalized. All other R&D costs are expensed.	Expense all research costs. Capitalize development costs if certain criteria are met.
60	Intangible asset received as a capital contribution	Measured at carrying value of asset surrendered.	Measured at carrying value of asset surrendered or at appraisal value.	Measured at an amount agreed by all parties involved, except measured at the investor's carrying amount when contributed at the time of an initial issue of shares.	Measured at FMV. [R]

APPENDIX III (CONT'D)

61	Intangible asset received in a non-monetary transaction	Not addressed.	Not addressed.	Measured at carrying amount of asset surrendered.	Measured at FMV. [R]
62	Land use rights	Treated as intangible assets and reported as cost less amortization.	Treated as intangible assets and reported as cost less amortization.	Recognized as an intangible asset until the construction or development starts; then accounted for as CIP. Once construction is completed, treated as PP&E or investment property and reported at cost less accumulated amortization and impairment losses.	Treated as prepaid lease payment and accounted for as and operating lease. Reported as cost less accumulated amortization and impairment losses on balance sheet.

IAS39: Financial Instruments: Recognition and Measurement

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
63	Criteria for the determination of bad debt allowance	Based on a government-approved rate from 0.3% to 0.5%.	Same as IAS.	Same as IAS.	Based on the criteria determined by the company. [R]
64	Carrying value of accounts receivable on balance sheet date	Same as IAS.	Same as IAS.	Same as IAS.	Carried at net realizable value (NRV) with a write-down recognized in net profit or loss.

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
65	Short-term investments on balance sheet date	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at either cost or LCM. If measured at LCM, any write-down is recognized in net profit or loss.	Measured at LCM with a write-down recognized in net profit or loss.	Measured at FMV. Changes in FMV are recognized in net profit or loss. [R]
66	Dividends received on short-term investments	Not addressed.	Recognized as a reduction of the carrying value of short-term investments.	Recognized as a reduction of the carrying value of short-term investments.	Recognized as revenue when receivable.
67	Long-term investments in equity securities on balance sheet date	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at cost less impairment with a write-down recognized in net profit or loss.	Measured at cost less impairment with a write-down recognized in net profit or loss.	Measured at FMV with changes in FMV recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]
68	Long-term investments in debt securities on balance sheet date	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at amortized cost subject to impairment, with a write-down recognized in net profit or loss.	Measured at amortized cost subject to impairment, with a write-down recognized in net profit or loss.	If classified as held to maturity, measured at amortized cost subject to impairment. If classified as available for sale, measured at FMV with value changes recognized either (a) in net profit or loss or (b) in equity until the investment is sold. [R]
69	Amortization of premium or discount on long-term debt investments	Use straight-line method.	Either effective interest rate method or straight line method.	Either effective interest rate method or straight line method.	Use effective interest rate method. [R]

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
70	Carrying value of financial instruments	Same as IAS.	Same as IAS.	Same as IAS.	Measured at original recorded amount less principal repayments and amortization of discounts and premiums, unless otherwise required. [R]
71	Investment securities received as a capital contribution from owner	Not addressed.	Not addressed.	Measured at an amount agreed by all parties involved.	Measured at FMV. [R]
72	Investment securities received in a non-monetary transaction	Not addressed.	Not addressed.	Measured at carrying amount of asset surrendered.	Measured at FMV. [R]
73	Recognition of impairment of financial instruments	Not addressed.	Same as IAS	Same as IAS.	Recognized as the difference between the asset's carrying amount and its recoverable amount on balance sheet date and recorded as a loss in the income statement. Recoverable amount is the higher of net selling price and the value in use. [R]

APPENDIX III (CONT'D)

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
74	Accounting for reversal of impairment of financial instruments	Not addressed.	Same as IAS	Same as IAS.	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
75	Debt restructuring	Not addressed.	Not addressed.	The difference between the carrying amount of the debt and the restructured amount of the debt is generally recognized as equity.	The difference between the carrying amount of the debt and the restructured amount of the debt is generally recognized as income.

IAS40: Investment Property

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
76	Measurement on balance sheet date	Not addressed.	Carried at cost less accumulated depreciation.	Carried at lower of (1) cost less accumulated depreciation and (2) net recoverable value.	Measured either at cost or FMV. Once method is selected, it must be used for all investment property. Change of method is permitted only if this results in a more appropriate presentation. [R]

Other

<u>Item</u>	<u>TOPIC</u>	<u>1992 CHINESE GAAP</u>	<u>1998 CHINESE GAAP</u>	<u>2001 CHINESE GAAP</u>	<u>2002 IAS</u>
77		Same as IAS.	Same as IAS.	Same as IAS.	Measured at cost.

**APPENDIX IV
RANK OF CLOSENESS***

- * Rank = 3, fully harmonized
 Rank = 2, harmonized in major aspects
 Rank = 1, harmonized with IAS to certain extent
 Rank = 0, not harmonized

Item	TOPIC	1992 CHINESE GAAP	1998 CHINESES GAAP	2001 CHINESE GAAP	2002 IAS
IAS2: Inventories					
1	Determination of Cost of Goods Sold (CGS)	2	2	2	3
2	Determination of ending inventory cost	0	1	3	3
3	Recognition of Inventory impairment and reversal of impairment	0	3	3	3
4	Determination of CGS of Low value inventories	2	2	2	3
IAS 8: Accounting Policies, Changes in Accounting Estimates, and Errors					
5	Non-mandated changes in accounting policy	2	3	3	3
6	Mandatory changes in accounting policy	2	3	3	3
7	Change in accounting estimates	3	3	3	3
8	Prior period fundamental errors	2	3	3	3
IAS 10: Events after the Balance Sheet Date					
9	Adjusting event and non-adjusting event	0	3	3	3
10	Sales return and sales cut-off	0	3	3	3
11	Dividends declared	0	0	2	3
IAS11: Construction Contracts					
12	Contract revenue	1	3	3	3
13	Expected loss on a construction contract	0	3	3	3
14	Borrowing costs incurred for construction contracts	0	0	0	3

APPENDIX IV (CONT'D)

IAS12: Income Taxes

15	Recognition of tax expense or income	3	3	3	3
16	Treatment for deductible temporary differences	0	1	1	3
17	Treatment for timing difference when there are changes in tax rates or imposition of new taxes.	0	1	1	3

IAS16: Property, Plant and Equipment (PP&E)

18	Determination of depreciation method, estimated useful life, and residual value of PP&E	0	3	3	3
19	PP&E and construction in process (CIP) on balance sheet date	1	1	3	3
20	Recognition of impairment of PP&E and CIP	0	0	3	3
21	Accounting for reversal of impairment	0	0	3	3
22	PP&E received as a capital contribution	1	1	1	3
23	Exchange of dissimilar PP&E	0	0	0	3
24	Exchange of similar PP&E	0	2	2	3

IAS17 Leases

25	Operating lease incomes/payments	0	3	3	3
26	Depreciation method for a leased asset	0	2	3	3
27	Lessee measurement of assets and related liability acquired from a finance lease	0	0	1	3
28	Discount rate used to measure the PV of MLP in a finance lease	0	0	1	3
29	Amortization of unrecognized finance charge of a finance lease by lessee	0	0	1	3
30	Initial direct costs of a finance lease by lessee	0	0	3	3
31	Initial direct costs of a finance lease by lessor	0	0	3	3
32	Lessor measurement of a finance lease	0	0	3	3
33	Lessor measurement of income from a finance lease	0	0	3	3

APPENDIX IV (CONT'D)

IAS20 Accounting for Government Grants and Disclosure of Government Assistance					
34	Government grant received to fund a specific project	0	0	0	3
IAS21: The Effects of Changes in Foreign Exchange Rates					
35	Initial recognition of foreign currency transaction	2	2	2	3
36	Monetary items reported on balance sheet date	3	3	3	3
37	Exchange differences in the normal operation	1	3	3	3
38	Non-monetary items reported on balance sheet date	1	1	1	3
39	Method of translating financial statement of foreign operations	0	2	2	3
40	Treatment of translation difference	0	2	2	3
IAS22: Business Combinations					
41	Recognition of goodwill	0	3	3	3
42	Measurement of goodwill	0	1	1	3
43	Amortization of goodwill	0	2	2	3
44	Amortization of negative goodwill	0	1	1	3
45	Measurement of minority interest	0	3	3	3
IAS23: Borrowing Costs					
46	Accounting for borrowing costs	0	2	2	3
IAS27: Consolidated and Separate Financial Statements					
IAS28: Investments in Associates					
IAS31: Interests in Joint Ventures					
47	Consolidation	2	3	3	3
48	Accounting for investments in subsidiaries and associates	2	2	2	3
49	Recognition for impairment of subsidiaries and associates	0	3	3	3

APPENDIX IV (CONT'D)

50	Investor has joint control	0	0	3	3
51	Gain on disposal of a subsidiary as a result of issuance of additional shares by the subsidiary to third parties	0	0	0	3
IAS37: Provisions, Contingent Liabilities and Contingent Assets					
52	Measurement of provisions	0	0	2	3
53	Measurement of contingent assets and liabilities	0	0	3	3
IAS38: Intangible Assets					
54	Amortization of intangible assets	1	2	2	3
55	Intangible assets on balance sheet date	1	1	3	3
56	Recognition of impairment	0	0	3	3
57	Accounting for reversal of impairment	0	0	3	3
58	Pre-operating expenses	0	1	1	3
59	Research and development (R&D) costs	1	2	2	3
60	Intangible asset received as a capital contribution	0	1	1	3
61	Intangible asset received in a non-monetary transaction	0	0	0	3
62	Land use rights	1	1	2	3
IAS39: Financial Instruments: Recognition and Measurement					
63	Criteria for the determination of bad debt allowance	0	3	3	3
64	Carrying value of accounts receivable on balance sheet date	3	3	3	3
65	Short-term investments on balance sheet date	0	1	1	3
66	Dividends received on short-term investments	0	1	1	3
67	Long-term investments in equity securities on balance sheet date	0	1	1	3

APPENDIX IV (CONT'D)

68	Long-term investments in debt securities on balance sheet date	0	1	1	3
69	Amortization of premium or discount on long-term debt investments	0	1	1	3
70	Carrying value of financial instruments	3	3	3	3
71	Investment securities received as a capital contribution from owner	0	0	0	3
72	Investment securities received in a non-monetary transaction	0	0	0	3
73	Recognition of impairment of financial instruments	0	3	3	3
74	Accounting for reversal of impairment of financial instruments	0	3	3	3
75	Debt restructuring	0	0	0	3
IAS40: Investment Property					
76	Measurement on balance sheet date	0	1	2	3
Other					
77	Initial recognition of an asset	3	3	3	3