

# **Enter the Dragon: China's Convergence with Rest of the World; Accounting Perspectives and Empirical Evidence**

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*The primary purpose of this paper is to provide recent empirical accounting evidence to assess the degree to which the significant accounting reforms in China (since 1992) have been effective in integrating the Chinese accounting system with the international standards. This paper applies the Weetman et al. (1998) Index of comparability ("IOC") before and after the promulgation of 2006 Accounting Standards for Business Enterprises (ASBE) based on AB-share and AH-share of all publicly financial data that could be found by our team for the period. The "Weetman" IOC is, in effect, a surrogate measure of the degree to which China has "converged" with the rest of the world. We analyzed 80 companies which issue both A-share and H-share or A-share and B-share for the period 2002 to 2009. The Weetman IOC model supports a significant degree of "convergence" of the Chinese Accounting System ("CAS") with the International Financial Reporting System ("IAS"). The value of this paper is that while some work has been done with data prior to 2006, no follow up was sighted to date. This paper contributes, firstly, by confirming that the convergence is essentially complete, with minimum recidivism and, secondly, that this unique sequence of events provided ample empirical evidence to support earlier studies that China's path towards full integration with the rest of the world is well and truly ensconced.*

**JEL Codes:** G38, M48, O16, and O19

## **1. Introduction**

Since 1992, China has attempted to harmonize gradually the Chinese accounting standards (CAS) with IAS/IFRS. In February 2006, China's Ministry of Finance (MOF)

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released the Accounting Standards for Business Enterprises (ASBE) to be effective on 1 January, 2007. The 2006 ASBE was to be fully compliant with IFRS in all material items. (Deloitte Touche Tohmatsu International, 2006).

China has a multi-partition share market catering separately for both the domestic and foreign investors. "A" shares are for designated domestic investors and "B" shares for foreigners. Further, some Chinese companies listed their stocks in Hong Kong (H shares) and in New York (N shares). A number of China listed companies issue shares to both local and foreign investors; these are AB-share companies. The Chinese companies that are listed in Hong Kong as well, are designated AH-share companies. The heterogeneous compliance requirements for AB-share companies and AH-share companies uniquely created a special situation in which comparability analysis and value relevance tests between the CAS financial report and the IAS financial report are possible.

In this study, we examine AB and AH-share companies for comparability based on their respective CAS and IAS/IFRS financial reports. That is we use the Weetman Model to compare objectively the financial statements under the CAS regime from 2002-2009 against those prepared under the IAS/IFRS regime. The degree of "comparability" should provide evidence of the degree of convergence between the two systems to date and that there is no recidivism since the preliminary studies at around 2000.

In Section 2 we review research prior to our present paper. In Section 3 we describe our research methodology and data and provide a brief description of the model used. Our hypotheses are included in this section along with their respective tests. We present our findings and conclusions in Section 3.

## 2. Literature Review

Earlier research that examined the relationship between CAS and IAS/IFRS were Chen et al.(1999, 2002), Kuan and Noronha (2007) and Peng et al. (2008). From 1992 through 2005, publications on value relevance include Bao and Chow (1999), Eccher and Healy (2000), Chen, Firth and Kim (2002), Wu, Koo and Kao (2005) and Foo, Liu and Davey (2009). However, no published paper using data later than 2006 was detected. Kuan and Noronha (2007) stated that studying only B-share reports was insufficient, companies listed in the HK stock market as well as all available AB and AH share companies should be considered as a pool.

Chen et al, 1999, found that CAS reported earnings were on the average 20-30% greater than IAS reported earnings. They found that the number of companies that decreased their earnings after restatement to IAS was four times larger than that of those reporting increased earnings after restatement. Around 15 percent of the B-share companies changed from a reported profit to a reported loss after

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restatement to IAS. No company which originally reported a loss later changed into profit after the restatement. Chen et al. (1999) concluded that:

*Chinese accounting standards(CAS) tend to be significantly less conservative, resulting in earnings that were significantly higher than those based on IAS. Further, an analysis of total accruals shows that, on average, 28.5 percent of the total difference between the two reported earnings is attributable to accrual. (p. 98)*

Chen et al (2002) examined China's harmonization efforts and found the following. Their analysis of 75 companies for the time period 1997-1999, (straddling the new 1998 accounting regulations) found that CAS earnings exceeded IAS earnings in 80 percent of the sample in 1997, 59 percent in 1998 and 69 percent in 1999. Their analyses showed that the 1998 CAS Regulation did not significantly reduce the earning gaps between CAS and IAS. They reasoned that these were caused by inadequate enforcement infrastructure, as was evident in excessive "earnings management" and low quality auditing.

Kuan and Noronha (2007) comparatively analyzed pair-wise the annual reports of 30 companies that were simultaneously listed in mainland China and Hong Kong stock exchanges for the year 2004 which include their respective revenues, assets, debts and equity. They found no significant differences between H and A-shares except for operating income. This seemed to contradict previous findings provided by Chen *et al.* (1999, 2002), and Lin and Wang (2001). According to Kuan and Noronha (2007):

*"The harmonization of Chinese accounting standards has reached an acceptable level. Although some substantial gaps have yet to be eliminated, on average, most financial figures prepared under Chinese accounting standards and international standards did not show any significant variances." (pp.635)*

Peng et al. (2008) evaluated the progress of convergence of Chinese GAAP with IFRS over the previous 15 years using three measurement methods: compliance index, consistency index and comparability index. 77 measurement items based on IFRS 1-40 were used to examine the convergence of CAS with IFRS in 79 companies that had both A and B-shares in both 1999 and 2002 annual reports. They showed that compliance with IFRS was consistently lower than compliance with CAS. There was significant improvement in compliance with IFRS in 2002 than 1999. They also showed that the consistency of accounting treatments using the CAS and IFRS annual reports was significantly improved from 1999 to 2002. Their comparability index suggested that the earnings gaps between CAS and IFRS were significantly reduced after the 2001 CAS.

## 3. Research Method and Data

We used all publicly available data published by AB companies and AH companies released between 2002 and 2009. AB companies are Chinese companies issuing both A and B shares in China simultaneously. AH companies are Chinese companies that simultaneously issue shares in the China stock exchanges (SSE & SZSE) and Hong Kong Stock Exchange respectively.

Prior to 2007, Chinese AB companies were required to prepare two separate sets of financial statements, viz., in compliance with CAS and IFRS, respectively. Since then the Chinese ASBE were officially considered fully compliant with IFRS in all material concepts. Hence AB companies were no longer required to prepare separate financial statements under IFRS. Similarly, AH companies were required to prepare separate sets of financial statements in compliance with CAS and with HKFRS (which was already considered IFRS compliant). These H-companies' reports are used here for comparability tests.

The net income and owner's equity, earning per share (EPS) and the book value of the owner's equity attributed to equity share holders per share were analyzed. Reported financial information from a total 84 AB companies (i.e., 42 listed in SSE and 42 from SZSE) were used. Of these 84 companies only 52 companies have all the required data available for the said research period (i.e., 20 from SSE and 32 from SZSE).

Please note that from 2007, AB companies were exempt from preparing separate IFRS compliant financial statements. Thus there should only be one set of financial statement prepared under CAS. For AH companies, as at 31 May, 2010, there were 116 Chinese companies listed in the Hong Kong stock exchange. Of these, 59 companies were also listed as A-shares in SSE or SZSE. However, only 28 companies have all 8 years of data available for the purpose for this research. So size of the final set is 80 for our index of comparability analysis. All financial statements were from the company's annual report published on the websites of the HK stock exchange, SSE and SZSE, respectively. Missing data in the research period were encountered reducing the population size of the companies.

### 3.1 The Index of Comparability (IOC)

To estimate the significance of any differences between the financial figures produced by the any company under the two different reporting regimes, the Weetman et al. index of comparability (Weetman, Adams and Gray, 1998) was used. The index of comparability ("IOC") was originally developed by Gray (1980), named the index of conservatism and later was renamed by Weetman et al. (1998) as the index of comparability to reflect its "relative accounting treatment" thus avoiding a judgment on

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the level of conservative (Weetman, Adams and Gray, 1998, pp.192). The IOC was used in a pair-wise comparison of financial results published by the same firm for the same financial period but under different accounting standards. Being a relative analysis, it does not quantify the impact of that difference per studies using other indices (Weetman, Adams and Gray, 1998;), such as H, I or C developed by van der Tas (1988), and T index produced by Taplin (2004). As Haverty (2006) indicated in his study:

*These indices measure the concentration of choices made by firms among alternative accounting treatments for a particular issue. They do not, however, measure the financial impact of those choices, nor are they useful to study differences obtained when different accounting systems are applied to the same firm. (p.59)*

The IOC was used in many studies to compare the accounting difference on net earnings and net assets (Gray, 1980; Weetman & Gray, 1991; Cooke, 1993; Norton, 1995; Rueschhoff & Strupeck 1998; Weetman, Jones, Adams, & Gray, 1998; Street, Nichols, & Gray, 2000; Haverty, 2006 and Foo, Liu and Davey, 2009). In this study, we use the IOC to test the difference of net earnings and net assets prepared under CAS and IAS respectively on a data set spanning 2002 and 2009; and straddling 2207 when ASBE became effective.

The basic formula of the “index of comparability” is as shown below:

### Equation 1: Index of comparability of net earnings

$$\text{Index of Comparability}_{\text{Net Earning}} = 1 - \left[ \frac{\text{Net Earning}_{\text{IAS}} - \text{Net Earning}_{\text{CAS}}}{|\text{Net Earning}_{\text{IAS}}|} \right] \text{ where}$$

$\text{Net Earning}_{\text{IAS}}$  is company's net earning prepared according to the international accounting standard.

$\text{Net Earning}_{\text{CAS}}$  is company's net earning prepared according to the Chinese accounting standard.

$|\text{Net Earning}_{\text{IAS}}|$  is the absolute value of  $\text{Net Earning}_{\text{IAS}}$ .

### Equation 2: Index of comparability of net asset

$$\text{Index of Comparability}_{\text{Net Equity}} = 1 - \left[ \frac{\text{Net Equity}_{\text{IAS}} - \text{Net Equity}_{\text{CAS}}}{|\text{Net Equity}_{\text{IAS}}|} \right]$$

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where

$Net\ Equity_{IAS}$  is company's net equity prepared according to the international accounting standard.

$Net\ Equity_{CAS}$  is company's net equity prepared according to the Chinese accounting standard.

$|Net\ Equity_{IAS}|$  is the absolute value of  $Net\ Equity_{IAS}$ .

When the IOC exceeds 1.0, the CAS compliant figure is reported higher than the IAS compliant figure. When the IOC is less than 1.0, the CAS figure is lower than the IAS figure. If the figure reported under CAS is similar to IAS, then the IOC is close to or equal to 1. The IOC may be used at an interval-level of measure to compare the magnitude of the difference in financial results under the CAS and IAS regimes. For example, the index value of net earnings is 1.1, which means CAS net earnings being 10% higher than IAS net earnings. Index value 0.9 of net earnings shows the net earning prepared according to CAS being 10% lower than net earnings reported under IAS.

We calculated the IOC of net earnings and net equity for each company each year. There is no predetermined a priori accepted materiality tolerance level to denote CAS-IAS equivalence. However, we note that 5% and 10% materiality levels were widely adopted in the literature (Gray, 1980; Adams, Weetman, Jones & Gray, 1998; Street, Nichols & Gray, 2000; Haverty, 2006; Foo, Liu & Davey, 2009). We thus conventionally adopted a 10% materiality level as a threshold of equivalence/difference between CAS and IAS. That is, if the IOC for each year and for the overall period is between 0.90 and 1.10, we conclude that net income or net equity reported under CAS and IAS are relatively equivalent.

Weetman et al. (1998) noted that there are two disadvantages of the IOC estimations. First, extreme index value appears when the denominator is close to zero. When this happens, the estimate is indeterminate, hence, difficult to interpret. Weetman suggested the Grant Thornton approach to mitigate the issue. According to Thornton (1990), when the net earning or net equity as manifested in the denominator is small or close to zero, (or net earnings or net equity changing from small positive figure to a small negative figure), the materiality per se should not be decided on this index value per se. In our population, very few companies reported positive profit under one reporting regime and simultaneous negative profit under the other regime. We did detailed analyses on the few and generally ignored these without any material impact on the overall results.

Second, Weetman et al. (1998) pointed out the "short-term timing difference" problem (p.194). Foo et al. (2009) indicated that "short-term timing difference" may not be a weakness where accounting matching is efficient. In our case, both the CAS and the IAS data are from the same company for all companies that issued AB or AH shares and for the same balance date, there should be no material timing difference.

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Formal hypothesis tests are performed to test for significance of the convergence of CAS and IAS (or the lack thereof). The hypotheses are as below:

H1: For listed Chinese firms that issue both AB and AH-shares, the firms' CAS and IAS based net earnings are identical, i.e.:

H<sub>0</sub>: The firm's index of comparability on net earnings = 1

H<sub>a</sub>: The firm's index of comparability on net earnings ≠ 1

H2: For listed Chinese firms that issue both AB and AH-shares, the reported net equity based on CAS and IAS is identical, i.e.:

H<sub>0</sub>: The firm's index of comparability on net equity = 1

H<sub>a</sub>: The firm's index of comparability on net equity ≠ 1

Here, H<sub>0</sub> is the null hypothesis and H<sub>a</sub> is the alternative hypothesis. As the alternative hypothesis can go to either more than 1 or less than 1, a non-directional (or two-tailed) test is applied. The statistical methods employed for hypothesis testing is one sample t-test and Wilcoxon signed rank test. Student t-test is a parametric statistical method based on the assumption that sample data follow the normal distribution. Wilcoxon signed rank test is a non-parametric hypothesis test statistics technique as a counter-part of the paired sample t-test. It is used to compare paired samples or repeated measurements on a single sample. The Wilcoxon signed rank test is a distribution free method and it does not require the sample data fitting normal distributions as required by the paired-sample t-test. It compares the probability distribution of the population rather than specific parameters of the population. Both statistical tests were performed. If the t-test contradicts Wilcoxon signed rank test, a histogram of the data will be analysed for normality of its distribution, if so the t-test is preferred as suggested by Motulsky (1995), otherwise Wilcoxon signed rank test would be used.

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**Table 1: Descriptive statistics for index of comparability of net earning**

<b>Panel A (Inclusive of outliers)</b>									
<i>Net Earnings</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>Overall</i>
<b>Mean</b>	1.3755*	1.0046	1.0078	1.3987*	0.6943*	1.0618**	0.9649	1.0810 **	1.0857**
<b>Std Err</b>	0.2705	0.0383	0.0544	0.3579	0.3222	0.0510	0.0361	0.0787	0.0923
<b>Median</b>	0.9927	0.9861	0.9923	0.9883	0.9618	1.0011	1.0000	1.0000	0.9935
<b>Std Dev</b>	2.4199	0.3429	0.4869	3.2014	2.8815	0.2701	0.1911	0.4165	2.0309
<b>Kurtosis</b>	57.5057	8.9119	25.6888	67.5387	75.9372	12.3727	10.8789	27.5375	139.3431
<b>Skewness</b>	7.1660	1.7978	4.3452	7.9701	-8.6002	3.4311	-3.3728	5.2285	3.1162
<b>Minimum</b>	-1.9065	-0.0967	0.1069	-1.5154	-24.4386	0.7985	0.2366	0.9180	-24.4386
<b>Maximum</b>	21.0905	2.6260	4.1458	28.5372	2.8416	2.1810	1.1298	3.1982	28.5372
<b>Count</b>	80	80	80	80	80	28	28	28	484
<b>Panel B (Exclusive of outliers)</b>									
<i>Net Earnings</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>Overall</i>
<b>Mean</b>	1.1259*	0.9695	0.9405**	1.0552**	1.0125	1.0203	1.0159	1.0026	1.0199
<b>Std Err</b>	0.1058	0.0231	0.0261	0.1018	0.0514	0.0309	0.0068	0.0070	0.0268
<b>Median</b>	0.9919	0.9833	0.9887	0.9876	0.9630	1.0000	1.0000	1.0000	0.9927
<b>Std Dev</b>	0.9406	0.2015	0.2302	0.9049	0.4568	0.1605	0.0348	0.0366	0.5811
<b>Kurtosis</b>	20.2423	7.0748	4.0515	23.6467	8.6065	18.1790	4.1318	2.3578	49.5877
<b>Skewness</b>	3.3419	0.8274	-0.8822	3.9919	1.2154	3.7894	2.0909	0.6332	5.1417
<b>Minimum</b>	-1.9065	0.3378	0.1069	-1.5154	-0.8165	0.7985	0.9760	0.9180	-1.9065
<b>Maximum</b>	6.7903	1.7792	1.6725	6.7815	2.8416	1.7551	1.1298	1.1011	6.7903
<b>Count</b>	79	76	78	79	79	27	26	27	471

*Note: \* Exceeds the 10% materiality level. \*\* Exceeds the 5% materiality level.*

Table 1 shows the descriptive statistics of the IOC of net income. Panel A here are descriptive statistics based on the overall population and for each year from 2003 through 2009. The observed average IOCs calculated under CAS are higher than those under IAS except in 2006 and 2008. IOCs in 2002, 2005 and 2006, respectively, exceed the 10% materiality level. However, the overall index value of net earnings remains within the 10% materiality threshold (i.e. 1.0857). CAS(earning) is thus, on the aggregate, 8.57% higher than IAS(earnings). According to our criterion, IAS(net earnings) is not considered materially different from CAS(net earnings). The associated standard errors of the IOC(net earnings) show minimal variation after 2007



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and the medians are very close to or equal to 1 after 2006. We conclude that the post 2006 CAS(earnings) becomes more convergent with IAS(earnings) than 2001 CAS with the corresponding IAS.

Outliers may bias or distort our results. We define outliers as IOC values over 3 times standard deviation from mean value in this study. Panel B presents the statistical result sans outliers. Result from Panel B is somewhat different from Panel A. Similar to Panel A, mean index values reported under CAS were predominantly higher than those reported under IAS. We observed that the average IOC in 2006 and 2008 change from less than 1 to more than 1. Meanwhile, the mean value in 2003 and 2004 drop below 1 against values of more than 1 in Panel A. We note that none of the values of IOC(earnings) exceeded the 10% materiality threshold except in 2002. We surmise that this exception was the consequence of disparity of compliance of 2001 CAS with the prevailing IAS. However, the mean IOC values remain within the 5% materiality threshold after 2006, as well as in the aggregated overall period. We note that in 2009, companies' reported earnings under CAS are, on average, only 0.26% higher than those reported under IAS. We conclude that the IOC level increased after 2006 (CAS) ASBE was promulgated. Overall reported earnings under CAS are about 2% higher than those reported under IAS.

Table 2 shows the descriptive statistics of IOC (net equity). We observe from Panel A of this Table that the mean value of IOC(net equity) did not exceed the 10% materiality threshold except in 2002 and 2009. We decided that the anomalies were caused by extreme values (i.e. outliers over 3 times standard deviation from mean). When these were excluded, we found that all indices remained within the 10% materiality threshold. These were tabulated in Panel B. Before the exclusion of the said outliers, the data, based on the aggregate ("Overall") population, suggest that the IOC(net equity) under CAS is 4% higher than the IOC(net equity) under IAS. This is within the 5% threshold. After eliminating the outliers, the CAS-IAS differential for the overall period shrinks to 0.04%. This suggests that, on the average, "net equity" reported under CAS is not materially different from that prepared under IAS.

### 3.2 Hypotheses Testing

To test our hypotheses, both parametric one sample Student t-test ("Student t") and the non-parametric Wilcoxon signed rank test ("Wilcoxon") were used. Student t-test, a parametric test, assumes that the sample data have a normal distribution. This was augmented with Wilcoxon signed rank test, a non-parametric counterpart of the student t-test. The results of IOC(net income) and IOC(net equity) are shown in Table 3 and Table 4, respectively. Our histogram plots for all data for each of the years and aggregated did not exhibit the characteristic 'bell shape'. This informally implied that the distribution of the data may not be Gaussian normal. Thus t-test results could be biased, so the Wilcoxon test result may be more reliable for our hypothesis testing.

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**Table 2: Descriptive statistics for index of comparability of net equity**

Panel A (Inclusive of outliers)									
<i>Equity</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>Overall</i>
<b>Mean</b>	1.1050*	0.9992	0.9963	1.0070	0.9955	1.0194	1.0155	1.4616*	1.0437
<b>Std Err</b>	0.1155	0.0080	0.0088	0.0149	0.0095	0.0207	0.0082	0.4064	0.0306
<b>Median</b>	0.9904	1.0000	1.0000	0.9985	0.9960	1.0002	1.0000	1.0000	0.9998
<b>Std Dev</b>	1.0333	0.0711	0.0791	0.1335	0.0850	0.1097	0.0433	2.1505	0.6740
<b>Kurtosis</b>	78.891	12.6685	8.7683	56.331	14.8157	14.8387	4.1689	26.9021	233.722
<b>Skewness</b>	8.8527	-2.3682	-1.4056	6.7336	1.9006	3.3968	2.0664	5.1531	15.0139
<b>Minimum</b>	0.5952	0.6043	0.6162	0.7175	0.6999	0.8536	0.9629	0.9577	0.0010
<b>Maximum</b>	10.2014	1.1659	1.2538	2.0891	1.4692	1.5045	1.1582	12.3369	12.3369
<b>Count</b>	80	80	80	80	80	28	28	28	484
Panel B (Exclusive of outliers)									
<i>Equity</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>Overall</i>
<b>Mean</b>	0.9899	1.0042	1.0010	0.9933	0.9894	1.0014	1.0103	1.0588**	1.0004
<b>Std Err</b>	0.0096	0.0063	0.0062	0.0060	0.0054	0.0108	0.0065	0.0561	0.0042
<b>Median</b>	0.9903	1.0000	1.0000	0.9983	0.9955	1.0000	1.0000	1.0000	0.9998
<b>Std Dev</b>	0.0851	0.0557	0.0542	0.0533	0.0476	0.0559	0.0337	0.2917	0.0906
<b>Kurtosis</b>	15.0844	4.6318	5.8678	10.5973	5.8570	5.3446	3.8024	26.6356	167.5919
<b>Skewness</b>	0.8397	-0.5856	-0.4067	-2.1825	-1.4715	0.7039	1.9283	5.1461	9.8654
<b>Minimum</b>	0.5952	0.7959	0.8006	0.7175	0.7740	0.8536	0.9629	0.9577	0.5952
<b>Maximum</b>	1.4423	1.1659	1.2067	1.1079	1.1010	1.1847	1.1144	2.5139	2.5139
<b>Count</b>	79	79	77	79	77	27	27	27	472

Note: \* Exceeds the 10% materiality level.

Note: \*\* Exceeds the 5% materiality level.

Table 3 provides the results of t-tests and Wilcoxon Tests for IOC(net income). With outliers, Panel A summarized the results for each of the years, 2002-2009. Under the t-tests, the results show no significant deviation of IOC(net income) from 1 (i.e., net income in CAS and IAS being equal). Under Wilcoxon Tests, IOC(net earnings) in 2003, 2005 and 2006, suggests that CAS net incomes are significantly different (at 5% level) from those reported under IAS. When outliers are excluded (Panel B), there is no significant difference of most IOC(net income) deviating from 1 in the t-test. However, Wilcoxon tests show the statistical difference in the net earnings of CAS against IAS net earnings for the period 2003-2006.

For the period 2007-2009, the results for both t-test and Wilcoxon are identically non-significant. This suggests that the net earnings reported under CAS (included with outliers-Panel A) are not statistically different from the IAS net earnings from 2007 to 2009. In Panel B (outliers excluded) Wilcoxon test result shows some statistical significance of net income differential reported under CAS vs. IAS before

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the new CAS(2007) became effective, except for 2002. However, under t-tests the CAS(net earnings) are mostly not statistically different from those under IAS. Even so, the Wilcoxon test supports our view that the comparability level of net earnings has improved after the new CAS (2007) became effective in 2007.

Table 4 provides the results of t-tests and Wilcoxon Tests for IOC(net equity). With outliers, Panel A summarizes the results for each of the years 2002-2009, Panel B summarizes the results without the outliers. Panel A and Panel B show similar statistical results. These suggest that net equity under CAS is not statistically significant for all of 2002-2009 using t-test at 95% confidence level. Whereas under Wilcoxon tests, CAS net equity significantly deviate from IAS in years 2002 and 2006.

<b>Table 3: Result of hypothesis testing for net income</b>								
<i>Net income</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>Panel A(inclusive of outliers) Student t test</b>								
<i>T</i>	1.39	0.12	0.14	1.11	-0.95	1.21	-0.97	1.03
<i>P value (2-tailed)</i>	0.17	0.9	0.89	0.27	0.35	0.24	0.34	0.31
<b>Wilcoxon Signed Ranks Test</b>								
<i>Z</i>	-0.4	-2.04	-1.86	-2.14	-2.15	-0.85	-0.72	-0.52
<i>P value (2-tailed)</i>	0.69	0.04*	0.06	0.03*	0.03*	0.39	0.47	0.6
<b>Panel B(exclusive of outliers) One Student t test</b>								
<i>T</i>	1.19	-1.32	-2.28	0.54	0.24	0.66	2.33	0.37
<i>P value (2-tailed)</i>	0.24	0.19	0.03*	0.59	0.81	0.52	0.03*	0.71
<b>Wilcoxon Signed Ranks Test</b>								
<i>Z</i>	-0.61	-2.65	-2.34	-2.38	-2	-0.55	-1.73	-0.16
<i>P value (2-tailed)</i>	0.54	0.01*	0.02*	0.02*	0.05*	0.58	0.08*	0.87

Note: \*statistical significance at the 10% level for a two-tailed test

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<b>Table 4: Result of hypothesis testing for net equity</b>								
<i>Equity</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>Panel A (inclusive of outliers) One sample t test</b>								
<b>T</b>	0.91	-0.1	-0.42	0.47	-0.47	0.94	1.9	1.14
<b>P value (2-tailed)</b>	0.37	0.92	0.68	0.64	0.64	0.36	0.07	0.27
<b>Wilcoxon Signed Ranks Test</b>								
<b>Z</b>	-2.33	-0.47	-0.38	-1.22	-1.94	-0.53	-1.44	-1.05
<b>P value (2-tailed)</b>	0.02*	0.64	0.7	0.22	0.05*	0.59	0.15	0.3
<b>Panel B (exclusive of outliers) One sample t test</b>								
<b>T</b>	-1.06	0.67	0.16	-1.12	-1.95	0.13	1.58	1.05
<b>P value (2-tailed)</b>	0.29	0.5	0.87	0.26	0.06	0.9	0.13	0.3
<b>Wilcoxon Signed Ranks Test</b>								
<b>Z</b>	-2.58	-0.68	-0.62	-1.45	-2.27	-0.19	-1.16	-0.72
<b>P value (2-tailed)</b>	0.01*	0.5	0.54	0.15	0.02*	0.85	0.25	0.47
<i>Note: *statistical significance at the 10% level for a two-tailed test</i>								

## 4. Summary of Findings and Conclusion

### 4.1 The Index of Comparability

First, the mean IOC (net earnings) under CAS (Table 1) are higher than those of IAS in all of 2005 through 2009, as well as the aggregated period. The aggregated average index does not exceed the 10% materiality level (1.0857 for the aggregated population, and 1.0199 excluding outliers). After 2006, the standard deviation of index values of net earnings decreased markedly. Further, median of the index of net earnings stabilized to 1 after 2006. The bulk of the index remained close to the 5% materiality threshold.

Second, the IOC (net equity) after removal of outliers (Table 2) shows no material difference between CAS and IAS. The mean IOC (net equities) are well within the 10% materiality level for each of the years 2002-2009. For the aggregated period, mean IOC (net equity), with or without outliers, within 5% materiality level and without outliers the mean is very close to 1 (1.0004).

Third, in general, there is no statistical difference between CAS reported net earnings and IAS net earnings at the 95% confidence level after 2006. Similarly, there is no material difference between CAS reported net equities and IAS net equities.

Given these IOC analyses, we may conclude that the harmonisation of CAS with IAS has progressed to an acceptable level since the promulgation of the 2006 ASBE. It is evident that the 2006 ASBE further reduced the gap between CAS and IAS.

## 5. Conclusions

Since 1992, China has undergone enormous economic change. Improvements in capital market structure and legal system have gradually brought China's practice in line with the international economic norm. The promulgation of the 2006 ASBE for the CAS was an important milestone in Chinese accounting history. The 2006 ASBE substantially harmonized the CAS with IFRS. The compliance requirements for dual-listed companies in China provided us with a very convenient platform to ascertain the results of the instituted reforms empirically. We build on previous researches, the last of which used data prior to 2005, by using accepted comparability to analyze accounting information gathered after 2002 through 2009. We found no research in this area after China's 2006 ASBE were released. This study straddles the 2006 ASBE promulgation.

### 5.1 Limitations

This research expands the existing literature on comparability analysis and value relevance of accounting information test. However, the following limitations should be noted. First, The quality of our findings are reliant on the quality of the data sources. There is a dearth of timely English sources and we tried to be as accurate as possible in our translation from the original Chinese sources. Secondly, the sample size for the period after 2006 that fulfill our conditions was small. Hence, the statistics may be somewhat biased though all care is taken to minimize statistical noise.

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