Department of Business Administration
BUSP02
Master Thesis
June 2009

Accounting harmonization in China --A comparison of A-share and H-share reported earnings

Submit to:

Kristina Artsberg

Submit by:

Chien-Ming Wang
Juan Li
Ning Zhu

Abstract:

Title: Accounting Harmonization in China- A comparison of A-share and H-share reported earnings

Seminar date: 8th of June 2009

Course: BUSP02, Master thesis in Accounting and Management Control, 15 Swedish credits (15 ECTS))

Authors: Chien-Ming Wang, Juan Li, Ning Zhu

Advisor: Kristina Artsberg

Key words: Chinese GAAP, IAS, Accounting Harmonization, Industry Classification, Earning Gaps

Purpose: The purpose of this thesis is to observe the progress of accounting harmonization in Chin with the extent of comparability between the newest Chinese GAAP and IAS. Further, we intend to analyze the earning gaps between these two standards based on the industry classification. The analysis will investigate the accounting items that have significant influence with industry characteristics.

Methodology: Inductive and quantitative researches have been used in this study. The overall index of comparability and partial index of comparability have been used. These quantitative studies support our conclusion.

Theoretical perspectives: Our theoretical perspectives based on prior studies both on the harmonization of De Jure and De Facto. Those previous researches indicate that Chinese GAAP has been substantially harmonized with IAS both on the improved comparability and decreased earning gaps.

Empirical foundation: We have analyzed 30 sample firms both listed in A-share and H-share in the year of 2006 and 2007. 29 sample firms are listed in Shanghai Stock Exchange while only one company listed in Shenzhen Stock Exchange.

Conclusions: The results of this research are supported by the previous studies and our statistical analysis with the conclusion that the improved convergence and reduced earning gaps between Chinese GAAP and IAS. We conclude there are some minor earning gaps exist due to environmental factors such as governmental regulations and industry characteristics. Finally, we propose the future study focused on importance of accounting items which might impact the comparability and cause earning gaps with the consideration of industry classification.

Acknowledgements:

We would like to thank our dissertation supervisor Kristina Artsberg, for her advice, guidance and expertise; and thanks she lead us to the academia of international accounting, the business area that makes our vision expend.

We appreciate our programme directors Per Magnus Andresson and Anne Loft; they lead us to explore the accounting world. We appreciate the Business School of Lund University, for providing the great opportunity to study in Sweden; the studying experience widen our international perspectives both on culture discrepancies and the difference accounting practice between different countries.

Finally, we would like to thank our friend Rosalie Heiskanen, for her support and proofreading; and our family for their unconditional love and compassionate understanding.

Lund, May 2009

Chien-Ming Wang Juan Li Ning Zhu

Table of Contents

Introduction:

The evolution of Chinese GAAP evolves in pace with the growth of its economic development. The Chinese accounting profession has experienced a remarkable growth since China started its ambitious economic reforms in the early 1980s. The accounting evolution has not only increased China's visibility in the world capital market, but also it has facilitated China drive toward a market-based economy. (Lin, 1998)

The result of the emerging capital market makes the fundraising abroad become more demanding in China. International investors need more reliable, comparable and understandable financial statements that are reported at the same measurement both under the Chinese GAAP and IAS. However, the current problems of the financial statements reported by Chinese listed companies are associated with an unsatisfactory status of rules enforcement in practice, therefore; the earning gaps remain between Chinese GAAP and IAS. (Lin, 1998)

This study examines the extent of comparability between the current Chinese GAAP (2006) and IAS that whether the harmonized accounting principles will lead to harmonized accounting practices. This study will focus on the net income comparison between the listed companies that issued A-share and H-share in mainland China based on industry level. First, to what extent the effects of earning gaps have been reduced or eliminated under current Chinese GAAP? Second, what accounting items have great impact on the earning gaps under those two sets of accounting standards?

Studying the earning gaps differences between Chinese GAAP and IAS is important because it observes insight on the process of harmonization in China and verifies the comparability of Chinese GAAP and IAS. This study contributes to the first step toward the investigation of industry-categorized earning gap difference under Chinese

GAAP and IAS. The rest of paper proceeds as follow. Section 1 describes the background and the features of Chinese stock market. Problems and objectives are delineated in Section 2. Research methodologies are developed in Section 3. Section 4 gives details about accounting institutional structure in China and comparing the new Chinese GAAP (2006) with old Chinese GAAP (2001) and IAS. Section 5 presents literature review with prior researches. Section 6 illustrates data analysis and discussion of research results. Section 7 summaries and conclude the paper with the proposals for future investigation.

1. Background

1.1 Accounting and the development of Capital Markets in China

The development process of Chinese accounting system goes hand in hand with China's economy development. The formulation of accounting standards is at the same pace with the constant changes in economic system, laws and regulations. The rapid development of capital markets is widely considered to "provide direct incentives and pressures for China to shift the accounting practices and methods away from a government orientation to a market orientation. (Peng, et, al, 2005)

Chinese accounting system started its reformation since 1980s along with the new economy policy that was translated as "Reform and Opening-up". When Deng Xiaoping set China on the road of economic reforms in 1978, China's economic reforms brought dramatic change, with productivity emerging as a key driver of accelerated growth. This contribution of the annual rise in exports to GDP was achieved due to an export growth rate over the past decade that averaged 17.7 percent per year (1995-2005) and 29.9 percent per year over from the year 2000 to 2005. (Dwight H, et al. 2008) This significant policy greatly boosted the international business with the result that Chinese economy became rapidly more exposed to external trade, and the share in GDP of total exports raised quickly in recent years, from 29.4% in 2003 to 38.8% in 2007. (National Bureau of Statistics, China Statistical Yearbook 2008)

As the inflows of foreign capital plays more and more important role in helping Chinese enterprises to obtain funds from international investors, immediately the capital markets in China grows. Two domestic stock exchanges, the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE), which have been established in 1990, have grown very fast during most of the 1990s. In 2007, approximately US$60 billion of equity has been raised on the stock market in Shanghai while approximately US$5 billion in Shenzhen. Growth in the market

capitalisation of the two stock exchanges has been very strong.[1] On the 8th of June 2007, China's stock market capitalization had topped the country's Gross Domestic Product (GDP) for the first time as a key stock index hit a fresh record high for a fifth straight session (www. chinadailyily.cn) "Shanghai looks set to challenge the position of the Tokyo Stock Exchange (TSE) as the biggest in the region". At the same time, more and more Chinese companies had expected to extend their funding in foreign capital market, mainly in Hong Kong Stock Exchange. The number of companies with H shares listed in the Hong Kong Stock Exchange had increased steadily from 39 of the year 1997 to 145 at the end of 2007 (Hong Kong Exchanges and Clearing Limited). Nowadays, 23 out of 40 largest stocks in HKSE by market capitalisation are Chinese companies that have significant impacts on Hong Kong Stock Exchange. (Hong Kong Exchanges and Clearing Limited)

As the domestic capital market becomes more and more mature, Chinese government being aware of the importance of financial system in the process of economic development constantly advances the convergence of the country's financial reporting standards with its international counterparts. Furthermore, every Chinese company listed both in HKEC and domestic markets need to prepare two sets of financial reports under the IASs and China GAAP, which may confuse the investors and reduce their interest in investing in Chinese companies. More and more Chinese companies strongly asked for the convergence of these two accounting standards. (Lin, et. al 2001)

The goal of accounting reform and development throughout this entire process is to provide transportable, reliable and comparable accounting information to the users. Before economy reformation, China has been under the planned economy system meaning that Chinese government is the major investor to the entrepreneurs. Thus, the

1 Shanghai stood at US$3.7 trillion at the end of 2007, while Shenzhen had risen to approximately US$800 billion, compared with, respectively, US$900 billion and US$200 billion at the end of 2006. (Asia Capital Markets Forum 2007)

main task of accounting system at that moment had been to provide useful information with government to make macro management decision. After shift to market-oriented economy, China has decided to adopt IAS as the accounting conceptual framework. China has strongly in the belief that the convergence of IAS will accomplish its obligation by providing understandable and useful accounting information for foreign investors and creditors in capital markets. (Lin, et. al 2001)

1.2 Capital Markets--A,B ,H shares:

Types of stocks in Chinese capital markets are categorized into A shares and B shares. All listed companies are entitled to issue either A shares or B shares or both in SHSE and SZSE. Chinese companies going public in the domestic market have to issue shares denominated in Chinese currency. The type of share which is widely recognized as A-share can only be traded within Chinese stock markets by domestic investors. For those Chinese companies wishing to raise funds from foreign investors, they have to apply for issuance of a special class of share known as B-share. B-shares are denominated in foreign currencies (US$ in the SHSE and Hong Kong Dollar in the SZSE) and had been traded exclusively by foreign investors until June 1, 2001 when regulation had been change that allows domestic investors to also participate in B shares. (Kung, et. al 2007)

Alternatively, Chinese companies are also allowed to list shares overseas. Most Chinese offshore stocks are traded on HKSE. H-shares refer to the shares of companies incorporated in mainland China that are traded on the HKSE. The share quotation is Hong Kong Dollar. Unlike A and B shares, there is no restriction on trading residents of H shares. (Kung, et. al 2007)

Chinese companies that issue A-shares are required to prepare annual reports under. Chinese GAAP and audited by a designated CPA firm that are authorized by the China Securities Regulatory Commission. Before 2007, Firms issuing B-shares had been required to prepare annual reports in accordance with IAS which must be

audited by major international accounting firms such as Big Four. Any differences in net income based on Chinese GAAP and IAS must be reconciled. After the implementation of 2006 version that had become mandatory for all listed companies in mainland China, as China's accounting and auditing standards are increasingly aligned with international practice, “foreign-invested companies which are listed on the mainland stock market (so-called B-share companies) will no longer be subject to double audit done in the mainland and offshore” the China Securities Regulatory Commission (CSRC) has announced in Oct, 2007. B-shares companies are free to choose local or international audit firms based on their needs. (Kung, et. al 2007)

Owing to listing requirements, the accounting reports for H-shares must be prepared under either IAS or Hong Kong GAAP. These listed companies with H-shares are required to be audited by Big4 accounting firms or other highly rated international accounting firms. After a long process of convergence with IASs, by 2005, HK GAAP had become fully harmonized with IAS, except for a few minor differences (Deloitte, 2005) “The convergence of HKFRS and IFRS provides further support for H-share accounting reports to act as a benchmark in this comparative study. Comparative analysis of A-shares and H-shares reports will definitely provide more insight on the process of harmonization in China” (Kung, et, al, 2007)

2. Problems and Objectives

2.1 Problems found:

The Chinese government has made considerable efforts on convergence with international accounting standards. However, concerns have been raised in prior research over the applicability of IFRS to Chinese accounting practices. (Xiang, 1998) Peng et al, (2005) has provided two main factors. Political factors have impact on the accounting practices of state-own companies which have been listed in the stock markets. Second, the competency of the audit profession has great impact to the compliance to a set of accounting standards. In China, independent auditing is a relatively new phenomenon "The independence of the CPA firms is greatly compromised in China"(Tang,2000) Therefore, whether harmonized Chinese Accounting Standards leads to harmonized accounting practices remains an open question and it therefore, with utmost importance to quantitatively analyze the effects of Chinese GAAP and IAS on financial reports.

With the recent promulgated ABSEs, the previous research results appeared to lack of timeliness and specificity. In detail, there were two main aspects of the problems that exist. First, in previous studies the samples were selected only up to 2004. The research after new ABSEs promulgation was still absent and the degree of harmonization with IAS after implementation of newest China GAAP was unclear. Second, all previous studies evaluated the samples in an overall level without considering the industrial characteristics. Our motivations are derived from below concerns. One concern is the accounting practices of different industries probably reach at different levels of harmonization. Previous investigation shown that most of the TOP10 listed companies with biggest earning gaps came from financial industry and transportation industry (airline companies) in 2003 and 2004. Is there a strong linkage between industrial characteristic and accounting practices? What reconciliation accounting items greatly impact the earning gaps in each industry? Additionally, there are various aspects of business operations previously not covered

by the current EDAS which are now included in the new ASBE, like the biological assets, hedging, etc. To identify the impact on the new ASBEs, in depth research of different industries can give a clearer picture. So the evaluation by category will reveal the industry characteristics impacting accounting harmonization more accurate.

2.2 Our objective:

Our research aims to evaluate the extent of comparability between Chinese listed firms' choices of accounting measurements based on the newest China GAAP (2006 version) and IAS. Given the highly convergence between the newest China GAAP and IAS, improved comparability can be evidenced by a reduced earning gap between Chinese and IAS-based net incomes.

Based on a sample of annual reports issued by Chinese listed firms that issued both A and H-shares in 2007, we intend to give an overall evaluation on the degree of reduced earning gap of net incomes. Furthermore, we would analyze differences of the same accounting items based on specific industries.

2.3 Research Questions:

Based on the problems and objectives we identified, we will focus on two research questions in our research

Q1: What is the earning gap between Chinese GAAP-based financial statements and IFRS-based financial statements for Chinese listed companies? To what extent the earning gap has been reduced or eliminated under the newest Chinese GAAP? Focus on the listed companies who issue both A and H-shared. All of them would be categorized into different industries.

Q2: What accounting items (assets, liabilities etc) have great impact on the earning gaps under those two sets of accounting standards? Reconciliation items would be compressed into certain items in each industry for data analysis.

3. Research Methodology

3.1 Research Approach:

In business and management area, qualitative and quantitative methods are the choices for analysis. As Bryman and Bell (2007) said "quantitative research can be construed as a research strategy that emphasizes quantification in the collection and analysis of data". Furthermore, "an inductive view of the relationship between theory and research" By contrast, "qualitative research can be construed as a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data." (Bryman and Bell, 2007) We prefer the quantitative research with intuitive figures "on understanding of the social world through an examination of the interpretation of that world by its participants" (Ibid) Our research questions address the quantitative effects of the differences between Chinese GAAP and IAS on Chinese listed companies' annual reports. "This provides an additional method of evaluating the success of Chinese harmonization efforts. (Peng et al, 2005)

3.2 Method:

For the first research question, we would apply the "index of comparability" to measure the differences in financial reporting figures produced by the same firm under two sets of accounting standards. The "index of comparability" is developed from the conservative index created by Gray (1980) and renamed by Weetman, Jones, Adam, and Gray (1998).In prior studies; this index was often used to compare profit measurement practices across countries. The formula to calculate the overall comparability index based on Gray is:

$$\text{Overall index of comparability} = 1 - \frac{(\text{IFRS net income} - \text{Chinese GAAP net income})}{|\text{IFRS net income}|}$$

The overall index of comparability is based on firm level. An index value of 1.0 means no difference in a firm's net income between China GAAP and IFRS. An index value which is greater than 1.0 means a higher net income under China GAAP, while an index value which is less than 1.0 means a higher net income under IFRS. Sample

firms' 2006 and 2007 annual reports are used to collect data and obtain each firm' overall index value. We intend to test whether net income under China GAAP and IFRS has a considerable difference and if that net income could be reduced with the issuance of the new Chinese GAAP.

For the second research question, we will apply the partial index[2] which is developed from the overall index based on Weetman and Gray (1991), where the deviation of net incomes is replaced by the partial adjustment that reflects the difference of the various individual reconciliation items. Therefore, the partial index can measure the contribution of specific reconciling item to the total difference of net incomes produced by the same firm under two sets of accounting standards.

$$\text{Partial index of comparability} = 1 - \frac{\text{Partial Adjustment}}{|\text{IFRS Net Income}|} \quad \text{（H-A）}$$

We classified all reconciliation items into a total of 19 financial statement items comprising 35 accounting treatments on basis of the list of International Accounting Standards (IAS).

3.3 Statistical Methods

3.3.1 *Descriptive Statistics*

"The human brain is limited in its capacity to deal with rapid incoming information, and when faced with large groups of numbers, most people cannot normally hold them all in mind at once. It is difficult to make any conclusions by simply looking at the data in its raw state; therefore it is useful to glean some kind of overall picture or summary of what is going on.'' (Joanne Birchall) The main purpose of statistics is to accurately summarise the data into easily interpretable fewer numbers. We will use some simple statistics to present the calculation results of IOP and IOC, in order to show their differences and distribution in two years by different industries clearly. For

[2] Peng 2005 derived the relationship between the overall index and the partial index as : Overall index = Sum of partial index – (n-1) while n= the number of adjusted items.

example, Average/Mean is one kind of descriptive statistic, which indicates a "typical" or "central" figure for a group of numbers. And the Median is more suitable to represent the central point when the numbers are very widely spread, are very unevenly distributed, or contain extremes values. Standard Deviation is to measure the variability or dispersion of the population. At last, the percentile is the value of a variable below which a certain percent of observations fall. So the 25^{th} percentile is the value below which 25 percent of the observations may be found.

3.3.2 *Wilcoxon Test*

Statistical Tests are extensively used in quantitative research within some fields such as economics, social sciences and biology. "Generalization process from sample to population is the intention of a quantitative as opposed to a qualitative researcher."(Pusat et al, 2005) In research, only a sample of subjects would be collected and studied. Researchers need to generalize the study results based on the sample back to the population where the sample is chosen. Usually a big sample of data is collected and this would require verification and validation based on the statistical tests of the hypothesis.

In our research, we need use a statistical test to verify the characteristics based on the analysis of our sample companies could represent the whole population of Chinese listed companies. Thus, the Wilcoxon test[3] is applied to examine our findings, because it is nonparametric and it does not require the data to come from a normally distributed population. "Wilcoxon test is distribution-free and the sample data are not influenced by extreme values and are independent for each other."(Chen, et. al. 2002)

We plan to use both the 1-sample Wilcoxon test and 2-sample Wilcoxon test in our analysis part. The 1-sample Wilcoxon test is a nonparametric hypothesis test for the median of a single population and its assumption is that the data are a random sample

[3] The Wilcoxon test is a nonparametric test. It is used when we have two samples coming from two populations. The goal is to verify if there is a difference between the populations on the basis of the random samples taken from these populations. (Yadolah 2008)

from a continuous, symmetric population. The formation of test hypotheses is:

H0: median = hypothesized median versus H1: median ≠ hypothesized median (Minitab Inc. 2006.)

The 2-sample Wilcoxon test is a nonparametric hypothesis test to determine whether two populations have the same population median and its assumptions are the populations of interest have the same shape and the population are independent. The formation of test hypotheses is:

H0: h1 = h2 versus H1: h1 ≠ h2, where h is the population median. (Minitab Inc. 2006.)

These tests enable us to judge if there is sufficient evidence to approve that the population median is being different than the hypothesized median in the 1-sample Wilcoxon test; and if there is a difference in the population median in two samples in the 2-sample Wilcoxon test. We use the confidence level 0.05 and the selection criterion is the same on these two tests that based on whether the p-value is under the confidence level or not. If the p-value is under the confidence level 0.05 then there is sufficient evidence to reject the null hypothesis, and vise versa.

3.4 Data Collection:

Our study focuses on the financial information after the newest Chinese GAAP implementation since 1st, 2007. It is our main concern to discover whether this newest standard eliminate the earning differences. Considering most of listed companies in China would publish their 2008 annual report by the end of Apr, 2009 and the financial information showed a certain degree of instability due to the financial crisis, we will focus on the financial indicators of 2007. In order to perform statistical test, the corresponding information of 2006 are selected too.

We chose the companies listed in Hong Kong Stock Exchange and China Mainland Stock Exchange including Shanghai Stock Exchange and Shenzhen Stock Exchange simultaneously. By the end of 2007, there were 44 companies complied with such criteria.(HKEx) We found three companies “China Shenhua Energy Company Limited” “JIANGXI COPPER CO., LTD” and “China Oilfield Services Limited”

applying Chinese GAAP in both exchanges. So we eliminated them as exceptions. In the remaining 41 samples, there were 11 companies newly listed in 2007 indicating that 30 companies issued A-share and H-share both in 2006 and 2007.

All relevant information and data can be extracted from those companies' annual reports of year 2007 and year 2006, which are available through the Websites of the HKEx as well as the Shanghai and Shenzhen Stock Exchange.

3.5 Industry Classification:

As we make the comparison of the earning gaps between A shares and H shares annual reports produced by those list companies, we intend to apply the thirteen industry categories made by China Securities Regulatory Commission (CSRC) as the industry classifications of our sample companies. The classification method which is used by CSRC is judged by the operating income of a company in certain business.[4] With these thirteen industries, we can get comprehensive information about how the earning gaps would be influenced by the different industries.

[4] If the ratio of the operating income of a company in certain business is more than or equal to 50%, the company will be included into the corresponding industry of the business. When the ratio of the operating income of a company in any business is less than 50%, if the ratio of the operating income in certain business is higher than that of other business by 30%, the company will be included into the corresponding industry of the business; otherwise, it will be included into the comprehensive type.

4. Accounting institutional structure in China

The present Chinese GAAP had evolved from Marxism macro-economy-oriented to market-economy-oriented accounting system. The traditional Chinese accounting system has served mainly as a simplified recording and reporting tool for the government's business administration (Lin, 1988). Subsequently, China had decided to abandon most of this traditional accounting system and "adapt the IAS as the basis for market-oriented accounting reforms" (Peng, et, al, 2005). The new Chinese standards that incorporate accounting principles familiar to investors worldwide will encourage investor confidence in China's capital markets and financial reporting and severe as an additional spur for investment from both domestic and foreign sources of capital. For Chinese companies that will play as the main actor in a global perspective, the acceptance of the new standards will also reduce the cost of complying with the accounting regimes of the different jurisdictions in which they operate. (Deloitte, 2006) Thus, China will surely benefit from the accounting harmonization that in line with the global economy integration by increasing investor confidence, improving the investment environment and country's financial reformation.

4.1 Milestones in the reform process:

The first milestone in the reform process was in 1983, when, for the first time, China selectively adopted internationally accepted accounting terminology and practices in its accounting regulation for joint ventures with foreign investments. The second was in 1992, when *the Experimental Accounting System for Joint Stock Limited Enterprises* was promulgated by the MOF[5].This accounting system was the first accounting regulation for listed companies and considered as a revolutionary change to Chinese accounting, because it was modeled after IAS (Chen et al., 2002) In 1995,

5 The Ministry of Finance (MOF) is the official standard setter in China who officially undertakes the task of Chinese accounting reforms. The function of MOF is similar with FASB in the United States but it is belong to governmental body and the accounting standards it sets are mandatory (Peng,et,al,2005)

the highest authority on accounting in China, The Accounting Law, was issued to represent general accounting principles for all Chinese enterprises.

The third milestone was in January 1, 1998, when a newly promulgated Accounting Regulation for Listed Companies was implemented to replace the 1992 regulation. Listed companies were required to reconcile accounting earnings from Chinese GAAP to IAS afterward and the discrepancies between Chinese GAAP and IAS would be largely eliminated. (Chen, et. al. 2000). In the beginning of year 1997, listed Chinese companies were required to comply with a series of regulations called *Form and Content of Information for Disclosure by Companies with Securities Issued to the Public* issued by the Chinese Securities Regulatory Commission (CSRC)[6].Another significant advancement for China Accounting was the "*Accounting System for Business Enterprises"* issued in 2001, for "it is considered much more in harmony with IAS as compared to prior system."(Peng, et, al, 2005)

The last milestone was the latest China GAAP issued on 15 February 2006 when the MOF formally announced the issuance of the long awaited Accounting Standards for Business Enterprises ("ASBEs") which consisted of a new Basic Standard and 38 Specific ASBEs. The ASBEs represented a milestone because it covered nearly all topics under the current International Financial Reporting Standards ("IFRSs") literature .This version of ASBEs became mandatory for listed Chinese enterprises since 1st of January, 2007 and brought a better transparent picture of financial statements of Chinese companies. For example, IAS on impairment required Chinese companies to improve the reflected fair value of their companies in the balance sheet, which historically had been recorded only at cost. (Peng,et,al,2005) Therefore, it can

6 The CSRC plays a pivotal role in setting accounting regulations for listed firms. The CSRC was established in 1992 and it powers and operations are similar to those of the SEC in then U.S.(Peng,et,al,2005)

be expected that the newest ASBE will further reduce the gap between Chinese GAAP and IAS.

4.2 Comparisons of Chinese GAAP 2006 ,Chinese GAAP 2001 and IAS:

In the new set of Chinese Accounting Standards, there are several new-evolving standards which are expected to have an impact to the financial results. However, some specific standards might have a limited impact of the financial statements of enterprises on net assets or net profit, such as Biological Assets, Extraction of Petroleum and Natural Gas Construction Contracts, that might only impact on specific industry. Thus, based accounting standards, which is chosen by KPMG and have significant impact on the general business enterprises, to do the general comparison of New Chinese GAAP, Old Chinese GAAP and IAS accounting standards.

4.3 Comparison Summary (KPMG, 2007):

Table 1 Comparison of Accounting Measrurement

Comparison Items	**Rules in 2001 Chinese GAAP**	**Rules in 2006 Chinese GAAP**	**Rules in current IAS/IFRS**
(1) Business Combination	No standard method. Acquisitions method and pooling of interests method are both used.	ASBE 20: Pooling of interests method is required for entities under common control. Acquisition method is required for entities not under common control.	IFRS 3: Only acquisition method is permitted. Business combinations involving entitles under common control are outside the scope of IFRS 3.
(2) Consolidated Financial Statement	There are specific circumstances where a parent is allowed not to prepare consolidated financial statements.	ASBE 33: All the parent companies are required to prepare consolidated financial statements. The reporting periods of the parent and the subsidiaries to be the same.	IFRS 27: In the case of the reporting dates of the parent and a subsidiary are different, it shall be no more than three

			months. The length of the reporting periods and any difference in the reporting dates shall be the same from period to period.
(3) Investment in Joint Venture	In the separate financial statements of the parent, a subsidiary shall be accounted for using the equity method.	ASBE 2: The rules of separate financial statements of parent: (1) Subsidiaries to be stated at cost method; (2) associates and jointly controlled entities to be accounted for using the equity method. Only equity method is allowed to recognise the interest in a jointly controlled entity.	IFRS 31: Subsidiaries, associates and jointly controlled entities to be accounted for in the separate financial statements of the parent either at cost or in accordance with IAS 39. A joint venture party shall recognise its interest in a jointly controlled entity either using proportionate consolidation or the equity method
(4) Recognition and Measurement of Financial Instruments	Measured at fair value except if classified as held to maturity, measured at amortized cost subject to impairment, or if classified as held for trading, value changes are recognized in net profit or loss.	ASBE 22: Requires all financial instruments to be measured at fair value at initial recognition.	IFRS 39: The same as ASBE 22
(5) Investment Property	Either accounted for as fixed assets (subject to depreciation) or other long-term assets (for property developers, and subject to amortization).	ASBE 3: If there is clear evidence that the fair value of an investment property can be reliably determinable on a continuing basis, the fair value model may be used. Otherwise they are accounted for using the cost model in the same way as fixed assets.	IFRS 40: An enterprise shall adopt the same accounting policy for all its investment properties.

(6) Borrowing Costs	Borrowing costs related to fixed assets must be capitalized as part of the cost of the asset. Only borrowing costs on specific borrowings can be capitalized.	ASBE 17: Requires capitalization of borrowing costs for a broader scope of assets - including inventories and intangible assets. General borrowing costs are now allowed to be capitalized. Requires the capitalization approach when the capitalization criteria are satisfied.	IFRS 23: Borrowing costs are either expensed as incurred or capitalized provided the capitalization criteria are met.
(7) Impairment of Assets	An impairment test is only required to be performed for individual assets and the concept of "asset group" is not addressed.	ASBE 8: If it is not possible to estimate the recoverable amount of an individual asset, an enterprise shall determine the recoverable amount of the asset group to which the asset belongs. Prohibits the reversal of all previously recognized impairment losses.	IFRS 36: Only prohibits the reversal of impairment loss for goodwill.
(8) Employee Benefits	The unfunded liability is not recognized. Expense is recognized when payments are made to retired employees.	ASBE 9: Requires an enterprise to recognize a liability in the period the services are provided at the amount of employee benefits payable for that service. Other employee benefits are expensed when they are paid.	IFRS 19: Defined benefit plans - Requires the recognition of a defined benefit liability and an expense throughout the expected service period of the related employees.
(9) Income Taxes	Either (a) tax payable method (deferred taxes not recognized) or (b) tax effect accounting using	ASBE 18: Disallows the tax payable method.	IFRS 12: The same as ASBE 18.

	an income statement approach is allowed. Both the liability method and the deferral method are allowed and deferred tax is recognized for timing differences.	 Adopts the balance sheet liability method to determine deferred tax of temporary differences.	
(10) Government Grants	The recognition principle is cash basis. The grants credited directly to equity.	ASBE:16 The recognition principle is accrual basis. The assets-related grants should be presented as deferred income and recognized as income evenly over the useful life of the related assets.	IAS 20: Either the presentation of asset-related grants as deferred income, and their recognition as income on a systematic and rational basis over the useful life of the asset, or the deduction of the grant from the carrying amount of the asset

4.4 The comparison between new Chinese GAAP and old Chinese GAAP:

Here are three main characteristics of the new Chinese GAAP in the comparison with old Chinese GAAP (KPMG, 2007):

4.4.1 Balance sheet measurement is becoming a major evaluation:

In the old Chinese GAAP, the operating profit in the income statement was the major assessment of business performance, but the balance sheet measurement became the main evaluation method in the new Chinese GAAP. The economic value of enterprises was not only the result of the operation, but also the total asset value. For example, the bond held to maturity valued based on the market value no matter if it was sold or not. Thus, the balance sheet measurement could have a better timely reflection on value fluctuations. (KPMG, 2007)

4.4.2 The internationalization of Chinese GAAP:

Financing abroad has become an important financing way with the economic globalization. Thus, preparing the financial statements which is based on international

accounting standards is essential to present the operating result to oversea investors. The new Chinese GAAP mitigates the discrepancies with IAS, and it supports international accounting harmonization to achieve convergence of Chinese GAAP with IFRS. (KPMG, 2007)

4.4.3 The transition of China's market economy:

The newest Chinese GAAP (2006 version) not only continues the convergence with IAS, but also reflects the circumstances from China's developing economic status. It comprises of disclosures of related party transactions, business combinations of entities under common control, fair value measurement and it prohibits the reversal of all previously recognized impairment losses. (KPMG, 2007)

4.5 The comparison between new Chinese GAAP and IAS:

One of the main trends of new Chinese GAAP is the convergence to IAS. Various aspects of business operations that are not covered by the previous China GAAP are now included in the new set. For instance, the new Chinese GAAP on biological assets, hedging, insurance and extraction of petroleum and natural gas have now covered grey areas where accounting standards had not been provided but the relevant markets are growing rapidly. (Kuan, et. al, 2007) Thus, the new Chinese GAAP can provide a better coverage to present the true picture of business enterprises in accordance with IAS. From the diagram above we can see that there is no big difference in principle rather a discrepancy between the choices of accounting treatment. Most Chinese GAAP is fully converged to IAS, except some different accounting treatments. For example, the most significant variation is the treatment of assets impairment. ASBE 8 prohibits the reversal of all impairment losses while IAS 36 only prohibits the reversal of impairment loss for goodwill. But the requirement under Chinese GAAP is comparable to IAS and this indicates that internationalization is also an important development trend.

5. Literature Review:

In this section, we will present the theoretical framework which our study is based on. We will demonstrate the findings in previous studies that are relevant to our research topics and what research questions are still unanswered. This section can be a means of developing a theoretical argument about the significance of our research.

Accounting harmonization is defined as "the process of increasing of the compatibility of accounting practices by setting bounds to their degree of variation" (Nobe,et,al,2005). Accounting harmonization is generally classified as harmonization of rules (de jure) and harmonization of practices (de facto). Pownall and Schipper(1999) have pointed out many discussions and studies focus on comparing standards, and implicitly assume that harmonized accounting standards lead to harmonized accounting practices.

5.1 Du Jure Harmonization Studies:

This research assess the harmonization by comparing one country' accounting standards with IAS to another, which is mainly about harmonization of accounting regulations. Some important researches haven been done in this aspect of harmonization, such as Nair and Frank (1981), Doupnik (1987), and Garrido et al. (2002). In summary, all those previous studies indicated an increase in harmonization of accounting standards

In the case of China, we can also find out some studies on harmonization of China GAAP with IAS in the literature. Tang (1994) had examined the 1992 Accounting System with IAS, while Chen et al (1999) compared the 1998 Accounting System with IAS. Both of them had focused on the gradual application of market value, which can be traded as evidence of harmonization with IAS. Peng et al 2005 has argued that "those examples of harmonization are descriptive. No efforts had been made to measure the extent of de jure harmonization and the progress of improvement." Their studies have measured the extent of de jure harmonization of each three Chinese GAAP (1992, 1998, and 2001 GAAP) and empirically evaluate whether the

comparability of Chinese accounting standards with IAS has significantly improved. Finally, they concluded Chinese GAAP has been substantially harmonized with IAS and the comparability has improved.

5.2 Du Facto Harmonization Studies:

The first stream of this study focuses on the compliance of firm' accounting practices with accounting standards, which is motivated with the concern that the harmonized accounting standards may not lead to harmonized accounting practices. Typical studies in this aspect include Street et al. (1999), Street and Bryant (2000), both of which focused on the accounting practices of listed companies across different countries and provided evidence of non-compliance of IAS. Chamisa (2000) and Street and Gray (1999) have focused on one country' accounting practices complied with IAS and found a certain level of de facto harmonization. The inconsistencies of those findings in these studies have indicated that it is still unclear to say whether the harmonized accounting practices can be achieved under the harmonized accounting standards and it is necessary to examine the extent of de facto harmonization even if one country adopts IAS.

Above compliance studies have made great contribution to examine the extent of firms' compliance with similar standards, especially in the situation that accounting standards with many voluntary options are applied. There all also some compliance studies of China. Xiao(1999) investigated the disclosure practices of Chinese listed companies and concluded the level of compliance by the sample companies appeared to be high. Peng(2005)focused on measurement practices of domestic Chinese listed companies and concluded that Chinese listed firms complied significantly with both Chinese GAAP and IAS both in 1999 and 2002. The consistency of those findings in these studies indicated the level of compliance by Chinese listed companies is high. As they also attributed the observed compliance to mandatory requirements by the Chinese government, it is safe to assume the compliance level by Chinese listed companies remains high or even higher with current Chinese GAAP.

The second stream of this study focus on the comparability of firms' accounting practices under different sets of accounting standards. There are two ways to do this stream. One way is to quantify the levels of harmonization with the concentration index. Van der Tas(1988) has been the first-known to develop the concentration index that measure the levels of harmonization for each accounting item in annual reports. 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 (Peng et al, 2005) Emenyonu and Gray (1992) have been using the concentration index to the extent to which accounting practices in France, Germany and the U.K. by selecting six key measurement items. Archer et al (1995) had proposed a "disclosure-adjusted" concentration index that gives a deep analysis within one country. All above studies have indicated a low level of harmonization of accounting practices. The other way is to compare the net incomes produced by the same company under two sets of accounting standards with the application of a conservatism index.

The earliest researcher that developed the conservatism index is Gray (1980) who assessed the differences of net incomes using the annual reports of 72 largest companies from France, Germany and the U.K. Gray (1980.P67) described the conservatism index as a 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" Many studies focused on the comparability of local GAAP-based net incomes and US-GAAP-based net incomes by collecting data from the Form 20-F of foreign companies listed US stock exchange. For example, Cook (1993) compared 19 Japanese listed companies on the US stock exchange in the financial sector that were required to submit the Form 20-F to the SEC. By comparison, international studies regarding developing countries in this area are fewer. Rueschhoff and Strupeck (I998) analyzed the earning gaps under 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.

In the case of China, most studies focused on the comparability of China GAAP-based earnings and IAS-based earnings with the conservatism index. The mandatory reconciliation requirements for Chinese listed companies that issue both A and H shares provided the empirical statistics in this area. J P Chen (et al, 1999) examined the differences between earnings and balance sheet items prepared according to Chinese accounting standards and IAS based on the Accounting Regulation for Listed Companies. They selected 34 companies in 1994 to 50 companies in 1997 in B-share market. With the same reform background, Shimin Chen (et Al, 2002) focused on the change of earning GAP of A-share and B-share under two sets of accounting standards changed from 1997 to 1999. They concluded that after the reform in 1998 there was deficiency of Chinese accounting standards in terms of convergence with international counterparts. Chen also suggested the reports both audited by Big5 have significantly smaller earning gap. J P Chen got the similar conclusion in 1999 research. Peng (2005) provided more comprehensive assessment of the harmonization of Chinese GAAPs issued in 1998 and 2001.They examined the levels of compliance, consistency and comparability of Chinese listed companies' practices under China GAAP and IAS. They concluded that "the overall level of harmonization is high more than two thirds of the financial accounting measurement requirements being substantially harmonized with IAS, but noticeable variances between Chinese GAAP and IAS still exist in key financial measures. When Kuan(et al,2007) did their research, they turned to the financial information for the year 2004 of the companies that issued both A-share and H-share as the targets, with the Regulation on Enterprise Financial Reporting issued in 2001. They reached the result that there was no significant difference between A-share and H-share. They also referred to the new standards would be enforced from January 1, 2007 with various aspects of business operations previously not covered by the EDAS would be included in the new ABSE and expected the new ASBE will further reduce the existing discrepancies, which can been seen as the unanswered question due to the

research period.

There are some limitations with the application of the concentration index. It measures the comparability of annual reports on an item-by-item basis, so it can not be used for those studies to evaluate the overall level of comparability of accounting practices under different accounting standards. What is more, it only can be used to examine accounting choices across different countries. Studies focus on a particular country can not apply the concentration index. In contrast, the conservatism index is wider applicable. It can be utilized to evaluate the harmonization of accounting practices either on the overall level or an item-by-item level across different countries or for a particular country. Therefore, we would apply the conservatism index in our research. Besides, we observed few studies have evaluated the harmonization efforts in developing countries towards IAS in this area. But it is the trend of developing countries adopting IAS and many of them have become committed proponents to the convergence with international accounting standards. We would like to quantitative evaluate the differences of accounting choices in China, which is expected to provide insight into the harmonization efforts in China.

6. Data Analysis

6.1 Data information:

Out of the 30 sample listed firms in mainland China that have been analyzed in this research, 29 of them are listed in Shanghai Stock Exchange while only one company, the "Angang Steel Company", is listed in Shenzhen Stock Exchange both in 2006 and 2007.

6.1.1 Auditor selection:

Choice of auditors has been playing a crucial role on the truthfulness and the reliability of the financial statements. (Ip Chi,et al,2006) According to our statistics, majority of the companies choose Big 4 as independent auditors in the two years. By comparison, companies listed in HK Stock Exchange are more prone to use Big Four than mainland enterprises. In year 2007, 27 out of 30 companies (90%) selected Big 4 as auditors of H-share annual reports while 24 out of 30 companies (80%) used Big 4 as auditors in mainland China. On the other hand, only 2 and 3 companies had selected local CPA firms instead of Big Four both for H-share and A-share annual reports in 2006 and 2007 respectively.

From another perspective, we tried to analysis the consistency of selecting auditors. We found 23 out of 30 companies selected the same audit firm for both A-share and H-share annual reports in 2006. In the year 2007, the number of companies rose to 24 out of 30. From year 2006 to year 2007, 3 companies changed auditors for the audit of H-share and the number of companies for A-share audit was the same, also 3 companies alter the auditors.

We can conclude that great majority of listed companies have chosen the world famous audit firm and achieved a high degree of consistency on employing the auditors. It is the belief that the congruent selection of auditor firms surely provided more assurance on high audit quality of annual reports.

6.1.2 Standard Selection:

As to HK capital market, a new applicant's accounts should be prepared in accordance with either Hong Kong Financial Reporting Standards or International Financial Reporting Standards. (HKEx) The financial statement must be published in Hong Kong either in Chinese or in English. The date of publication is usually the same day that the Chinese GAAP-based report is released in China.

Among the total 30 companies in year 2007, the ratio of choosing different standards is very similar. 16 companies have chosen IFRS as the standard of financial statements while 14 companies have applied HK GAAP to illustrate the financial information. The result is the same for year 2006. All the companies have applied the same set of standards in two years.

6.2 Research Question 1:

6.2.1 Figure Description [7]

Table 2 Value Changed after Restatement

		Report Increase in Profit After Restatement		Report Decrease in Profit After Restatement		Report unchanged in Profit After Restatement	Mean value of earnings	
Year	N	No. of Firms	Changes in million RMB	No. of Firms	Changes in million RMB	No. of Firms	IFRS	Chinese GAAP
2006	30	26	27,784	4	1,065		7,184	6,293
2007	30	17	14,003	11	533	2	10,262	9,813
By industry								
Excavate								
2006	2	2	5,367				28,890	26,207
2007	2	2	2,127				30,986	29,922
Production and supply of power/gas/water								
2006	3	3	2,451				3,943	3,126
2007	3	1	63	2	46		4,130	4,125

[7] Report increases in profit after restatement: Reported profits based on International Accounting Standards (H-share) > Reported profits based on Chinese accounting standards (A-share).

Reported decrease in profit after restatement: Reported profits based on International Accounting Standards (H-share) < Reported profits based on Chinese accounting standards (A-share).

Transportation and Warehousing

2006	8	7	591		1	673			792	802
2007	8	5	452		3	422			1,925	1,921

Financial and Insurance

2006	4	3	17,983		1	314			31,247	26,830
2007	4	3	11,046					1	49,648	46,887

Information Technology

2006	1	1	13						102	89
2007	1	1	24						120	96

Manufacturing

2006	12	10	1,379		2	78			1,207	1,099
2007	12	5	291		6	65		1	1,616	1,598

The advent of the new Chinese GAAP which applied since financial year 2007 did reduce the earning gap between Chinese GAAP and IAS. The figures above can support this argument.

For the overall evaluation, in both the year of 2006 and 2007, the number of listed firms that increased earnings after the restatement is more than that of those reporting a decreased in the restated earnings. The earning gap has been narrowed significantly both in "*increased restatement*" from 27,784 million RMB to 14,003 million RMB and in "*decreased restatement*" from 1,065 million RMB to 233 million RMB. Furthermore, there are two companies have no earning gap between Chinese GAAP and IAS in the year 2007; and neither, there was no company changed sign of profit after the restatement to IAS. By comparison, there were totally 18 B-share companies that required presenting annual reports both under Chinese GAAP and IAS reported profit turn to loss after restatement to IAS during 1994 to 1997. (Charles 1999). On the other hand, during those years, no company, which originally reported a loss, later changed to profit after the restatement. Our finding is consistent with previous research on this point. These results imply that the new Chinese GAAP has mad a considerable effort to the convergence with IAS.

We observed that there were six industry categories with different level of harmonization in our sample. First, the industries of "*Production and supply of power/gas/water*" and "*Manufacturing*" have the most significant earning gap reduction from 2,451 million RMB and 1,379 million RMB to 63 million RMB and 291 million RMB respectively, and the mean value of earnings has almost no difference in the year of 2007. Second, the earning gap reduction is relatively high in the industry of "*Excavate*" with the high earning gap reduction and low mean value difference between the earnings based on Chinese GAAP and IAS in the year of 2007; but the earning gap reduction was relatively low in the industry of "*Transportation and Warehousing*" and the industry of "*Financial and Insurance*". For the "*Information Technology*" industry, the change in 2007 had been higher than the change of 2006, indicating the earning gap was bigger in 2007. On the basis of these results, we can see the overwhelming majority of accounting practices of different industries reach at high level of harmonization.

Conclusion:

Based on the collected data, we can conclude that the new Chinese GAAP has relatively high conformity with IAS and this result is especially eminent in the industries of "*Production and supply of power/gas/water*" and "*Manufacturing*". And the "*Information Technology*" industry is the only exception of this trend. We would further verify our research based on descriptive statistic analysis in the next section to support our arguments.

6.2.2 Descriptive statistics:

We perform the descriptive statistics on the basis of the firm level as the first step. We calculate the Index of Comparability of each company in Appendix 1 with panel A for year 2006 and panel B for year 2007 by applying the formula:

$$IOC = 1 - \frac{(\text{IFRS net income} - \text{Chinese GAAP net income})}{|\text{IFRS net income}|}$$

Then we calculate the statistical indicators Mean, Median, Standard Deviation (Std.Dev) and Percentile Value of every company's Index of Comparability by excel with the result showed in Table 3.

Table 3 IOC for Two Years

	Year	N	Mean	Median	Std. Dev	Min	Percentile Value			Max
							25th	50th	75th	
Index of Comparability	2006	30	0.6896	0.9177	1.1550	-5.3721	0.8065	0.9177	0.9680	1.2402
	2007	30	1.0176	0.9978	0.2892	0.7244	0.9735	0.9978	1.0055	2.4939

Index of comparability values exceeding 1.0 indicates that Chinese GAAP net income is higher than IFRS net income. The mean and median of the index of comparability were 0.6894 and 0.9177 in 2006, and 1.0176 and 0.9978 in 2007 respectively, indicating that Chinese GAAP net income was lower than IFRS net income in 2006 and a little higher than IFRS net income in 2007. The result of 2006 was consistent with the finding of Ip Chi et Al (2007) who analyzed the listed companies' annual reports of 2004. They found that 57 percent (17 companies) of the companies reported a higher net income in their H-share financial statements than in their A-share statements. In other words, when investors preliminarily obtained the A-share reports of these 57 percent of companies, they were indeed utilizing a lower profitability indicator for their decision-making process. That finding on net income contradicts those from previous studies (Chen et al., 1999, 2002; Lin and Wang, 2001) which indicated that A-share earnings were frequently higher than H-share earnings.

With the promulgation of new accounting standard, Chinese GAAP became closer to IFRS. The value of mean decreased 33.4% from 1.357 of 2002 (Chen et Al. (2002) and S.Peng et Al (2008)) to 1.0176 of 2007, indicating that the net income under two sets of standards were almost the same. Compared with the result of 2006, the net income under Chinese GAAP had great increase. Besides the affection of new accounting standard, the change of lists of minority interests in the statements also has great impact on it. Under the new ASBE, the same as IAS, the net income contains the

minority interests which were excluded before.[8] Instead of improvement of accounting treatment, this change is only the way of list in financial statement. Thus we will ignore the affection of minority interest and will focus on the changes due to the accounting treatment in research question 2.

What's more, both the mean and the percentile values were more divergent from 1.0 in 2006 than 2007, suggesting a reduction in the earning gap and the convergence of net incomes as reported in firms' Chinese GAAP and IFRS-based annual reports. The value of standard deviation also decreased continuously from 1999 to 2007 with 3.238 in 1999, and 2.381 in 2002 (S.Peng et al 2008), and 1.1550 in 2006 and 0.2892 in 2007, indicating that the degree of difference dispersion is getting smaller and smaller. So we can see that in year 2007 after the new Chinese GAAP promulgation the earnings gap between Chinese GAAP and IFRS was extremely insignificant compared with previous statistics.

On the second step, we summarized the data in Appendix 1 by different industries. We also calculate the statistical indicators by excel with the result showed in Table 4.

Table 4 IOC for Two Years by Industries

	Year	N	Mean	Median	Std. Dev	Min	Percentile Value			Max
Index of Comparability by Industries							**25th**	**50th**	**75th**	
Excavate	2006	2	0.826	0.826	0.125	0.737	0.782	0.826	0.870	0.870
Production and supply of power/gas/water	2006	3	0.796	0.806	0.036	0.756	0.781	0.806	0.816	0.826
Transportation and Warehousing	2006	8	0.915	0.938	0.176	0.578	0.889	0.938	0.973	1.195
Financial and Insurance	2006	4	0.842	0.922	0.253	0.479	0.771	0.922	0.994	1.046
Information Technology	2006	1	0.873	0.873	-	0.873	0.873	0.873	0.873	0.873
Manufacturing	2006	12	0.423	0.944	1.829	-5.372	0.852	0.944	0.972	1.240
Excavate	2007	2	0.903	0.903	0.099	0.834	0.869	0.903	0.938	0.973
Production and supply of power/gas/water	2007	3	1.004	1.004	0.014	0.990	0.998	1.004	1.011	1.018
Transportation and Warehousing	2007	8	1.167	0.992	0.537	0.916	0.970	0.992	1.010	2.494
Financial and Insurance	2007	4	0.930	0.998	0.137	0.724	0.724	0.998	1.000	1.000
Information Technology	2007	1	0.800	0.800	-	0.800	0.800	0.800	0.800	0.800
Manufacturing	2007	12	0.988	1.001	0.064	0.826	0.991	1.001	1.013	1.061

[8] The old Chinese GAAP defined the Minority Interests (MI) as liability with the theory of "Parent Company". The MI was deducted from the consolidated net income. Under the new Chinese GAAP, based on the theory of "Economic Entities", the MI is recognized as Equity. The consolidated net income contains MI.

When we research by industry, we conducted a more detail and specific analysis. In 2006, all the industries had a higher net income under IFRS. In year 2007, there were two industries "*Production and supply of power/gas/water*" and "*Transportation and Warehousing*" had higher net income under Chinese GAAP. But the mean of "*Production and supply of power/gas/water*" and "*Manufacturing*" showed the most close to IFRS among the 6 industries, indicating that they reached the highest degree of convergence with IAS. By contrast, the "*Information Technology*" and "*Transportation and Warehousing*" presented the first and second biggest deviation from IAS in 2007.

Ranking by the amount of samples, the "*Manufacturing*" comes first with 12 companies. The mean and median value increased from 0.423 and 0.949 in 2006 to 0.988 and 1.001 in 2007, suggesting a great reduction of earnings gap. The change of percentile value was also consistent with this trend. Secondly comes to "*Transportation and Warehousing*" industry. The median value and percentile value showed the same direction with "*Manufacturing*". But the mean value increased and the standard deviation appeared more dispersive in 2007. The "*Financial and insurance*" and "*Production and supply of power/gas/waster*" and "*Excavate*" industries also indicated the higher convergence in 2007 of two sets of accounting standards with 4 and 3 and 2 companies respectively. The last industry "*Information Technology*" presented the opposite trend. The mean and median value suggested that there were bigger gaps in 2007. Since there is only one sample in this industry, we can not conclude it represent the trend of the whole industry.

***Conclusion*:** With the analysis above, we can see 5 out 6 industries showed the trend of moving towards IFRS with different degrees of convergence while only one industry presented the opposite direction. The industry "*Manufacturing*" shows the greatest reduction of deviation from IFRS, followed by "*Production and supply of power/gas/water*". These two industries also present the higher degree of convergence to IFRS compared with the other four industries according to the figures of 2007. But

the "*Information Technology*" and "*Transportation and Warehousing*" shows the bigger net income gap between two sets of standards in 2007.The result complies with the figure description mentioned above. We will raise hypotheses and use statistical test to illustrate research question one below.

6.2.3 Tests of the Hypotheses:

The distribution of comparability indices in 2006 and 2007 have been described below by means of histograms respectively. Both Figure 1 and Figure 2 prove that the distribution is not normal. The t-test cannot be used since it requires a normal distribution, thus, we apply non-parametric approach "Wilcoxon Statistic" that also had been applied in the research of Smith Chen (et al. 2002) and Songlan Peng (2005) to test our hypotheses.

Figure1

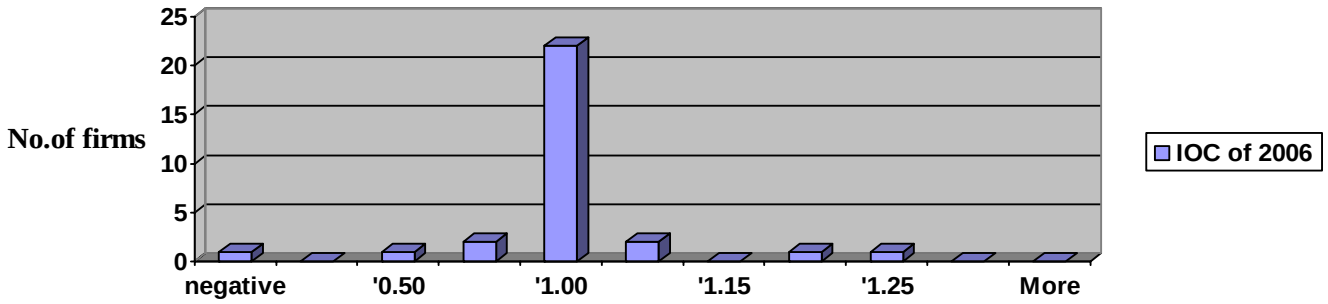
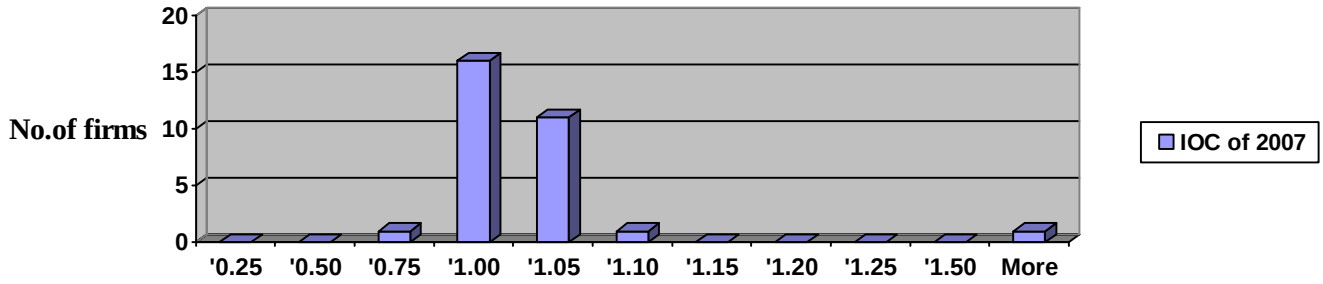


Figure2



The goal of wilcoxon test is to verify if there is a difference between the populations

on the basis of the random samples taken from these populations. (Yadolah 2008). In our research, we apply wilcoxon test to verify not only sample firms but total Chinese listed firms have greatly harmonized towards international accounting practices. Null hypothesis is always traded as the hypothesis with no difference.

First, we would test whether there are significant differences between Chinese GAAP-based and IFRS-based net incomes. With the wilcoxon one -sample test, we need to develop two hypotheses.

H_1: Chinese GAAP-based and IAS-based net incomes produced by the same firm are significantly different for Chinese listed firms that issue both A and H-shares.

H_0: (Null hypothesis): Incomes produced by the same firm under two sets of standards are **not** significantly different for Chinese listed firms that issue both A and H-shares.

Then wilcoxon one-sample test is used to test whether the median comparability index value for sample firms' 2006 and 2007 annual reports is significant different from one. As shown in Table 1, hypothesis H_0 is rejected at the 5% level for the year 2006 with P-Value[9] 0.001($T > T_{0.05,}$ $P<0.05$) while it is supported at the 5% level for the year 2007 with P-Value 0.198($T<T_{0.05,}$ $P>0.05$). These results imply that Chinese GAAP-based net income produced by the same firm was significantly different the IAS-based net income in year 2006 and the net income gap produced by the same firm under two sets of standards have reached insignificant level in year 2007.

[9] The p-value is defined as the probability, calculated under the null hypothesis, of having outcome as extreme as the observed value in the sample or is the probability of obtaining a result at least as extreme as a given data point, (Yadolah 2008)

Table 5 Significance of the Net Income Differences between Chinese GAAP and IAS

Year	N	Actual Median	Estimated Median	Wilcoxon Statistics	P-Value
2006	30	0.918	0.895	65	0.001
2007	30	0.998	0.992	146	0.198

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

*We got above results from the software "minitab".

Second, we intend to test whether the difference between Chinese GAAP-based and IAS-based net incomes produced by the same firm has been reduced with the issuance of the 2006 version Chinese GAAP. Two hypotheses have been developed as below:

H2: The difference between Chinese GAAP-based and IAS based net income have been reduced with the issuance of the new Chinese GAAP for Chinese listed firms that issue both A and H-shares

H_0: (Null hypothesis): The difference between Chinese GAAP-based and IAS based net income have **not** been reduced with the issuance of the new Chinese GAAP for Chinese listed firms that issue both A and H-shares

Table 6 Reduction of the Net Income differences between Chinese GAAP and IAS from 2006 to 2007

N	Wilcoxon Statistics	P-Value
30	694	0.0011

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

We apply a Mann-Whitney Test (Wilcoxon two-sample test) to test H2 using sample firms' 2006 and 2007 annual reports. The null hypothesis is that there is no significant difference reduction between Chinese GAAP-based and IAS based net income with the issuance of the new Chinese GAAP for Chinese listed firms that issue both A and H-shares under the same industry. As shown in Table 5, the p-value is 0.0011 which is under a 5% significance level. Thus, the null hypothesis is rejected.($T>T_{0.05}$) indicating that there was significant difference reduction between Chinese

GAAP-based and IAS-based net income with the issuance of the new Chinese GAAP for Chinese listed firms that issue both A and H-shares in 2006 and 2007.

Conclusion: The difference between Chinese GAAP-based and IAS based net income have been reduced with the issuance of the new Chinese GAAP.

6.3 Research Question 2:

We get two important observations from the first question. First, the earning gaps under Chinese GAAP and IAS have been greatly reduced with the issuance of the new Chinese GAAP. Second, Chinese GAAP-based earnings in different industries cause different gaps with the IAS-based earnings. In the question 2, we would try to explore reasons behind above accounting phenomena. What accounting choices under the newest Chinese GAAP are most significantly affect the total difference of net incomes? What accounting items contribute greatly to the earning gaps in a specific industry?

6.3.1 Analysis of Reconciliation items:

We examined the reconciliation schedule between Chinese GAAP and IFRS financial information in our sample companies' annual reports in year 2006 and 2007, in order to measure the contribution of each reconciliation item to the net income difference under two sets of accounting standards. All 30 sample companies presented their reconciliation schedules in their 2006 annual reports and 28 sample companies presented their reconciliation schedule in their 2007 annual reports. Two firms in manufacturing industry did not show the reconciliation from one standard to another, for they claimed no accounting treatments have impacted the net incomes significantly. We classified all reconciliation items into a total of 19 financial statement items comprising 35 accounting treatments on basis of the list of International Accounting Standards (IAS).

The incidence of occurrence and occurred amount of each accounting treatment has been presented in Table 6. Comparing with two years' figures, more adjusted

reconciliation items were used in year 2006 than year 2007, which implied that the adoption of the new Chinese GAAP brought greater convergence with IAS. Several observations could be got from Table 6. First, the item "deferred tax and income tax" is the most frequently used reconciliation item with 22 and 17 incidences of occurrence in year 2006 and 2007 respectively. In year 2006, the difference was mainly caused by the difference of accounting method on recognition of deferred tax. The old China GAAP allowed both the balance sheet liability method and the tax payable method and deferred tax is recognised for timing differences, while the IAS only allowed the balance sheet liability method to determine deferred tax of temporary differences. In year 2007,the accounting method on deferred tax has been harmonized under the new Chinese GAAP and IAS, so the adjusted amount of this item has been reduced from 4,847 to -304 million RMB. The difference on deferred tax item between 2007 A-share and H-share annual reports could be treated as the impacts on the tax of other reconciliation items' differences. The second and third most frequently used reconciliation items are R1 and R35 both in year 2006 and 2007. Regarding the depreciation of fixed assets, the accounting treatments of general assets under the Chinese GAAP and IAS have been harmonized expect some special assets in specific industries. For example, Chinese GAAP only allows straight line method for the depreciation of gas assets, but IAS applies production method of depreciation. The main difference of R1 in our sample companies was caused by the different accounting models about the assets revaluation allowed by the two standards, which would be explained later. Last, almost one-third companies in both 2006 and 2007 used the item "others" to reconcile the net income difference between Chinese GAAP and IAS-based annual reports. As no explanation was given by those companies, this indicates those companies are not capable to fully explain the specific sources of all differences or believe the amount in this item is immaterial to net income differences. As a result, we can not tell whether such adjustments arise from differences of accounting treatments under two standards or from the companies' opportunistic use of reconciliation schedules.

We also noticed that the reconciliation items with biggest adjusted amount in 2006 and 2007 are not the same items most frequently used. The item "Recognition and Measurement of Financial Instruments" with the biggest adjusted amount in year 2006 is the most significant reconciliation item for the company" China Air", while the item " Insurance Contract" with the biggest adjusted amount in year 2007 is the most significant reconciliation item for the insurance companies. Whether these items have more significant impacts on a specific industry than other industries? We would discuss it later.

Table 7 Causes of the net income differences under Chinese GAAP and IAS

		Yr 2006		Yr 2007	
No[10]	Assets	Incidences of occurrence	Amount (Million RMB)	Incidences of occurrence	Amount (Million RMB)
R1	Fixed /Intangible assets Depreciation/ (fixed, intangible and Financial) assets Revaluation	16	(1,514)	11	(1,377)
R2	Amortization of land use right, Revaluation	8	(48)	9	(66)
R3	Net income on disposal of fixed assets	2	(3)	-	-
R4	Investment Property	3	(507)	2	(3)
R5	Capitalization of overhaul expense	3	194	1	(58)
R6	Gas Assets	1	(331)	1	(523)
R7	Goodwill	8	230	1	(58)
R8	Inventory	2	143	1	2
	Investments	-	-	-	-
R9	long-term equity investment	11	135	4	(1)
R10	Long term securities investment	1	(5)	-	-
	Impairment of Assets				
R11	Impairment of Fixed/Intangible Assets	2	252	1	170
R12	Impairment of long-term assets	1	150	-	-
R13	Adjustment of bad debts	1	(348)	1	(1)
R14	**Recognition and Measurement of Financial Instruments**	12	(15,517)	1	1
R15	**Leases**	2	(39)	-	-
	Accounts Payable	-	-	-	-
R16	Account payable cannot be paid	4	(30)	-	-
R17	Long-term account payable.	1	37	-	-
	Employee benefits	-	-	-	-
R18	Employee bonus and welfare fund	4	24	3	14

[10] We will use the No. for short instead the name of accounting items in the tables below.

R19	Earlier retirement benefit obligation	5	641	-	-
R20	Employee welfare	3	192	1	81
R21	Housing reform	5	159	5	213
	Accrued Expenses	-	-	-	-
R22	Special Funds for Safety	2	(616)	2	(724)
R23	Accrue electricity fee	1	11	1	(363)
	Borrowing costs	-	-	-	-
R24	Capitalization of Interests	9	(1,612)	2	(28)
R25	**Business combinations**	5	(1,189)	4	850
R26	**Foreign Currency Transaction**	1	313	-	-
R27	**Deferred tax and income tax**	22	4,847	17	(304)
R28	**General Grants**	14	(123)	8	(56)
	Debt Restructuring	-	-	-	-
R29	Debt forgiveness	3	(498)	-	-
R30	**Transactions of related-parties**	2	(42)	-	-
R31	**Insurance Contracts**	1	(193)	1	(10,486)
	Share-based Payment	-	-	-	-
R32	Stock Appreciation Right	1	431	-	-
	First -time adoption of Accounting Standards	-	-	-	-
R33	Amortization starting-load cost	7	(770)	1	(3)
R34	Convertible bonds	-	-	1	7
R35	**Others**	10	(188)	9	(23)

6.3.2 Analysis of each industry:

In this section, we would measure the materiality of the contribution of reconciliation items to the overall net income difference based on the industry level. We would apply below partial index for each reconciliation item to evaluate how much each item has contributed to the net income difference. Besides, we would try to discover the linkage between industry characteristics and specific reconciliation items. The formula of the partial index is as below:

$$\text{Partial index of comparability} = 1 - \frac{\text{Partial Adjustment}}{|\text{IFRS Net Income}|} \quad \text{(H-A)}$$

An index value which is greater than 1.0 means a higher amount of this reconciliation item can be got under China GAAP than IAS; while an index value which is less than 1.0 means a higher amount of this reconciliation item under IAS.

Table 8 IOP of Transportation and Warehousing:

	AIR CHINA		CHINA SOUTHERN AIRLINE		CHINA EASTERN AIRLINE		CHINA SHIPPING DEVELOPMENT		JIANGSU EXPRESSWAY		GUANGSHEN RAILWAY COMPANY		SHENZHEN EXPRESSWAY		ANHUI EXPRESSWAY	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
No	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP
R1	1.100	1.072			1.069	0.318	0.998		1.028	1.025	1.042	1.019	0.997		1.061	1.143
R2			1.020	1.002		1.051									0.999	0.998
R3											1.003					
R5	1.071	1.014	2.216		0.804											
R7					0.975				1.010				0.999		1.034	
R9	0.747		0.760		1.012								1.029			
R10													1.009			
R11					0.932	0.306										
R14	0.919		0.873		0.988		1.031									
R15			0.828		1.021											
R16											1.034					
R17															0.961	
R19	0.996		(0.922)								0.971					
R20					0.975	0.668										
R21			0.868	0.987			0.995	0.989			0.981	0.989				
R22															1.016	
R24			2.833	1.028							1.017					
R25				0.997							1.027					
R27	1.016	0.990	0.838	0.998	1.051	1.297	0.971		1.000			0.994			1.123	0.908
R28	0.997	1.004	1.005	1.000							0.998		1.001	1.001		
R30							1.001									
R35		1.004			1.000	0.866	1.002				1.007	1.001				

The samples in "*Transportation and Warehousing*" industry are mainly composed by aviation and expressway companies. At first glance, in two years, the item R1 occurred most frequently, which stands for "*Fixed /Intangible assets Depreciation/Revaluation/Amortization*". But the most deviation items show in R5 "*Capitalization of overhaul expense*" and R24 "*Capitalization of interests*" of China Southern Airline in 2006. There is also a special item, R19 "*Earlier retirement benefit obligation*" in 2006 presents a negative IOP of CHINA SOUTHERN AIRLINE. We will briefly illustrate them in turn.

Firstly, 7 out of 8 companies have the reconciliation items on fixed assets depreciation and revaluations. One of the main differences is due to the accounting treatment on revaluation of assets. Many companies revaluated the assets when they initial public offered. But under IAS the assets are recognized as history cost. Both the premium and discount will be written off under IAS. Another reason is the different depreciation years under two sets of standards. For example the rail line assets of GUANGSHEN EXPRESSWAY are not depreciated according to the request of the Ministry of Finance while it should be depreciated by 70 to 100 years under IAS.

Then we turn to analysis IOP for CHINA SOUTHERN AIRLINE in year 2006. It shows the most representative items of R5, R19 and R24. Item R5 present the characteristic of industry obviously. According to Chinese GAAP, the aircraft and engine overhaul costs should be charged to profit and loss in the current period. Under IAS, the overhaul costs should be capitalized as part of fixed assets and depreciated in the expected overhaul period with straight line method. This leads 248million RMB reconciliation in 2006. In 2007 the requirement under new Chinese GAAP is the same as IAS. So there is no different accounting treatment for this item.

Item R19 "*Earlier retirement benefit obligation*" represents a negative IOP because the reconciliation amount (392million RMB) exceeds the net profit (204million RMB) in H-share. When it applies the formula of IOP, the result shows negative. In detail, the difference between two standards is: Under IAS, the cost for earlier retirement staff should be accrued one-time. But there has been no such requirement under Chinese GAAP until 2007. So we can not see the reconciliation item in the latter year. However there is also an item lasts for two years in the category "*Employ Benefit"*: the "*Housing Reform*". The housing subsidies were recorded in the retained earnings of 2001 under Chinese GAAP while IAS requires recording the cost in the relative accounting period.

Finally is the item R24 "*Capitalization of Interests*". The Chinese GAAP only allows capitalization of interests of the special loan while IAS allows both for special loan and general loan when the company needs to build or buy a fixed asset. That difference was also eliminated in 2007.

Conclusion: From the analysis above, we can see that the significant differences were showed all in 2006. In 2007 those differences are greatly reduced both in terms of quantity and amount. But there are still some differences due to the special requirement of government regulations, for example, the rules on depreciation years, which may not be eliminated in a short while.

Table 9 IOP of Financial and Insurance:

	ICBC		BOC		China Life		CMB	
	2006	2007	2006	2007	2006	2007	2006	2007
No	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP
R1	1.009	1.003	1.006	1.012	1.005	1.003		
R4			1.010					
R8			0.997					
R9	1.002				1.005			0.998
R14					1.785			
R19			0.995					
R26							0.954	
R27			1.004	0.988	0.735	1.004		
R31					1.010	1.268		
R32					0.979			

The diagram clearly shows that in 2007 there is basically no significant difference between two sets of standards. The most obvious variance in 2007 locates in R31 and in R14 for year 2006 respectively. Firstly we would analyze R31 "*Insurance Contract*" which shows an industry characteristic. Under the current Chinese GAAP, the cost for commission, handling charge and administration of insurance policy should be recognized into profit and loss of current period. While under IAS,

according the different types of insurance policy, the cost should be recorded as deferred expense or amortized in a reasonable period.

The item R14 "*Recognition and Measurement of Financial Instruments*" shows a significant difference in 2006 while was eliminated under the newest Chinese GAAP in 2007. The recognition of financial assets and bonds are same under two standards.

We draw the conclusion that there is not much variance in this industry, especially after the promulgation of new accounting standard. But when compared at an international level, this industry is an emerging industry in China. Some rules do not appear detail enough. We believe there are still spaces to further improvement on the convergence to IAS.

Table 10 IOP of Manufacturing

Manufacturing A

	Anhui Conch		TSINGTAO BREWER		ANGANG		MAANSHAN		SHANGHAI PETROCHEMICAL		DONGFANG ELECTRIC	
	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007
	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP	IOP
No												
R1	1.0019		0.999	0.968								
R2	1.0021	1.001			1.001	1.001			1.004	1.002		
R3												
R4												
R8												
R9											1.000	
R11			0.963									
R13												
R14			0.992									
R16					1.000						1.000	
R18							0.997	0.997			0.991	
R19												
R20												
R22						1.001						
R24					1.024				1.032			
R25	0.999		1.050									
R27	1.024	0.993	1.001		1.011	1.000	1.031		1.003	1.007		
R33	0.999				1.000	1.000						

R34						0.999						
R28					1.000		1.020		1.029	1.016	1.049	
R29			1.023									
R30									1.042			
R35			1.000	0.999								

Manufacturing B (continued with A)

	GUANGZHOU SHIPYARD		**YIZHENG CHEMICAL**		**CHONGQING IRON & STEEL**		**Guangzhou Pharmaceutical**		**SHENJI GROUP**		**LUOYANG GLASS**	
	2006	**2007**	**2006**	**2007**	**2006**	**2007**	**2006**	**2007**	**2006**	**2007**	**2006**	**2007**
	IOP	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**	**IOP**
No												
R1							0.947	0.960				
R2			1.129	1.292							1.047	1.025
R3							1.003					
R4		1.001					1.000	1.006	1.058			
R8											1.250	0.972
R9									0.998	0.995	0.082	
R11												
R13										1.004	9.083	
R14	0.996	0.999			1.032						0.685	
R16							1.011					
R18	0.992	0.998					0.967	0.989				
R19	1.016											
R20							0.971					
R22												
R24			0.959									
R25											1.412	
R27	0.898		0.987	0.904	1.206		1.053					
R33											1.049	
R34												
R28					0.984		1.005	1.001	1.002	0.996	1.035	1.005
R29											1.041	
R30												
R35					1.017					0.999		0.939

Manufacturing industry contains the most samples in our research. The same as "*Financial and Insurance*" industry, the items that have differences reduced greatly from 2006 to 2007. In 2007 the IOP are all very close to 1 indicating the variance are

quite small. However, R4 and R22 both has one company presenting newly variance that was not appear in 2006, which are the objects we will focus on.

The company GUANGZHOU SHIPYARD has a new variance in R4 "*Investment Property*". From the annual reports we can see as the new item in the statement of 2007, the initial measurement is the same in two standards. But the annual depreciation rate appears different. Under Chinese GAAP the annual depreciation rate is 1.39%~2.16% while the rate shows 1.4%~3.2% under IAS. Another company that has the new variance is ANGANG STEEL in item 22 "*Special Funds for Safety*". According to Chinese GAAP, the company can make provision for safety funds by the certain proportion of production or sales revenue. But IAS forbids this provision. This variance can be seen as an industry characteristic. And it also can be seen as the government regulations. Companies in high-risk industries can even use this regulation to manipulate profit under certain circumstance.

We can say that the variance has been reduced greatly. But for the accounting items that newly appeared in the Chinese GAAP, there still exist some differences with IAS. Another conclusion is the government regulation is also a factor that can not be ignored. On the purpose to protect some industries, the regulation may make the differences exist for a long time.

6.3.3 Other Industries:

In this section, we defined these three industries *Excavate, Production and supply of power/gas/water* and *Information Technology* as other industries, because the size of sample representatives of these three industries is rather smaller than the size in the other three industries.

We can see that the different accounting treatments of specific accounting items have been reduced from 2006 to 2007 in these three industries. However, there are still some minor earning gaps exist, and we conclude that the reminding earning gaps

could be attributed to the accounting items that possess specific industry characteristics. Here are our research comparisons based on the different accounting treatments of industry characteristics.

Table 11 IOP of Other Industries

A Excavate

	CHINA PETROL		YANZHOU COAL	
	2006	2007	2006	2007
	IOP	IOP	IOP	IOP
No				
R2	1.000	1.001		
R6	1.006	1.009		
R7			1.007	
R9	1.010			
R10				
R12	0.997			
R14			0.999	
R22			1.253	1.221
R24	1.009			
R25	1.020			0.871
R27	0.994	1.018	0.971	0.928
R28	1.000			
R29	1.009			
R33	1.013		1.034	
R35			1.000	

Excavate:

There are two accounting items R6 *Gas Assets* and R22 *Special Funds for Safety* those have industry characteristics under excavation industry.

First, under Chinese GAAP, it applies the straight-ling method for the depreciation of *Gas Assets*, however; IAS it applies production-unit-basis depreciation method.

In addition, under the regulation of PRC government, the *Special Funds for Safety* should be accrued in mining industries based on its extraction volume of mining and record as current expense. However, under IAS the *Special Funds for Safety* is

recognized as expense when they are accrued. This item is also the one that shows the most deviation from IAS in this industry.

B Production and supply of power/gas/water

	HUANENG POWER		DATANG GENERATION		HUADIAN	
	2006	2007	2006	2007	2006	2007
	IOP	IOP	IOP	IOP	IOP	IOP
No						
R7	0.968			1.013	1.014	
R9		1.003				
R14	1.015		0.986			
R20			0.972			
R21	0.995	0.994	0.981	0.981		
R23	0.998	1.056				
R24	1.032	0.996	1.035		1.119	
R25		0.941				0.970
R27	1.034	1.017	1.011	0.996	0.978	1.005
R28					1.001	1.007
R33			1.003		0.985	
R35	1.024	1.003	1.004	1.005	0.998	

Production and supply of power/gas/water:

Under IAS, R23 *Advanced Electricity Fees from Customers* are recorded as liability and recorded as revenue when they occur, however; under Chinese GAAP, these prepayments do not need to be recorded, and the electricity revenue are accrued based on the actual consumption volume and current electricity price.

C Information Technology

	NANJING PANDA	
	2006	2007
	IOP	IOP
No		
R1	1.002	1.002
R7	0.998	
R9	1.051	1.154
R27		1.038
R35	1.009	1.002

Information Technology:

As the result in the question one has showed that the industry of *"Information Technology"* has higher earning gaps in 2007 than 2006. This is the only one sample representative in our data collection result and it cannot represent the whole information technology industry, so we cannot conclude that the characteristic of the industry of "*Information Technology*" is inclined to have higher earning gaps than other industries.

This increased earning gap could be attributed to the factors of different accounting treatments for the *long-term equity investment*. Under Chinese GAAP it only allows the equity method; but under IAS, a venture shall recognize its interest in a jointly controlled entity either using proportionate consolidation or the equity method. (Deloitte, 2006)

Conclusion:

Based on these facts, we can conclude that the harmonization of Chinese GAAP to IAS has been converged in a certain high level, and the reminding earning gaps are mainly caused by the industry characteristics and government regulations within China. In addition, although the sample sizes of these industries are rather small and may not represent the whole industry in mainland China, but we can see that the industry uniqueness do have strong relationship with accounting treatments, and it might be the blocks to impede Chinese GAAP be fully converged with IAS due to the environmental factors.

7. Summary

7.1 Findings:

This study provides a comprehensive assessment of the harmonization of Chinese GAAP (2006) with IAS, and focuses on the earning gap differences based on industry categorization. We can conclude following findings in our researches:

(1) The research result of 2006 was consistent with the prior study of Ip Chi et al (2007) that Chinese GAAP based net income was lower than IFRS based net income. Therefore, the trend of financial indicators was more conservative under Chinese GAAP continued in 2006.

(2) Our research finding for 2007 that the earning gaps were eliminated notably as the advent of new Chinese GAAP was supported by our descriptive statistics that the value of mean decreased significantly from 1.357 of 2002 (Chen, et. al. 2002) to 1.0176 of 2007

(3) Under the industry classification, our findings are both supported by the figure description and descriptive statistics with the conclusions that different industry has different level of convergence with IAS. The industry of Production and supply of power/gas/water has the biggest amount of earning gap reduction as its profits after restatement change from 2451 million RMB in 2006 to 63 million RMB in 2007.

(4) Under the research of accounting items in each industry for data analysis, we found out that the earning gaps between Chinese GAAP and IAS are caused form the environmental factors such as government regulation and industry characteristics in China.

In the comparison of the Index of Comparability (IOP) under industry classification, we can see that the in 2007 the difference are significant reduced for these six industries. However, the minor earning gaps still exist to reflect the special accounting practices under Chinese circumstance.

For instances, the government regulation has a great effect on the industry of "*Transportation and Warehousing*", with the accounting item of *Employ Benefit*; and the industry characteristics play a considerable role both under the industry of "*Financial and Insurance*" and the industry of "*Manufacturing*", with the different accounting treatments of *Insurance Contract* and *Special Funds for Safety.* We also can see the converging trend under *the other industries*, although the small sample size may not represent the whole industries.

Finally we would conclude that the new Chinese GAAP has been converged with IAS in a certain high degree, even though there might be some convergence spaces between these two standards, the accounting differences would not be fully erased due to the national regulations and industry features.

7.2 Contribution:

We have continued the prior studies and contributed the most updated information regarding the convergence between Chinese GAAP and IAS. Compared with previous study, we made the more detailed comparisons based on industry level and clearly see the different industries reaching varies degrees of harmonization. Furthermore, based on the annual reports provided by listed companies, we analysed the most significant accounting items that treated differently in two sets of accounting standards. We got the result that those different accounting treatments under industry characteristics have great impact on the net income gap. And in certain industries it might be difficult to further its harmonization with IAS as the issues of governmental regulations and the industry features in China. Thus, accounting practices are at the same pace with the constant changes and its environmental factors.

7.3 Limitations

With the analysis above, there are certain limitations that should be considered under our research. As we compared the earning gaps between different industries, the samples selected only cover 6 out of the 13 categories in accordance with CSRC. So the features of other 7 industries are not reflected in this research.

Another limitation of our study is the small sample size. There are only 30 companies both issued A-share and H-share both in 2006 and 2007, and this size of sample is even smaller after the industry classification since it might only represent one or two companies in some industry. Therefore, the small sample size may not cover all situations that bring differences between Chinese GAAP and IAS.

In addition, based on the previous studies both political factors and audit profession have impacts on accounting practices. (Peng et al, 2005) These two factors would be our research limitations as well, because we did not further our study in these two perspectives and their impacts. For example, in the data collection process, we found that most listed companies are prone to have Big Four as their auditor, but we did not evaluate and measure the impacts of auditing profession under these schemes. Thus, we take these two impacts as a part of our research limitations and recommend that these limitations could be considered in the future study.

7.4 Proposal for further studies

In the volatile economical environment currently, stricter financial supervision was implemented. What the impact would it be on the present accounting standards? Chinese enterprises performed relatively well in this financial tsunami and many international financial institutions had been nationalized. Will the IASB prone to adopt some rules to make the standards more prudent and will it lead to a higher

harmonization between IAS and Chinese GAAP by reducing the differences that due to the Chinese characteristics? This would be an interesting issue for further study.

The selection of auditors is another issue worth of further research. Due to the conditions on sample choice, only parts of the companies were selected as our objects of research. Many companies that only issued A-share did not choose Big 4 as auditors because of the high audit fee compared with Chinese local CPA firms. After the significant reform of Chinese accounting system, had the tens of thousands of auditors in local firm got enough professional training on the newest ASBE? How big is the gap between Chinese CPA firms and the Big 4? And to what extent would it affect the quality of audit report?

References:

Book

Alan, B., & Emma, B. (2007). Business Research Methods. Second edition. P79

China's New Accounting Standards, A comparison with current PRC GAAP and IFRS. (2006). Deloitte.

Christopher, N. & Robert, P. (2005). Comparative international accounting. Ninth Edition.

GAAP Difference in your Pocket: IAS and GAAP in the People's Republic of China. (2001). Deloitte.

Impact of New Accounting. (2007). KPMG

National Bureau of Statistics of China, *China Statistical Yearbook 2008*. Retrieved from http://www.stats.gov.cn/eNgliSH/statisticaldata/yearlydata/#

Shanghai Stock Exchange Fact Book. (2008). Shanghai Securities Market.

Shenzhen Stock Exchange Fact Book. (2008). Shenzhen Securities Market.

Article

Archer, S., P. Delvaille, & S. McLeay (1995). The measurement of harmonization and the comparability of financial statement items: within-country and betweencountry 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, Gual, F. A. & Su, X. (1999). A comparision of reported earnings under Chinese GAAP vs. IAS: Evidence from the Shanghai stock exchange. *Accounting Horizons, 13(2)* 91-112.

Chen, S., & Sun, Z., & Wang, Y. (2002). Evidence from China on whether harmonized accounting standards harmonize accounting practices. *Accounting Horizons, 16 (3)*183-198.

Doupnik, T. S. (1987). Evidence of international harmonization of financial reporting. *The International Journal of Accounting Education and Research 23(1)* 47-67.

Dwight, H., & Thomas, G.. (2008). Forecasting China's Economic Growth to 2025. *The China Business Review, 35(6)* 34-40.

Emenyonu, E. N., & 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.

Garrido, P., A. Leon, & A. Zorio (2002). Measurement of formal harmonization progress: the IASC experience. *The International Journal of Accounting 37(1)* 1-26.

Gray, S. J. (1980). The impact of international accounting differences from a securityanalysis perspective: some European evidence. *Journal of Accounting Research 18(1)* 64-76.

Kuan, I.C., & Noronha, C. (2007). The progress of accounting harmonization in China: A comparison of A-share and H-share financial results. *Managerial*

Auditing Journal, 22(6).

Lin, Z. J. & Chen, F. (2000). Asian financial crisis and accounting reforms in China. *Managerial Finance, 26(5)* 63-80.

Lin, J. Z., & Wang, L. (2001). Financial disclosure and accounting harmonization cases of three listed companies in China. *Managerial Auditing Journal.* 263-273

Mokhtar, I. (2005). Quantitative Research Methodology. *Pusat Pengajian Ilmu Pendidikan Kolokium Pelajar Pengajian Siswazah PPIP 2005* 8-10

Nair, R. D., & W. G. Frank (1981). The harmonization of international accountingstandards, 1973- 1979. *The International Journal of Accounting Education and Research 17(1)* 61-77.

Peng, S. (2005). The harmonization of Chinese accounting standards with international accounting standards: An empirical evaluation. V*irginia Commonwealth University,* 169.

Peng, S., & Tondkar, R. H., & Smith, J., & David, W. (2008). Does Convergence of Accounting Standards Lead to the Convergence of Accounting Practices?: A Study from China. *The International Journal of Accounting, 43(4)* 448.

Pownall, G., & 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.

Street, D. L., S. J. Gray, & 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 Accountinq 34(1*) 1 1-48.

Street, D. L., & 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 Accountinq Auditing & Taxation S(1)* 13 3- 164.

Street, D. L., & S. M. Bryant (2000). Disclosure level and compliance with IASs: a comparison of companies with and without U.S. Listings and filings. *International Journal of Accounting 35(3)* 305-329.

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. *Account in Horizons 14(1)* 93- 102.

Van der Tas, L. G. (1988). Measuring harmonization of financial reporting practice. *account in^ and Business Research, 18(70):* 157- 169.

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.

Xiang, B. (1998). Institutional factors influencing China's accounting reforms and standards. *Accounting Horizons, 12(2)* 105-119.

Yadolah, D. (2008). The Concise Encyclopedia of Statistics. *Springer New York.* Retrieved from http://www.springerlink.com.ludwig.lub.lu.se/content/n6782j4183413081/fullte

xt.html

Lin, J. Z. (1998). Internationalization of public accounting: Chinese experience. *Managerial Auditing Journal.* 84-91

Website

China: Economic background. (2009, January 08). EIU Views Wire. Retrieved from http://proquest.umi.com.ludwig.lub.lu.se/pqdweb?did=1637014041&sid=5&Fmt=3&clientId=53681&RQT=309&VName=PQD

Dong, Z. (2007, August 09). China stock market capitalization tops GDP. *China Daily.* Retrieved from http://www.chinadaily.cn/china/2007-08/09/content_6019614.htm

Joanne, B. (2009, June 07) Simple statistics written by Joanne Birchall from rainbow research. Retrieved from http://www.marketresearchworld.net/index.php?option=com_content&task=view&id=21&Itemid=41

Appendix 1 Index of Comparability based on Company Level

Panel A

Yr 2006 in Million RMB

No	Company Name	H-Code	A-Code	H-Net Profit	A-Net Profit	Variance	IOC	Industry
				a	b	c=a-b	d=1-c/|a|	
1	INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED	01398	601398	49,880	48,719	1,161	0.9767	Financial and Insurance
2	BANK OF CHINA LIMITED	03988	601988	48,264	41,892	6,372	0.8680	Financial and Insurance
3	CHINA LIFE INSURANCE COMPANY LIMITED	02628	601628	20,051	9,601	10,450	0.4788	Financial and Insurance
4	CHINA PETROLEUM&CHEMICAL CORPORATION	00386	600028	55,408	50,664	4,744	0.9144	Excavate
5	CHINA MERCHANTS BANK CO,. LIMITED	03968	600036	6,794	7,108	-314	1.0462	Financial and Insurance
6	ANHUI CONCH CEMENT CO,. LTD	‘00914	600585	1,865	1,428	437	0.7657	Manufactory
7	HUANGNENG POWER INTERNATIONAL, INC.	00902	600011	6,889	5,550	1,339	0.8056	Production and supply of power/gas/water
8	DATANG INTERNATIONAL GENERATION CO.,LTD.	00991	601991	3,582	2,707	875	0.7557	Production and supply of power/gas/water
9	AIR CHINA LIMITED	00753	601111	3,305	3,191	114	0.9655	Transportation and Warehousing
10	TSINGTAO BREWERY COMPANY LIMITED	‘00168	600600	449	435	14	0.9688	Manufactory
11	YANZHOU COAL MINING COMPANY LIMITED	‘01171	600188	2,372	1,749	623	0.7374	Excavate
12	CHINA SHIPPING DEVELOPMENT COMPANY LIMITED	01138	600026	2,759	2,761	-2	1.0007	Transportation and Warehousing
13	ANGANG STEEL COMPANY LIMITED	‘00347	000898	7,094	6,845	249	0.9649	Manufactory

14	JIANGSU EXPRESSWAY COMPANY LIMITED	00177	600377	1,213	1,128	85	0.9299	Transportation and Warehousing
15	MAANSHAN IRON & STEEL COMPANY LIMITED (MAS C.L.)	00323	600808	2,453	2,277	176	0.9283	Manufactory
16	SHANGHAI PETROCHEMICAL CO.,LTD	00338	600688	911	737	174	0.8090	Manufactory
17	GUANGSHEN RAILWAY COMPANY LIMITED	00525	601333	772	711	61	0.9210	Transportation and Warehousing
18	DONGFANG ELECTRIC CORPORATION LIMITED	01072	600875	865	830	35	0.9595	Manufactory
19	CHINA SOUTHERN AIRLINES COMPANY LIMITED.	01055	600029	204	118	86	0.5784	Transportation and Warehousing
20	HUADIAN POWER INTERNATIONAL CORPORATION LIMITED.	01071	600027	1,359	1,122	237	0.8256	Production and supply of power/gas/water
21	SHENZHEN EXPRESSWAY CO., LTD.	00548	600548	591	559	32	0.9459	Transportation and Warehousing
22	CHINA EASTERN AIRLINES CORPORATION LIMITED.	00670	600115	-3,453	-2,780	-673	1.1949	Transportation and Warehousing
23	ANHUI EXPRESSWAY COMPANY LIMITED	00995	600012	944	749	195	0.7934	Transportation and Warehousing
24	GUANGZHOU SHIPYARD INTERNATIONAL COMPANY LIMITED	00317	600685	277	294	-17	1.0614	Manufactory
25	YIZHENG CHEMICAL FIBRE COMPANY LIMITED	01033	600871	41	37	4	0.9024	Manufactory
26	CHONGQING IRON & STEEL COMPANY LIMITED	01053	601005	254	315	-61	1.2402	Manufactory
27	GUANGZHOU PHARMACEUTICAL COMPANY LIMITED	00874	600332	231	227	4	0.9827	Manufactory
28	SHENJI GROUP KUNMING MACHINE TOOL COMPANY LIMITED	00300	600806	90	78	12	0.8667	Manufactory
29	NANJING PANDA ELECTRONICS COMPANY LIMITED	00553	600775	102	89	13	0.8725	Information Technology
30	LUOYANG GLASS COMPANY LIMITED	01108	600876	-43	-317	274	-5.3721	Manufactory

Panel B ***Yr 2007 in Million RMB***

No	Company Name	H-Code	A-Code	H-Net Profit	A-Net Profit	Variance	IOC	Industry
				a	b	c=a-b	d=1-c/|a|	
1	INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED	01398	601398	82,254	81,990	264	0.9968	Financial and Insurance
2	BANK OF CHINA LIMITED	03988	601988	62,036	62,017	19	0.9997	Financial and Insurance

3	CHINA LIFE INSURANCE COMPANY LIMITED	02628	601628	39,060	28,297	10,763	0.7244	Financial and Insurance
4	CHINA PETROLEUM&CHEMICAL CORPORATION	00386	600028	58,743	57,153	1,590	0.9729	Excavate
5	CHINA MERCHANTS BANK CO,. LIMITED	03968	600036	15,243	15,243	-	1.0000	Financial and Insurance
6	ANHUI CONCH CEMENT CO,. LTD	‘00914	600585	2,688	2,704	-16	1.0060	Manufactory
7	HUANGNENG POWER INTERNATIONAL, INC.	00902	600011	6,481	6,418	63	0.9903	Production and supply of power/gas/water
8	DATANG INTERNATIONAL GENERATION CO.,LTD.	00991	601991	4,390	4,409	-19	1.0043	Production and supply of power/gas/water
9	AIR CHINA LIMITED	00753	601111	4,122	3,774	348	0.9156	Transportation and Warehousing
10	TSINGTAO BREWERY COMPANY LIMITED	‘00168	600600	579	598	-19	1.0328	Manufactory
11	YANZHOU COAL MINING COMPANY LIMITED	‘01171	600188	3,228	2,691	537	0.8336	Excavate
12	CHINA SHIPPING DEVELOPMENT COMPANY LIMITED	01138	600026	4,546	4,596	-50	1.0110	Transportation and Warehousing
13	ANGANG STEEL COMPANY LIMITED	‘00347	000898	7,534	7,525	9	0.9988	Manufactory
14	JIANGSU EXPRESSWAY COMPANY LIMITED	00177	600377	1,680	1,639	41	0.9756	Transportation and Warehousing
15	MAANSHAN IRON & STEEL COMPANY LIMITED (MAS C.L.)	00323	600808	2,568	2,576	-8	1.0031	Manufactory
16	SHANGHAI PETROCHEMICAL CO.,LTD	00338	600688	1,683	1,641	42	0.9750	Manufactory
17	GUANGSHEN RAILWAY COMPANY LIMITED	00525	601333	1,436	1,430	6	0.9958	Transportation and Warehousing
18	DONGFANG ELECTRIC CORPORATION LIMITED	01072	600875	2,411	2,176	235	0.9025	Manufactory
19	CHINA SOUTHERN AIRLINES COMPANY LIMITED.	01055	600029	2,065	2,039	26	0.9874	Transportation and Warehousing
20	HUADIAN POWER INTERNATIONAL CORPORATION LIMITED.	01071	600027	1,520	1,547	-27	1.0178	Production and supply of power/gas/water
21	SHENZHEN EXPRESSWAY CO., LTD.	00548	600548	668	674	-6	1.0090	Transportation and Warehousing
22	CHINA EASTERN AIRLINES CORPORATION LIMITED.	00670	600115	245	611	-366	2.4939	Transportation and Warehousing
23	ANHUI EXPRESSWAY COMPANY LIMITED	00995	600012					Transportation and

				636	605	31	0.9513	Warehousing
24	GUANGZHOU SHIPYARD INTERNATIONAL COMPANY LIMITED	00317	600685	960	962	-2	1.0021	Manufactory
25	YIZHENG CHEMICAL FIBRE COMPANY LIMITED	01033	600871	23	19	4	0.8261	Manufactory
26	CHONGQING IRON & STEEL COMPANY LIMITED	01053	601005	449	449	-	1.0000	Manufactory
27	GUANGZHOU PHARMACEUTICAL COMPANY LIMITED	00874	600332	330	345	-15	1.0455	Manufactory
28	SHENJI GROUP KUNMING MACHINE TOOL COMPANY LIMITED	00300	600806	252	251	1	0.9960	Manufactory
29	NANJING PANDA ELECTRONICS COMPANY LIMITED	00553	600775	120	96	24	0.8000	Information Technology
30	LUOYANG GLASS COMPANY LIMITED	01108	600876	-81	-76	-5	1.0617	Manufactory