

# **MASTER OF BUSINESS**

## **ACCOUNTING DEVELOPMENTS IN CHINA: THE PROGRESS OF HARMONISATION**

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for the Master degree at Auckland University of Technology**

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## **ATTESTATION OF AUTHORSHIP**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Fiona Chung Chieh Cheng

## **ABSTRACT**

This research is an empirical study to ascertain the progress of accounting harmonisation in Chinese GAAP with the IFRS after the implementation of the latest 2006 ASBE. Three research questions are addressed and developed. The first research question aims to assess the progress of harmonisation in Chinese GAAP with IFRS. The second aims to establish whether the gap varies among different industry categories, and to further identify the industries with the most significant discrepancies between the two sets of accounting standards. The final research question seeks to identify the major items contributing to the differences in net profit and total equity figures reported under the IFRS and Chinese GAAP.

The 2001 Chinese GAAP and the 2006 Chinese GAAP are evaluated against the IFRS, with the aim of providing a before-and-after comparison between the old and new Chinese GAAP. The final financial data used in this research comprises 2006 and 2007 financial reports prepared by the 47 Chinese-listed firms that simultaneously issue H- and A-shares to assess the progress of harmonisation in Chinese GAAP with IFRS.

In general terms, the findings of this research indicate an improvement in the harmonisation of Chinese accounting with the IFRS after the implementation of the 2006 ASBE. Nevertheless, certain discrepancies still exist in the amount of net profit and total equity reported under the two sets of accounting standards.

Furthermore, the evidence shows that the reporting of net profit and total equity discrepancies varies among different categories of industry. Insurance companies, the extractive industries, and property-leasing and development companies are identified as the industries that either contributed the largest reporting gaps, or produced the lowest comparable figures reported under the IFRS and Chinese GAAP.

More specifically, the items that contributed to the discrepancies may generally being categorised based on three main causes. These are: a) the actual differences between accounting requirements under the IFRS and Chinese GAAP (treatment of policy acquisition cost and claim reserve); b) the specific requirements imposed by non-accounting Chinese regulations (treatment of policyholders' reserve, unearned premium reserve and safety funds); and c), the options of measurement methods under the two sets of standards (methods of depreciating fixed assets, investment properties, oil and gas properties).



# CHAPTER ONE

## INTRODUCTION

Over the years of reform and development in the *International Financial Reporting Standards*, IFRS, (known, up until 2002 as the IAS, International Accounting Standards) from its beginnings in 1973, the IFRS is gradually being adopted by many countries across the world (Chen & Cheng, 2007; Hope, Jin, & Kang, 2006). Nevertheless, prior studies argued that accounting systems are being adopted with the purpose to serving national needs (Nobes & Parker, 2006), and are, therefore, being shaped differently by the unique culture, economics, infrastructure, and political and legal environment of each country (Ball, 2006; Berry, 2008; Graham & Li, 1997; Sun, Weetman, & Xiao, 2004). As a result, many studies also argued that the harmonisation of accounting standards does not always lead to the harmonisation of accounting practice among countries (Archer, Delvaille, & McLeay, 1995; Emenyonu & Gray, 1992; Evans & Taylor, 1982). Therefore, attention needs focus on harmonising accounting in countries with transitional economies (Ng, 1999).

China has unique historical features that differ greatly from many Western countries. It has been transformed from a highly centralised economy to a more market-orientated economy following the new policy on “economic liberalisation and reformation” and the so-called “open-door policy” for attracting foreign investments since 1970 (Bao & Chow, 1999; Chong & Vinten, 1998; Lau & Tang, 2000). In response to economic reform, China has undergone several changes in its accounting system. The most significant of these came out of the 1992 regulation (*Accounting Standards for Business Enterprises*) that abandoned the Soviet accounting system used for decades, and partially implemented the Western accounting principles and practices from the IFRS (Chen, Sun, & Wang, 2002). In 1998, a new set of *Chinese Generally Accepted Accounting Principles* (Chinese GAAP) called “*Accounting Regulation for Listed Companies*” (ARLC) was issued with the aim of reducing the discrepancies of the former 1992 regulation to further align with the IFRS (Chen et al., 2002). Most recently, in 2006, the latest “*Chinese Accounting Standards for Business Enterprises*” (2006 ASBE) was issued and became effective from 1 January 2007 with the aim of addressing nearly all the issues outlined under the IFRS (Deloitte, 2006).

Although the most recent prior studies (Baker & Moore, 2008; Bouvier, 2007; Pacter, 2007) have qualitatively compared the standards and measurement requirements contained in the 2006 ASBE against the IFRS, none of the above mentioned studies empirically examined the quantified impacts of the 2006 ASBE on the reporting figures. As a result, the purpose of this research is to empirically study the progress of accounting harmonisation in Chinese GAAP with the IFRS after the implementation of the latest 2006 ASBE.

For the purpose and nature of this research, financial data used is based on the 2006 and 2007 financial reports prepared by the 47 Chinese listed firms who simultaneously issue H- and A-shares. There are two main reasons for choosing this data population. Firstly, companies issuing both H- and A-shares have prepared two sets of accounts under the Chinese GAAP and either the IFRS or *Hong Kong Financial Reporting Standards* (HKFRS). And they are required to restate financial data in accordance with either the IFRS or HKFRS, while the HKFRS became fully converged with IFRS in 2005. As a result, the comparison of the financial data in the H- and A-share reports will provide insights into the progress of harmonisation between the Chinese GAAP and the IFRS. Secondly, the 2006 ASBE became effective from 1 January 2007, so will affect the 2007 A-share financial reports, while the 2006 A-share financial reports were prepared in accordance with the old GAAP. Therefore, this research provides a before-and-after comparison between the 2006 and 2007 results, and aims to offer insightful, detailed information on the progress of accounting harmonisation in Chinese GAAP.

There are three research questions examined in this study. The first research question aims to ascertain the progress of accounting harmonisation between Chinese GAAP and the IFRS. The results gathered from Research Question One demonstrate an improved harmonisation between Chinese GAAP and the IFRS from 2006 to 2007. However certain discrepancies still existed in the amount of net profit and total equity reported under the two sets of accounting standards.

The second research question aims to provide insights into the relationship between industry and the reporting discrepancies under the IFRS and Chinese GAAP. The findings show a strong relationship between industry and the amount of discrepancies in net profit and total equity reported under the two sets of accounting standards only in 2006, but not for the 2007 results.

The last research question aims to identify the major items contributing to the differences reported under the two sets of accounting standards in industries. The results obtained show the insurance companies, and petroleum, oil and gas refiners have a certain number of discrepancies that are specifically related to their particular industry and very different to other analysed industries. It also found that the items contributing to the discrepancies under the two sets of accounting standards could be categorised according to three main causes, namely: the actual differences of accounting treatments between the two sets of accounting standards; the specific requirements imposed by the non-accounting Chinese regulations; and the options of measurement methods provided under the two set of accounting standards.

This research should benefit accounting students, report users, researchers, regulators, and government for three main reasons. Firstly, it provides an understanding of the progress of Chinese accounting in harmonising with the IFRS. Secondly, there is often a lack of direct examination of the impact and relationship certain categories of industries might have on the discrepancies in the reporting figures under the IFRS and Chinese GAAP. This research is designed to directly investigate how different categories of industries may influence the reporting gaps between the two sets of accounting standards. Lastly, a number of items contributing to the discrepancies under the IFRS and Chinese GAAP were identified. These address areas with which report users need to take care when reading the Chinese financial reports.

Nevertheless, two limitations must be considered when reading the results of this research. Firstly, only a limited number of sample companies were examined to find out the items which have contributed to the differences under the IFRS and Chinese GAAP. Readers of this research should expect that there are other items which have caused the differences under the two sets of standards were not being analysed. Secondly, sample companies in this research need to prepare reconciled statements for the reporting discrepancies under the IFRS and Chinese GAAP, and must also be audited by the Big Four. This may create incentives for management to reduce the reporting gaps. Therefore, readers of this research should also expect the possibility of larger discrepancies in the reporting figures prepared by domestic entities that neither prepare two sets of financial reports, nor audited by the Big four.

The remainder of this research proceeds as the follows: Chapter Two discusses prior studies that relate to the accounting development and the progress of harmonisation of accounting

standards in China. Chapter Three outlines the research design of this paper. Chapter Four presents the findings from this research. The last chapter summarises and concludes the findings followed by a discussion of limitations and suggestions for future research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

The purpose of this chapter is to review previous studies relating to the accounting development and the progress of the harmonisation of accounting standards in China. To this end, previous studies on the issue are separated into five sections, not only related to the three research questions, but also to the economic and accounting development in China in order to provide a better understanding of the Chinese background to the research.

The first section discusses the economic development in China, while the second section analyses the development of the Chinese accounting system. The last three sections focus on previous studies that directly relate to the research questions. Of these, the third section is relevant to Research Question One, which reviews literatures that focus on the progress of Chinese accounting harmonisation with the IFRS. The fourth section is relevant to Research Question Two, which reviews previous studies that focus on the relationship between industries and reporting discrepancies under the IFRS and Chinese GAAP. The last section is relevant to the last research question, and focuses on ascertaining the major items contributing to the discrepancies under the two sets of accounting standards.

#### **2.1 ECONOMIC DEVELOPMENT IN CHINA**

##### **2.1.1 Economic Development – Pre-Reform**

The People's Republic of China was founded by the Communist Party led by Mao in 1949 (Ge & Lin, 1993; Lan, 2003; Zhou, 1988) and operated under an economic system adopted from the former Soviet Union (Ge & Lin, 1993; Lin & Wang, 2001). Under this economic system, the state ownership of production and the distribution of production means were highly centralised and controlled in accordance with the economic plans established by the government (Ge & Lin, 1993; Lau & Tang, 2000; Lin & Wang, 2001). State-owned enterprises (SOEs) were established and operated to meet profit and production targets under the economic plans, with capital funds received from either the government or state-controlled bank loans (Ge & Lin, 1993; Lau & Tang, 2000; Zhou, 1988). As a result, SOEs were implemented as the basic production units with a lack of autonomy (Claiborne, Sewon, & Wang, 2008; Zhou, 1988). In addition, since there was no private ownership of resources,

and production came under the rigid government planning-and-control economic system (Ge & Lin, 1993), stock issuance to raise funds for enterprise was forbidden, and stock companies were suspended nationwide from 1950 (Chen & Lin, 2005; Chen, Huss, & Winkle, 1994; Karmel, 1994).

### **2.1.2 Economic Development – Post-Reform**

In addition to the introduction of the “economic liberalisation and reformation” policy implemented by the new leader of the Chinese Communist Party, Deng Xiaoping in 1979, and the open-door policy for attracting foreign investments from 1970, China started to participate in a global context, and opened its economy to foreign investment either for joint trading with local enterprises or in a form of direct foreign investment (Chen, Lin, & Tang, 2001; Lau & Tang, 2000).

Several economic structure reforms were carried out to transform the highly centrally controlled economy into a market-orientated economy (Bao & Chow, 1999; Chen & Lin, 2000; Chen et al., 2001; Chong & Vinten, 1998; Tang, 2000). Indeed, it was argued that there was a need to separate economic functions from Chinese politics and enterprises in order to move towards a market-orientated economy (Chong & Vinten, 1998; Claiborne et al., 2008). In fact, the Chinese government decentralised the economic activities to allow enterprises to choose their own production and distribution of output (World Bank, 1992), which, in turn, changed the operation of the SOEs and the nature of their relationship with the government (Ding, 2000; Hilmy, 1999). Some of the SOEs were transformed to the “share-capital enterprises” model (Lin & Wang, 2001), where they were allowed to issue treasury bonds and non-public shares to their employees, and to other business-related enterprises and government agencies (Chen, Gul, & Su, 1999; Lin & Wang, 2001). As a result, the stock companies returned in the mid-1980s on an experimental basis (Burke, 1999; Chen & Lin, 2005; Lin & Wang, 2001). What is more, four years after the reappearance of stock companies issuing non-public shares, public shares began to be traded over bank counters in Shanghai by the end of 1984 (Chen et al., 1999).

Another major development in the Chinese economy was the establishment of the Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) in late 1990 and early 1991, respectively (Chen & Lin, 2005; Claiborne et al., 2008; Sami & Zhou, 2004). Their goal was to attract foreign capital into the country, and raise funds from national individual savings to

enterprises (Bao & Chow, 1999; Chen et al., 1999). Currently, two types of shares are issued in the two stock exchanges: A-shares and B-shares. A-shares were the first type of shares issued only to domestic investors in 1990, while some selected A-share issuers began to issue B-shares to foreign investors in early 1992 (Chen & Lin, 2005; Kuan & Noronha, 2007; Sami & Zhou, 2004). Nevertheless, domestic investors were also allowed to invest in B-shares from 2001 (Kuan & Noronha, 2007). What is more, in order to obtain more foreign capital investments, the Chinese government selected some companies to participate in overseas stock markets, with the type of shares named according to the location of the share listing (Lin & Wang, 2001). For example, shares listed in the Hong Kong Stock Exchange are categorised as H-shares, while N-shares are listed in New York (Kuan & Noronha, 2007; Lin & Wang, 2001).

The Chinese government implemented the so-called ‘deeper’ changes in the Chinese economy after the Asian Financial Crisis of 1997 (Chen & Lin, 2000), with the aim of improving the productivity of the SOEs and attracting larger amount of funds from the public by either leasing or selling medium and small SOEs (Chen et al., 1999; Chen & Lin, 2000). This led to the privatisation of some SOEs in 1998 (Claiborne et al., 2008). At the same time, state-owned banks were also being encouraged to become privatised or to engage in commercial banking, thus operating under market forces rather than meeting economic plans to provide loans to unprofitable SOEs (Claiborne et al., 2008).

As a result of the economic reform undertaken over the last decades, a more diversified economic environment was developed with various forms of business ownership, including foreign investment, SOEs, collectively owned business or owner-operated enterprises (Chen et al., 2001; Chen, Jubb, & Tran, 1997). The Chinese economy has shifted away from a highly centralised model to a market-orientated economy. As a result, the Chinese government has also changed its role and begun to act mainly as a macro policy-maker rather than a direct controller (Ding, 2000; Tang, 2000).

## **2.2 ACCOUNTING DEVELOPMENT IN CHINA**

### **2.2.1 Accounting Development – Pre-Reform**

Many studies argue that different accounting systems are adopted to match the national needs and were shaped by different conditions such as the economy, culture, and political and legal background of a country (Ball, 2006; Berry, 2008; Graham & Li, 1997; Nobes & Parker, 2006; Sun et al., 2004). As mentioned, a Soviet-style economic system was adopted in China, and featured highly centralised economic planning and often a lack of freedom of production and distribution of national output (Lan, 2003). As a result, in the economic pre-form period, the *Uniformed Accounting Systems* (UASs) were adopted to provide the needs of government control and economic planning in China (Aiken, Lu, & Ji, 1995; Chen et al., 1999; Hao & Scapens, 1995; Lin, 1988).

From a Chinese perspective, the ‘uniform system’ meant standardized and constant regulations within the same type of industry rather than among all the different industries (Lau & Tang, 2000). Hence, 40 industry-specific and ownership-specific accounting standards were implemented among enterprises (Chen & Lin, 2001; Chen et al., 1997), with three features focusing on tax, uniform rules and fund principles (Chau, Chow, & Gray, 1995; Davidson, Gelardi, & Li, 1996). In other words, the Chinese accounting system provided strict and uniform rules for SOE bookkeeping systems that could be used to record and calculate tax revenue for the government (Davidson et al., 1996; Pacter, 2007). At that time, all the resources of SOEs represented in terms of funds, such as ‘fund application’, refer to the funds provided for purchase, and ‘fund source’ refers to the channel of obtaining funds (Chau et al., 1995; Enthoven & Lou, 1987; Hilmy, 1999; Lin, 1988).

### **2.2.2 Accounting Development – Post-Reform**

Since economic reform began in the 1970s, accounting academicians and practitioners have addressed the deficiencies of the UAS to the market-orientated economy system (Ge & Lin, 1993; Reuvid & Yong, 2005) and, finding the concept of ‘fund’ was no longer applicable, they voiced demands for creating a new accounting system (Chen et al., 1997; Lau & Tang, 2000; Tang, 2000).

As a result, from the 1980s, the Chinese government carried out several changes to its accounting system (Chen et al., 1999; 1997). Initially, the Anglo-American accounting



principles were adopted and reflected in the *Accounting Regulations for the Joint ventures* (ARJV). It became effective from 1985 with the purpose of replacing the rigid and detailed Soviet-accounting model (Chen et al., 1997; Shi & Xue, 1982; Yang & Yian, 1985) with a more optimal resource allocation objective (ie. the introduction of accrual accounting and bad debts provision) that serves the needs of quality accounting information of individual investors and creditors in joint ventures (Bao & Chow, 1999; Chen & Lin, 2001; Hussain, Jiang, & Liu, 2008).

The first step of Chinese accounting to align with the IFRS can be found in 1992 (Chen et al., 1994; Liu & Zhang, 1996; Xiang, 1998), when the *Accounting Standards for Business Enterprises* (1992 ASBE) and the new *Industry-Specific Accounting Regulations* (ISAR) were established to improve Chinese accounting standards and harmonise with the internationally accepted accounting standards (Chen & Tran, 1995; Liu & Tang, 1997; Liu & Turley, 1995; Yang, 1994). The aim was also to enhance the information quality to assess the performance and efficiency of enterprises (Hilmy, 1999; Zhou, 1988).

Generally, the ASBE can be described as the basic standards that introduce the basic accounting objectives on accounting entity, going concern, monetary measurement and accounting period, and adopt internationally accepted accounting principles such as objectivity, relevance, comparability, timeliness, consistency, understandability, accrual, matching, prudence, materiality, and the distinction between revenue spending and capital expenditures (Lau & Tang, 2000; Pan & Xiao, 1997). The ISAR were considered to be practical standards that replaced the 40 accounting systems to 13 industry-based (manufacturing, finance, agriculture retailing, construction, real estate, foreign economic cooperation, communication, transportation, food, tourism and insurance) and two ownership-based accounting systems (domestic and foreign enterprises) (Lau & Tang, 2000; Oppen, 2003). Nonetheless, both the 1992 ASBE and ISARs were also considered to be the basic measurements and concepts for further development of Chinese accounting standards (Aiken et al., 1995; Chen & Lin, 2000; Mao, Yang, & Taussing, 1994)

The *Accounting Regulation for Listed Companies* (ARLC) replaced the 1992 regulations and became effective from 1998 with the purpose of further aligning Chinese GAAP with the IFRS and eliminating the discrepancies found between the 1992 regulations and the IFRS (Bao & Chow, 1999; Chen & Lin, 2000; Kuan & Noronha, 2007). It also intended to further

improve the reliability of accounting and information disclosure (Chen & Lin, 2000). In short, the ARLC allows enterprises to determine the level of bad debts provisions rather than being limited to the range between 0.3 – 0.5%. It lets them adopt the measurement of lower of cost, or net realisable value for valuating inventories rather than sticking to the historical costs as prescribed under the 1992 regulations. It also allows the introduction of the equity method for long-term equity investments (Chen et al., 2002). In addition to the accounting and financial reporting standards, 38 auditing standards and guidelines were also issued for auditors to check and examine the truth and fairness of the financial position of the reporting entities (Chong & Vinten, 1998) and therefore achieve the ultimate aim of enhancing both the quality and quantity of corporate accounting disclosure for Chinese enterprises (Sami & Zhou, 2004).

Further development in the Chinese accounting system took place in 2001, where the *Accounting Systems for Business Enterprises* (2001 ASBE) was established to improve the transparency and reliability of financial information (Chen & Lin, 2000) and, in turn, reduce the chances for earnings management (Chen & Cheng, 2007). There were new disclosure requirements under the 2001 ASBE (Deloitte, 2002). For example, it provides more details of basic principles with minimum disclosure of information and further requires enterprises to provide notes on the financial statements as one of the major elements in the interim and annual reports (Kuan & Noronha, 2007).

Most recently, Chinese accounting systems have made further changes to existing accounting standards to harmonise with IFRS and to serve the needs of Chinese market economy development (Ernst & Young, 2006). The latest new *Chinese Accounting Standards for Business Enterprises* (2006 ASBE), established in 2006 and effective from 1<sup>st</sup> January 2007, will impact on the 2007 financial reports prepared by Chinese-listed companies (Deloitte, 2006). The 2006 ASBE covers one basic standard, 16 revised standards and also 22 new issued standards, hence one basic and 36 specific standards were established to further align with the IFRS (Ernst & Young, 2006).

## **2.3 THE PROGRESS OF ACCOUNTING HARMONISATION IN CHINA**

This section focuses on previous studies relevant to the progress of accounting harmonisation in Chinese GAAP with IFRS.

In past decades, evidence have shown that the adoption of different accounting systems may result in differences in financial reporting across nations (Gernon & Wallace, 1995; Lopez & Schultz, 2001; Nobes & Parker, 1998; Pownall & Schipper, 1999). Indeed, infrastructure, culture, economy, legal, political and social backgrounds, are possible factors that shape the national accounting systems and lead to differences in accounting standards between countries (Ball, Robin, & Wu, 2003; Gray & Radebaugh, 1997). Due to the underlying events in specific countries, many researchers argued that the harmonisation of accounting standards does not always lead to the harmonisation of accounting practices (Archer et al., 1995; Chen & Cheng, 2007; Emenyonu & Gray, 1992; Evans & Taylor, 1982).

For example, Gray, (1980) investigated the impact and the extent that profit measurements are correlated with national characteristics by applying the conservatism index to earnings reported by 90 companies in France, Germany and the United Kingdom. The study found that France and Germany are relatively more conservative than the United Kingdom. It contended that the movement of profit measurements are correlated with national characteristics, hence the profit reported a company significantly depended on the country in which that company was located (Gray, 1980). Gray and Weetman, (1991) conducted similar research to Gray, (1980). They further developed Gray's, (1980) conservatism index into two forms namely, the overall conservatism index and the partial conservatism index. The study examined the extent of quantitative differences in profits reported in accordance to U.S. GAAP against the U.K. GAAP, Swedish GAAP and the Dutch GAAP (Gray & Weetman, 1991). Gray and Weetman, (1991) found that the Swedish GAAP is more conservative than the US GAAP, while the U.K. GAAP is significantly less conservative than the U.S. GAAP. Lastly, the Dutch GAAP is in a position similar to the U.S. GAAP (Gray & Weetman, 1991).

Nevertheless, the harmonised accounting standards could make accounting information more comparable and understandable for international investors and creditors, which, in turn, will assist multinational businesses and global stock markets (Beresford, 1990; Nobes, 1989; Tang, 1994; Wyatt, 1989). Because of this, accounting harmonisation is seen as a desirable goal (Economist, 2007; Levitt, 1998; McCollum, 2006; Turner, 1983).

Tay and Parker, (1990) identified two types of accounting harmonisation, *de jure* harmonisation and *de facto* harmonisation. *De jure* harmonisation refers to the accounting harmonisation among different accounting regulations, while *de facto* harmonisation represents the harmonisation of accounting practices (Tay & Parker, 1990). Van Der Tas, (1988) further categorized the accounting research to the *de facto* harmonisation as the material harmonisation and the *de jure* harmonisation as the formal harmonisation. For more details, the formal *de jure* accounting harmonisation investigates and evaluates how accounting regulations change over time, while the material *de facto* accounting harmonisation investigates and evaluates the frequencies of accounting choice made by reporting entities (Garrido, Leon, & Zorio, 2002; Van Der Tas, 1988).

Although accounting harmonisation research can be regarded in two different categories, as mentioned above, the majority of accounting harmonisation research evaluates the progress of accounting harmonisation with both material and formal aspects (Ganeshanandam, Perera, & Garrido, 1996; Van Der Tas, 1988). Nevertheless, research has shown the harmonisation of accounting standards is the basis for the harmonisation of accounting practice (Wolk & Heaston, 1992), as the level of accounting practice harmonisation would increase when the level of accounting standards harmonisation increased (Garrido et al., 2002).

Empirical studies on Chinese accounting began at the end of the 1980s (Qin, 1989; Yu & Zhang, 2007). In the initial stages of Chinese accounting research, there was a lack of published English research, while many studies mainly focused on the history of the Chinese accounting system. For example, Zhou, (1988) focuses on Chinese accounting history and provides a detailed explanation of the Soviet-style accounting system and how it was relevant to the centralised economy in China.

Chinese accounting research reached a new stage after the establishment of the draft of 1992 ASBE in 1990, when Chinese accounting researchers began to apply foreign empirical research skills to evaluate the Chinese accounting system (Qin, 1989). Generally, Chinese accounting research focused on three main dimensions, where some studies investigated the relationship between the economic environment and accounting system in China (Chen & Lin, 2000; Chen et al., 1994; Ge & Lin, 1993; Lau & Tang, 2000; Lawrence, 1997; Mills & Cao, 1996; Tang, 1994), and the others focused on the cultural, legal and taxation system and the implications on Chinese accounting (Graham & Li, 1997; Hilmy, 1999; Lan, 2003; Wan,

2003). Hence, one group of researchers evaluated environmental influences on the Chinese accounting systems, while another focused on the problems China faced in harmonising its accounting standards with IFRS.

As stated in Oppen, (2003), the socialist character still exists in the market-orientated Chinese economy. This means multiple goals co-exist (ie. objectives of obtaining tax revenue and expanding capital markets) and the blurred policy-economy boundaries have both weakened the enforcement of accounting and auditing standards (Oppen, 2003), which may in turn slow the progress of Chinese accounting development (Chen et al., 2001). Other issues, such as a lack of accounting infrastructures (Ng, 1999; Ng, Yuen, & Pacter, 2002; Tang, 2000), undefined property rights (Chen et al., 1997), the incoherence in Chinese accounting standards (ie. different recognition and measurements) (Ding, 2000), and language barriers, have all been documented as the barriers to harmonisation.

The last group of researchers in the 1990s focused on the draft of the 1992 ASBE. Kao and Yang, (1994) compared the draft with the Financial Accounting Standards Board (FASB) Conceptual Framework. Their research mainly compared the basic principles, accounting assumptions and elements, and the implementation constraints in the two sets of standards (Kao & Yang, 1994). As per Kao and Yang, (1994), the major differences can be found in the different treatment of expenditures on selling and administrative spending, the inconsistent adoption of a conservatism approach, the coverage of anticipated contract losses and the different treatment of inventory valuation. In contrast, Chen and Heep, (1997) examined the objective, and the definition of assets and liabilities in the Draft against the U.S. GAAP and IFRS. They found that the Chinese Draft is different to the U.S. GAAP and IFRS both in the objective and the definition of assets and liabilities, while the U.S. GAAP and IFRS are similar to each other in these three concerns (Chen & Hepp, 1997).

After the implementation of the 1992 ASBE, much research has focussed on a comparison of the information environment and the usefulness of reporting figures between the A- and B-shares stock markets. The A-share reports are prepared in accordance with the Chinese GAAP, while the B-share reports are prepared in accordance with the IFRS. For example, Abdel-Khalik, Wong, and Wu, (1999) examined the differences in the market structure and information environment in A- and B-share stock markets based on the financial data collected from the Shanghai and Shenzhen Stock Exchange in 1994 and 1995. Generally,

they found that the information environment in the A-share stock market was less structured than in the B-share markets (Abdel-khalik et al., 1999). This is because the stock information (A-share) was delivered through informal communication between groups with relatively limited external monitoring of A-share performance.

In contrast, the B-shares market provides a better information environment for investors through the adoption of IFRS, the appointment of international auditors, and with greater pressure from external monitors (large financial institutions) (Abdel-khalik et al., 1999). In addition, they further compared the relationship between report earning and share prices in the A- and B-share market. Contrary to their hypotheses, Abdel-khalik et al., (1999) found that there was a relationship between reported earnings and unexpected returns to the A-share prices but not for the B-share prices due to the reasons of high price volatility, dominance of government officials, and the thinness of trading volume in the B-share markets.

Similar research was conducted by Bao and Chow, (1999), which covering a longer sample period. Bao and Chow, (1999) investigated the value relevance of earning and book value to the A- and B-share prices from 1992 to 1996. Contrary to the findings in Abdel-khalik et al., (1999), Bao and Chow, (1999) found both earnings and book values reported in accordance to IFRS have greater explanatory power to the B-share prices than those in the A-share markets. The different finding in Bao and Chow, (1999) and Abdel-khalik et al., (1999) may be attributed to the different years of the sample period and the different methods used in the two studies, where Bao and Chow, (1999) used the Ohlson, (1995) model and Davidson-MacKinnon J-tests to test their hypothesis, while Abdel-khalik et al., (1999) conducted the event-study approach.

Sami and Zhou, (2004) conducted cross-sectional analysis to examine the differences in the value relevance between the A- and B-share markets based on the sample years from 1994 to 2000 with a total of 104 sample companies. As found in Sami and Zhou, (2004), both mean earnings and book value reported under the IFRS were higher than the Chinese GAAP. This indicates that the earnings and book values reported under the IFRS are more conservative than those reported under the Chinese GAAP. Indeed, Sami and Zhou, (2004) also contended that while financial information produced under the IFRS and Chinese GAAP is both relevant to the A- and B-share prices, the price correlation of earnings and book value is higher for B-shares than for A-shares (Sami & Zhou, 2004). A similar study to Sami and Zhou, (2004) was

conducted by Chen and Lin, (2005) but with different findings. Chen and Lin, (2005) also examined the differences in value relevance of financial information between the A- and B-share markets but with a larger sample size and a longer period of sample years. Chen and Lin, (2005) obtained a total of 415 companies through the sample years from 1995 to 2002 and found that earnings and the book value of owner's equity reported in accordance to the Chinese GAAP were better to explain both A- and B-share prices (Chen & Lin, 2005).

The findings from those studies that focused on the relationship between value relevance and stock prices in A- and B-share markets may possibly indicate the progress of accounting harmonisation in China. For example, in Bao and Chow's, (1999) research, based on their sample years (1992 to 1996), it is likely that the financial data collected from the A-share market were based on the 1992 Chinese regulation. Sami and Zhou (2004) covered the sample periods from 1994 to 2000, during which time A-share results were prepared based on the 1998 Chinese regulation for the last three years of their sample period. While Chen and Lin, (2005) cover the period from 1995 to 2006, when the A-shares results were partially based on the 2001 regulations. From the pattern drawn from their findings, the value relevance of A-share results was found to be irrelevant in Bao and Chow, (1999), to become relevant in Sami and Zhou, (2004) and lastly, to be the most important variable to explain both stock prices and stock returns for both A- and B-shares in Chen and Lin, (2005). A summary of the findings on the value relevance of reporting figures from prior studies and the related year of Chinese GAAP is shown in the Table 1.

**Table 1: Literatures Comparing Value Relevance of Earnings & Book Value under ASBE & IFRS (Prepared by author)**

<b>Literature</b>	<b>Sample Period</b>	<b>Assumed Standard Examined</b>	<b>Findings</b>
Abdel-Khalik et al., (1999)	1994-1995	1992 ASBE	Greater explanatory power of earnings & book values reported under ASBE.
Bao & Chow, (1999)	1992-1996	1992 ASBE	Contrary to Abdel-Khalik et al., (1999). Greater explanatory power of earnings & book values reported under IFRS.
Sami & Zhou, (2004)	1994-2000	1992 & 1998 ASBE	Earnings & book values under IFRS & ASBE are both relevant, while price correlation is relatively higher for B-shares.
Chen & Lin, (2005)	1995-2002	1992, 1998 & 2001 ASBE	Greater explanatory power of earnings & book values reported under ASBE.

Another group of researchers investigated the progress of Chinese accounting harmonisation with the international accounting standards as a way of comparing the reporting figures under the Chinese GAAP and IFRS. Chen et al., (1999) examined the earnings reported under the IFRS and 1993 ASBE for a sample period from 1994 to 1997 and the financial data were collected from 34 B-share companies in 1994 and increased to 50 B-share companies in 1997. In general, their findings suggested earnings reported under the Chinese GAAP were significantly higher than the earnings prepared in accordance to the IFRS. As a result, they contend that Chinese accounting is significantly less conservative than the IFRS, and attribute the differences to four main reasons: the different practices between the two sets of accounting standards; earnings management; non-accounting regulations; and the special events that occurred during the Chinese economic development process (Chen et al., 1999).

Indeed, Chen et al., (1999) also briefly discussed the effects of the 1998 Chinese regulation which were not covered in their samples. They suggested that the 1998 ASBE may have significantly reduced the gaps between Chinese GAAP and the IFRS due to the changes in the standards in relation to the provision of bad debts, inventory and temporary investment valuation (Chen et al., 1999). Nevertheless, Chen et al.'s, (1999) suggestions seem to be assumptions made based on the comparison of the two sets of accounting standards, and there is a lack of actual studies of the quantified effects of the 1998 Chinese regulation on the progress of harmonisation.

Lin and Wang, (2001) examined the financial disclosure practices between the IFRS and Chinese GAAP. They selected three Chinese companies with distinct characteristics (chemical fibres, brewing and petroleum companies) that simultaneously issue both A- and H-shares (Lin & Wang, 2001). Lin and Wang, (2001) used financial data collected from 1995 to 1998 and compared the reporting figures of total revenue, income before tax, net income, earnings per share, total assets, net owner's equity and return on assets of the three companies. In general, similar to the findings in Chen et al., (1999), Lin and Wang, (2001) found reporting figures under Chinese GAAP are higher than those reported under the IFRS and HKFRS. Indeed, the gaps in reporting figures between the HKFRS and Chinese GAAP are even larger than those reported between the IFRS and Chinese GAAP. They also suggested that the discrepancies may be attributed to the unstandardised Chinese accounting practices, which provides a choice of procedures or policies to restate financial figures and, in turn, allows room for earnings management (Lin & Wang, 2001).



Chen et al., (2002) conducted a comparison of reporting figures between 1998 regulations and the IFRS. They used a before-and-after sample design with financial data collected from 1997 to 1999 for 75 sample companies who issue both A- and B-shares. Therefore, they compared the earnings reported under both 1993 and 1998 Chinese regulations against the reporting earnings under the IFRS. As found in Chen et al., (2002), the establishment of the 1998 regulation did not successfully reduce the discrepancies between the IFRS and Chinese GAAP, where earnings under the Chinese GAAP tend to be higher than the IFRS with substantial differences still existing in the earnings reported under the two sets of accounting standards. They suggested the lack of accounting infrastructure, low quality of auditing and earnings management were the main reasons behind the differences (Chen et al., 2002).

Peng, (2005) measured the progress of Chinese accounting harmonisation with the IFRS in a different way to the prior studies. Peng, (2005) compared the Chinese accounting standards issued in 1992, 1998 and 2001 against the IFRS as a way of developing a checklist of 77 measurement items, and assigning each measurement item a rank of closeness to the IFRS for the three sets of Chinese GAAP. Contrary to the prior studies, Peng, (2005) found significant improvement in the three sets of Chinese GAAP from 1992 to 2001. For more details, there was significant improvement from the 1992 to 1998 Chinese standards and also from the 1998 to 2001 Chinese standards. Fourteen out of the 77 identified items fully harmonised with the IFRS in the 1992 regulations, 36 items fully harmonised with the IFRS in the 1998 regulations and 53 items in the 2001 regulations (Peng, 2005). However, it should be noted that the findings in Peng, (2005) were examined as a qualitative comparison between the Chinese standards and the international standards, therefore they do not take into account the quantified effects on reporting figures under the IFRS and Chinese GAAP.

Hussain et al., (2008) investigated the trend of movement in earnings gaps between Chinese GAAP and the IFRS from 2000 to 2003, which was subject to the 1998 and 2001 Chinese regulations. The study collected financial data from 51 companies that issue B-shares. Hussain et al., (2008) examined the reconciliation statement of the 51 companies and found there was a downward trend of earnings gap between the Chinese GAAP and the IFRS from 2000 to 2003. More specifically, they have found the gap drops to zero in 2003, which indicates the improvement in harmonisation. Further, contrary to the findings in Chen et al., (1999, 2002) and Lin and Wang, (2001). Hussain et al., (2008) found there was a similar number of cases reporting higher Chinese GAAP earnings (23/51) to those reporting higher

IFRS earnings (25/51), rather than a frequency of higher Chinese GAAP than IFRS earnings as reported in Chen, et al., (1999, 2002) and Lin and Wang, (2001). The different findings may be attributed to the different years of data examined and further indicate the effort of different years of Chinese regulations in the progress of accounting harmonisation with the IFRS. However, since Hussain et al., (2008) presented the averaged frequency of overstatement/understatement between the Chinese GAAP earnings and the IFRS earnings from 2000 to 2003; it is difficult to assess the changing pattern of frequency of overstatement/understatement between the two sets of accounting standards in each individual sample year.

Kuan and Noronha, (2007) collected the 2004 financial data for the 30 sample companies who issue both A- and H-shares and carried out statistical analysis to investigate the progress of accounting harmonisation of 2001 ASBE with the IFRS. Different to the method used in Hussain et al., (2008), Kuan and Noronha, (2007) break down the reporting figures in the financial statements, focusing on six accounting elements, namely sales revenue, operating income, income before tax, income after tax, assets, liabilities and equity, and found significant discrepancies exist only in operating income while no substantial gap exist in the rest of five tested accounting elements. Hence, Kuan and Noronha, (2007) also suggested the accounting harmonisation of Chinese GAAP with the IFRS has reached an acceptable level after the establishment of the 2001 regulation. Indeed, the selection of Big Four audit firms has also enhanced the competence and professionalism of audit quality, which in turn reduces the chances of earnings management and thus leads to financial information being more understandable and comparable by users (Kuan & Noronha, 2007).

Most recently, Baker and Moore, (2008) qualitatively compared the measurements and standards contained in the 2006 ASBE against the IFRS. The study found that two main issues made it difficult to align the Chinese GAAP with the IFRS, namely the concept of related parties and the adoption of the fair value method due to the cultural background in China (Baker & Moore, 2008). Indeed, Baker and Moore, (2008) also suggested that the lack of accounting professionals impeded the progress of harmonisation between the Chinese GAAP and the IFRS. Baker and Moore, (2008) also referred to Norton, (2008), and suggested that the centralised ownership, short operating history of the market economy, and the multiple ownership in company structures are also factors slowing down the harmonisation progress (Norton, 2008). The discussion of the establishment of the 2006 ASBE in Bouvier,

(2007) and Pacter, (2007), found that the new 38 specific standards contained in 2006 ASBE are very similar to the international structure of the IFRS (Bouvier, 2007), but the two sets of accounting standards are still not identical to each other (Pacter, 2007). Nevertheless, none of the above mentioned studies empirically examined the quantified impacts of the 2006 ASBE on the reporting figures.

Based on the findings from previous studies that compare the reporting figures between the IFRS and Chinese GAAP, it is clear that substantial improvement was made in Chinese GAAP to harmonise with the IFRS in recent years. A summary of findings on comparing the reporting figures and the related Chinese GAAP is listed in Table 2.

**Table 2: Literatures Empirically Comparing the IFRS & Chinese GAAP (Prepared by author)**

<b>Literature</b>	<b>Sample Period</b>	<b>Standard(s) Examined</b>	<b>Findings</b>
Chen et al., (1999)	1994-1997	1992 ASBE	Earnings under ASBE are significantly higher than under IFRS.
Lin & Wang, (2001)	1995-1998	1992 & 1998 ASBE	Reporting figures under ASBE are higher than under IFRS.
Chen et al., (2002)	1997-1999	1992 & 1998 ASBE	Earnings under ASBE are higher than under IFRS with substantial differences.
Peng, (2005)	1992-2001	1992, 1998 & 2001 ASBE	Significant improvements in the three sets of ASBE with increment of items fully harmonised with IFRS after issuing each set of ASBE.
Hussain et al., (2008)	2000-2003	1998 & 2001 ASBE	Downward trend of earnings gap from 2000 to 2003, with similar number of cases reporting higher ASBE earnings with those reporting higher IFRS earnings.
Kuan & Noronha, (2007)	2004	2001 ASBE	Significant discrepancies in operating income. No significant differences in sales revenue, income before tax & after tax, assets, liabilities & equity.

While there has been research on this topic before, it is still not known whether the latest 2006 ASBE, which became effective on 1 January 2007, will reduce the gap of reporting figures reported under the IFRS and Chinese GAAP. This leads to the first research question, which aims to assess the progress of harmonisation between Chinese GAAP and the IFRS. This research question will be tested from four different dimensions as listed below:

**Dimension I:** Tests the pattern of changes in the net profit and total equity gaps reported between the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension II:** Identifies the specific changes in net profit and total equity gaps reported between the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension III:** Investigates the significance of changes in the amount of net profit and total equity gap between 2006 and 2007.

**Dimension IV:** Examines the success of accounting harmonisation in Chinese GAAP with the IFRS between 2006 and 2007.

## 2.4 THE RELATIONSHIP BETWEEN INDUSTRY & DISCREPANCIES

The second research question aims to investigate whether or not relationships exist between industries and the reporting differences under the IFRS and Chinese GAAP.

Kohlmeyer, Rieman and Schneider, (2008) investigated the possible impact of the establishment of Statement of Financial Accounting Standards No. 154 – Accounting Changes and Error Corrections (FAS 154) on the reported earnings. They also compared the changing effects on reporting figures by companies for different years, firm features and sizes. Kohlmeyer et al., (2008) collected samples from 1998 to 2004 with a total of 2,612 sample companies, and further divided these into different categories according to their firm features and sales volume. As found in Kohlmeyer et al., (2008), the impact of the FAS 154 on the earnings varies among different industries and firm sizes.

On the other hand, Van Der Tas, (1992) analysed the major characteristics of the European insurance accounting regulations established by the EC Council of Ministers in December 1991. As pointed out by Van Der Tas, (1992), the EC recognised banks and insurance companies have undertaken activities that are very different to other industries, and therefore, need different accounting requirements.

In addition, Luther, (1996) suggested the finite lives, the lack of direct relationship between costs and revenues, the uncertainty associated with exploration, and the greater public accountability pressures in the extractive and mining industries, are the main features that differentiate extractive industries from industries engaging in other business activities. Luther, (1996) further offered this as the reason why the extractive industries are excluded from the application of IAS 4 – “*Depreciation*”, IAS 9 – “*Research and Development*”, IAS 16 – “*Property, Plant and Equipment*”, and the IAS 17 – “*Lease*”. Similarly, Mohebbi, Tarca and Woodliff, (2007) examined the treatment of pre-production expenditures among 152 companies involved in the mining sector and listed the on major stock exchanges in Australia, Canada, South Africa, the UK and the USA in 2003. As found in Mohebbi et al., (2007), the explorer firms engaged in mining, oil and gas refining are more likely to capitalise pre-operating expenditures than other manufacturing or producer firms.

Although previous studies have found indirect evidence of the link between reporting figures and industries – which seems to imply that different accounting policies or options under

different accounting standards may influence the reporting figures prepared by different industries – very few studies have explored the link between the differences in reporting figures under the IFRS and Chinese GAAP and the different categories of Chinese industries. For example, in Lin and Wang, (2001), the research tends to compare the differences of reporting figures prepared under the IFRS and Chinese GAAP based on three industries with different corporate structures and features, namely brewing, chemical fibre and petroleum companies. Indeed, the research found that a tendency of deviations exists in the financial disclosures and financial figures reported under the IFRS and Chinese GAAP among the three companies.

However, only a little information was provided to identify the direct relationship between industries and the discrepancies of reported figures under the IFRS and the Chinese GAAP. Hence, the second research question aims to identify the relationship between different categories of industries and the gaps in net profit and total equity reporting figures under the IFRS and Chinese GAAP in 2006 and 2007. It will also find the industries that have shown the most significant discrepancies between the two sets of accounting standards. In other words, the second research question will be tested from two dimensions:

**Dimension I:** Tests the significance of the relationship between the different categories of industry and the gaps in net profit and total equity under the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension II:** Identifies the industries that have shown the most differences in net profit and total equity under the IFRS and Chinese GAAP in 2006 and 2007.

## **2.5 MAJOR ITEMS CONTRIBUTED TO THE DISCREPANCIES BY INDUSTRIES**

The last research question aims to identify the major items that contributed to the differences in net profit and total equity reported under the IFRS and Chinese GAAP.

Cooke (1993) examined the differences in profit reported under the Japanese GAAP and U.S. GAAP through the application of the conservatism index developed by Gray, (1980) and the partial index developed by Gray and Weetman, (1991). Since the U.S. Securities and Exchange Commission requires all foreign companies listed in the U.S to prepare Form 20-F, which either restates or reconciles profits under the listing companies' national GAAP in according to the U.S. GAAP, the study collected financial information on the Form 20-F from 19 Japanese companies in the finance sector listed on the U.S. Stock Exchange (Cooke, 1993). As found in Cooke, (1993), earnings reported under the Japanese GAAP tend to be more conservative than those reported under the U.S. GAAP. Indeed, of the 19 sample companies, 12 recognized differences in profit reported under the two sets of accounting standards and reported a total of 17 adjusted items, while the most frequently involved items relating to the provision for deferred taxes and the foreign currency translation (Cooke, 1993).

Norton, (1995) investigated the differences in both profit and equity reported under the Australian and the U.S. GAAP based on the adjusted items listed on the Form 20-F prepared by 13 Australian companies listed on the U.S. Stock Exchange between 1985 and 1993. Contrary to previous studies showing evidence that Australian GAAP is less conservative than the U.S. GAAP, Norton, (1995) found little evidence to support that profit reported under the U.S. GAAP is more conservative than the Australian GAAP. There was evidence, however, that equity reported under the U.S. GAAP was more conservative than Australian GAAP, which is consistent with the findings in previous studies. Indeed, the study compared the Australian GAAP against the U.S. GAAP, and found eight items showing differences in the two sets of accounting standards, namely asset valuation, intangible assets, business combination, cost recognition, share compensation, taxation, cash dividend, and the preference share classification (Norton, 1995).

Rueschhoff and Strupeck, (1998) examined the reporting differences reported under the U.S. GAAP and the local GAAP of the companies listed on the U.S. Stock Exchange and further investigated the effect of the differences particularly on the net income, equity, and equity returns. Consistent with Cooke, (1993) and Norton (1995), Rueschhoff and Strupeck (1998) also examined the adjusted items listed on the Form 20-F. However, the study collected data from a greater sample population and a longer sample period, which covered 92 foreign companies from 20 developing countries listed either on the New York Stock Exchange or the American Stock Exchange from 1985 to 1994 (Rueschhoff & Strupeck, 1998). Rueschhoff and Strupeck, (1998) found substantial discrepancies existed in net income, equity and equity returns reported under the U.S. GAAP and the local GAAP of the reporting companies. They attributed their findings to the differences of accounting principles adopted in various countries. Further, similar to the findings in Norton (1995), Rueschhoff and Strupeck, (1998) found the most frequently adjusted items were income taxes, share compensation, intangible assets, effects of changing prices, fixed assets, paid-in capital and minority interests.

Gray, Nichols and Street, (2000) investigated financial data prepared in accordance with IFRS by 33 non-U.S. companies from 17 countries from 1995 to 1997. More specifically, the study examined the adjusted items listed on the Form 20-F with the purpose of ascertaining the differences between the IFRS and the U.S. GAAP (Gray et al., 2000). Gray et al., (2000) found the differences between IFRS and the U.S. GAAP had narrowed from 1995 to 1997, and no statistical significance existed in 1997. The study attributed their findings to the efforts of the International Accounting Standards Committee's Comparability Project in 1989, and further suggested the adoption of IFRS, rather than preparing reconciliation statements (Gray et al., 2000).

Previous studies on the issue in China are widely documented after the introduction of the Draft of the 1992 Chinese regulation. Kao and Yang, (1994) carried out a qualitative analysis of the differences between the Draft of 1992 Chinese regulation and the FASB Conceptual Framework. As found in Kao and Yang, (1994), the major differences between the two sets of accounting standards are found in relation to the inventory valuation and the recognition of revenue arising from the long-term construction contracts, and they attributed their findings to the ambiguous role of conservatism in Chinese accounting.



Chen et al., (1999) carried out an empirical investigation of the material differences in earnings reported under the 1993 Chinese GAAP and the IFRS, with a sample size ranging from 34 in 1994 to 50 in 1997. As pointed out by Chen et al., (1999), the differences between Chinese GAAP and the IFRS can be attributed to four main reasons: different accounting practices under the two sets of accounting standards; managerial opportunistic applications; non-accounting government regulations; and the events that occurred during the process of economic reform in China. More specifically, the study categorised inventory and temporary investment valuation, provision for bad debts, long-term investment valuation, tax-related items, revaluation of fixed assets and the amortisation of intangible assets (Chen et al., 1999). These items resulted from the different accounting practices under the two sets of accounting standards. Further, items such as the discretionary use of accruals by capitalising operating leases (under the managerial opportunistic applications categories as specified by the study); the estimated useful life and minimum residual value of various types of fixed assets as required by the Chinese Ministry of Finance; the employee benefits (under the non-accounting government regulations); and the state-controlled foreign currency (under the events during the Chinese economic reform), were the main items contributing to the differences between the Chinese GAAP and the IFRS (Chen et al., 1999).

Chen et al., (2002) compared the earnings reported under the IFRS and the 1998 Chinese GAAP with 75 companies that issue B-shares from 1997 to 1999. Although many items (ie. provision for bad debts, inventory valuation, investment valuation, revenue recognition) were revised under the 1998 Chinese GAAP and thus further aligned with the IFRS, the study found the establishment of the 1998 Chinese GAAP did not successfully reduce the discrepancies under the two sets of accounting standards (Chen et al., 2002). Chen et al., (2002) attributed their findings to the lack of adequate accounting infrastructure, earnings management and low quality of auditing in China. Further, contrary to Chen et al., (1999, 2002), Kuan and Noronha, (2007) emphasised the 2001 Chinese GAAP and found no significant differences existed in sales revenue, income before tax, net income, assets and liabilities, except for the operating income.

More detailed analysis of the items that caused the differences in net profit between the IFRS and the Chinese GAAP was found in Peng, (2005), where the study compared the IFRS with both 1998 and 2001 Chinese GAAP. Indeed, Peng, (2005) also developed a checklist based on qualitative analysis of the 1992, 1998 and 2001 Chinese GAAP, and compared the

standards against the IFRS. As found in Peng, (2005), the financial accounting measurement required under the 1992, 1998 and 2001 Chinese GAAP and the IFRS can be summarised to 77 items, and Peng, (2005) also listed the similarities and differences between the standards (Appendix 1).

Further, based on statistical analysis of the major items contributing to the differences between the Chinese GAAP and IFRS, Peng, (2005) has separated them into two categories. These are: a) differences existing between standards; and b) management's opportunistic application of standards. Peng, (2005) found that only one item, specifically the adjustment of government grant, was actually caused by the different accounting treatment applied under the IFRS and 1998 Chinese regulation. However, five items – the adjustment for recognition and amortisation of goodwill; adjustment for recognition of profit from the disposal of subsidiaries; adjustment of pre-operating expenditure; adjustment of government grants; and adjustment for debt restructuring – were caused by the different accounting treatment applied under the IFRS and 2001 Chinese regulation (Peng, 2005).

On the other hand, Peng, (2005) suggested the items that caused by management's opportunistic application of standards were not those considered to be caused by different accounting policies under the two sets of accounting standards. These items are: adjustment for provision of doubtful debts; adjustment for provision of inventories; adjustment in relation to long-term investment; and adjustment for intangible assets and fixed assets based on the 1998 Chinese regulation; and only one factor, the adjustment for provision for doubtful debts, was reported under the 2001 Chinese regulation.

Lastly, Baker and Moore, (2008) qualitatively compared the content of the 2006 ASBE, IFRS, and the U.S. GAAP, and found eight major categories between the 2006 ASBE and the IFRS (Appendix 2).

The above mentioned studies were investigated based on the Chinese accounting regulation issued before 2006, or only discussed the differences between the 2006 ASBE and the IFRS without empirical examination. In other words, the quantified affect of the latest 2006 ASBE was not examined. Further, the studies identified above did not take into account the affect of the different industry categories with different structure features. Therefore, the third research question in this study aims to identify the major items that contributed to the differences in

net profit and total equity reported under the IFRS and Chinese GAAP based on different categories of industries as identified in the second research question.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

The purpose of this chapter is to present and clarify the methodologies used in this research. There are two sections in this chapter. Section One discusses the sample collection process and the sample being collected in this research, while Section Two presents detailed discussion on the method of analysis for each of the three research questions.

#### **3.1 DATA COLLECTION & SAMPLING**

The purpose of this section is to explain how the data used in this research was chosen and collected. Since the major objective of this study is to assess the progress of accounting harmonisation in Chinese GAAP with the IFRS after the implementation of the latest 2006 ASBE, it outlines the major tasks that need to be achieved in order to meet the objectives of the research.

The first task of this sample-collection process is to identify the sample companies that will best provide the comparison of reporting figures under the IFRS and Chinese GAAP. In light of Bryman & Bell, (2007), a well-designed target population is a completed group of objects, and therefore, a well-designed target population can be used to provide information towards the objective of research.

As a result, the target population chosen in this research is the financial reports prepared by Chinese-listed companies who issue both H-shares and A-shares. This is because companies that simultaneously issue these two types of shares will prepare two sets of financial reports under Chinese GAAP and either the IFRS or HKFRS; where the A-share financial reports are prepared in accordance with the Chinese GAAP, while H-share financial reports are prepared in accordance with either the IFRS or HKFRS. Indeed, since the HKFRS is fully aligned with the IFRS in December 2004, the discrepancy between the HKFRS and IFRS is minimal (Kuan & Noronha, 2007). Hence, the comparison of the financial data in the H- and A-share reports will provide insights into the progress of harmonisation between the Chinese GAAP and IFRS.

In other words, only secondary data will be used in this research for obtaining financial statements from Chinese companies who issue both H- and A-shares. In light of Bryman & Bell, (2007), secondary data are often easier to access, less time-consuming and free from cost or can be purchased with lower cost than obtaining primary data. In contrast to subjective data, these annual reports are considered to be the objective data with the benefit of the independence from personal opinion and are less likely to be disputed (Bryman & Bell, 2007).

It should be noted that the Chinese companies who issue H-shares are listed on the Hong Kong Stock Exchange (HKSE), whereas the A-share issuers may be listed either on SHSE or the SZSE. Since listed companies are required to provide public access to their annual reports, the annual reports of Chinese companies that issue H- and A-shares can be obtained from either the Hong Kong/Shanghai/Shenzhen Stock Exchanges or electronic databases. Further, as found from the Hong Kong, Shanghai, and Shenzhen Stock Exchanges, currently there are 149 H-shares listed on the Hong Kong Stock Exchange, 854 A-shares listed on the Shanghai Stock Exchange, and 729 A-shares listed on the Shenzhen Stock Exchange. There are 56 companies who issue both H- and A- shares. Of these 56 companies, there are 49 A-shares listed on the Shanghai Stock Exchange and 7 A-shares listed on the Shenzhen Stock Exchange.

The second aspect of this sample-collection process is to identify the years of financial statements that need to be obtained from the 56 sample companies. As mentioned in Chapter One of this research, the latest ASBE was issued in 2006 and became effective from the 1 January 2007. Hence, the new 2006 ASBE will impact on the 2007 A-share financial statements. However, since the major objective of this research is to assess the progress of accounting harmonisation in Chinese GAAP with the IFRS, as the Chinese GAAP has undergone several changes from 1992, 1998 and 2001, the financial reports that need to be obtained are the 2006 and 2007 H- and A-share reports. As a result, the analysis acts as a before-and-after comparison between the 2006 and 2007 results, and it will provide more detailed information on the progress of how accounting harmonisation changed in Chinese GAAP. This is because the 2006 A-share financial results were prepared in accordance with the 2001 Chinese regulation, while the 2007 A-share financial data were prepared in accordance with the new 2006 ASBE. Therefore, Table 3 is presented to clarify the years of the A-share financial statements collected for this research.

**Table 3: The Years & Standards of the A-share Financial Statements (Prepared by author)**

	<b>2006 A-share Financial Reports</b>	<b>2007 A-share Financial Reports</b>
<b>Standard</b>	2001 ASBE	2006 ASBE

However, although there are statutory requirements for listed companies to provide public access to the financial statements, it should be noted that not all the financial statements for the 56 Chinese companies could be obtained from the abovementioned database. Of the 56 Chinese-listed companies that issue both H- and A-shares, 40 companies provided both H-share reports and A-share reports in both 2006 and 2007, while two companies only provided H-share reports for 2006 and 2007. Nevertheless, since most of the Chinese-listed companies provided reconciled statements for the differences of reporting figures under the IFRS/HKFRS and the Chinese GAAP in both 2006 and 2007, financial data for the two companies can still be obtained from the reconciled statements of the 2006 and 2007 H-share reports for these two companies.

In addition, five companies only provided the H-share reports and A-share reports in 2007, while only H-share reports were provided in 2006 with no reconciled statements. In other words, no 2006 A-share reports could be obtained from these five companies. However, in light of the new 2006 ASBE – *‘First Time Adoption of ASBE’*, entities need to provide restated statements if they have made changes in accounting policies or estimates after the adoption of the new 2006 ASBE. Therefore, reporting figures can be obtained from the five companies who did not provide 2006 A-share reports, from the 2006 reporting figures in the restated statements provided in the 2007 A-share reports. However, it should be noted that nine companies were excluded from the research due to missing A-share reports, or a lack of reconciled or restated statements. As a result, of the 56 Chinese companies who issued both H-shares and A-shares, financial data for only 47 companies were collected for the research due to the inaccessibility of financial data from the remaining nine companies.

## 3.2 METHOD OF ANALYSIS

The methods of analysis for the three research questions in this study are discussed separately as follows:

### 3.2.1 Research Question One: The Progress of Accounting Harmonisation in China

The first research question aims to investigate the progress of harmonisation in Chinese GAAP with the IFRS, and this research question will be examined from four angles. The methods of analysis for the four angles are:

#### 3.2.1.1 The Changing Pattern of Discrepancies in Net Profit & Total Equity

The first dimension aims to assess the changing pattern of differences in net profit and total equity figures reported by the 47 sample companies under the IFRS and the Chinese GAAP between 2006 and 2007. The formula used in Kuan & Noronha, (2007) to measure the differences of reporting figures between the IFRS and Chinese GAAP was developed from Chen et al., (2002) as follows:

$$\text{Gap}_{it} = X_{it}^H - X_{it}^A$$

The  $X_{it}^H$  represents “i” sample company’s “X” reporting figure in the “t” period under the H-share report, whereas  $X_{it}^A$  represents “i” sample company’s “X” reporting figure in the “t” period under the A-share report. The  $\text{Gap}_{it}$  indicates the differences of “X” reporting figure for “i” sample company under the H-share report and A-share report in the “t” period. However, for the purpose of this research, Kuan & Noronha’s, (2007) formula will be further developed as shown below:

#### Formula 1

$$X \text{ Gap}_{year}^{IFRS \& ASBE} = X_{year}^{IFRS} - X_{year}^{ASBE}$$

Where  $X_{year}^{IFRS}$  represents sample company's "X" reporting figure under the IFRS in the identified "year", while  $X_{year}^{ASBE}$  represents sample company's "X" reporting figure under the Chinese GAAP in the identified "year". Hence, subtracting the result in  $X_{year}^{ASBE}$  from the result in  $X_{year}^{IFRS}$ , shows the  $X \text{ Gap}_{year}^{IFRS \& ASBE}$  which represents the differences in the "X" reporting figure under the two sets of accounting standards in the identified "year".

Since this research only focuses on the net profit and total equity reported under the two sets of accounting standards, two pairs of the intended measuring item (either net profit or total equity at a time) will be extracted from the 2006 and 2007 financial statements under both the IFRS and the Chinese GAAP and applied to the developed formula. In addition, it should be noted that there will be three outcomes after the application of the formula. These are: IFRS reporting figure is greater than Chinese GAAP reporting figure ( $IFRS > ASBE$ ), IFRS reporting figure equals Chinese GAAP reporting figure ( $IFRS = ASBE$ ), and IFRS reporting figure is less than ASBE reporting figure ( $IFRS < ASBE$ ).

Further, as found in Bryman & Bell, (2007), the advantage of a bar chart is to clearly show the comparison of variables and indicate both absolute and relative values. Therefore, the result of calculation for net profit and total equity will be presented in two bar charts (one for net profit and one for total equity) while the number of companies falling under each outcome ( $IFRS > ASBE$ ,  $IFRS = ASBE$ , and  $IFRS < ASBE$ ) will be expressed as a percentage. Therefore, through the repeated application of the formula to the 47 sample companies' net profit and total equity reporting figures, the pattern of differences in net profit and total equity figures reported under the two sets of accounting standards can be calculated and presented in bar graphs.

### 3.2.1.2 The Specific Changes in Net Profit and Total Equity

While the previous angle in 3.2.1.1 aims to examine the changing pattern of discrepancies in net profit and total equity reported under IFRS reports and Chinese GAAP. The second angle aims to identify the specific changes in net profit and total equity differences reported between the IFRS and Chinese GAAP in 2006 and 2007. In other words, it aims to identify the changes in net profit and total equity gaps from 2006 to 2007 and to find out whether the



gaps in net profit and total equity figures under the two sets of accounting standards have decreased, increased, or remained consistent over the two sample years.

The results calculated from the Formula 1 developed in the previous angle have also been adopted for the current analysis, with further developments. However, it should be noted that the results obtained from the Formula 1 provide positive and negative figures of the differences in reporting figures under the two sets of accounting standards. As a result, this may reduce the accuracy of the new result if simply applying the old results calculated from Formula 1 to new formulas, as the negatives and positives cancel each other out. Therefore, before applying the results gathered from Formula 1, another formula has been developed to indicate amendments made to change the negative figures to positive figures in order to obtain absolute values of the differences:

**Formula 2:**

$$|X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}}| = X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}$$

Hence, the results from Formula 2 can be further used and developed to investigate the changes in net profit and total equity gaps from 2006 to 2007:

**Formula 3:**

$$\Delta X \text{ Gap}_{2006 \& 2007}^{\text{IFRS \& ASBE}} = |X \text{ Gap}_{2007}^{\text{IFRS \& ASBE}}| - |X \text{ Gap}_{2006}^{\text{IFRS \& ASBE}}|$$

The  $|X \text{ Gap}_{2007}^{\text{IFRS \& ASBE}}|$  represents the differences in sample company's "X" reporting figure

under the IFRS and Chinese GAAP in 2007, while  $|X \text{ Gap}_{2006}^{\text{IFRS \& ASBE}}|$  represents the differences

in sample company's "X" reporting figure under the IFRS and Chinese GAAP in 2006. Hence,

subtracting the result in  $|X \text{ Gap}_{2006}^{\text{IFRS \& ASBE}}|$  from the result in  $|X \text{ Gap}_{2007}^{\text{IFRS \& ASBE}}|$ , indicates the

changes in the differences of the sample company's "X" reporting figure under the two sets

of accounting standards from 2006 to 2007, represented by  $\Delta X$  Gap . Similar to  
2006 & 2007

testing the changing pattern of discrepancies in net profit and total equity in 3.2.1.1, this formula will be re-applied to the 47 sample companies in order to find the pattern of changes in gaps over the two sample periods for all the 47 sample companies.

While the results calculated from Formula 3 show positive figures, this indicates that the gaps between the IFRS and Chinese GAAP reporting figures have increased from 2006 to 2007. Because the only situation where the results could show positive figure is when the reporting gaps in 2007 are greater than the gaps in 2006. However, care needs to be taken while analysing the results showing negative figures, as this indicates two possible situations. Either the gaps of the reporting figures under the two sets of accounting standards have decreased or, there is no gap in the reporting figures in 2007, while differences existed in 2006 reporting figures under the two sets of accounting standards. What is more, when the result show a value zero, this also indicates two possible situations. Situation one is that there was no gap in the reporting figures under the two sets of accounting standards for both 2006 and 2007. In contrast, situation two is that the amount of gap in 2006 exactly equals the amount of gap in 2007; however, it is a rare situation.

The following tables are used to illustrate the discussion:

#### Example 1

Company	2006 Net Profit		2007 Net Profit	
	IFRS RMB (million)	ASBE RMB (million)	IFRS RMB (million)	ASBE RMB (million)
A	100	120	110	150
B	90	60	100	90
C	120	150	130	160
D	80	90	100	100

The above table shows the amount of net profit reported under the IFRS and Chinese GAAP by four companies in 2006 and 2007. Through the application of Formula 2, the example results are shown as the following:

Company	Net Profit Gap - In Absolute Value	
	2006 RMB (million)	2007 RMB (million)
A	20	40
B	30	10
C	30	30
D	10	0

It further applies the Formula 3 and the findings are presented as below:

<b>Company</b>	<b>Results</b>	<b>Indicated</b>
A	20	Gap Increased
B	-20	Gap Decreased
C	0	Remain Constant
D	0	New No Gap

As a result, through the application of Formula 3, the pattern of changes in the reported figure gaps can indicate four possible outcomes: the gap has decreased, the gap has increased, further companies show no gap between the two sets of accounting standards in 2007, and companies show no gap in both 2006 and 2007. Again, the results will be presented in a bar graph while the numbers of companies are expressed as percentages.

### **3.2.1.3 The Significance of Differences in Net Profit and Total Equity**

Although the two previous angles in 3.2.1.1 and 3.2.1.2 aim to assess the pattern of changes in the net profit and total equity gap between the IFRS and Chinese GAAP, they do not, however, aim to assess whether or not the net profit and total equity reporting figures under the two sets of accounting standards are significantly different to each other. Therefore, the current analysis aims to prescribe the method to test the significance of differences in the amount of net profit and total equity reporting figures under the two sets of accounting standards between 2006 and 2007.

It should be noted that the method of analysis in the current assessment will be somewhat different to the methods used in testing the changing pattern of discrepancies and establishing the specific changes in net profit and total equity. Generally, the current assessment applies the results obtained from the previous assessment, using a different type of test. As found in Bryman & Bell, (2007), the t-test can be used to investigate whether a variable or a set of variables are from the same population, and to analyse whether there is a significant difference between two sample means, and to test whether the difference occurred by chance. Paired sample t-test is recommended to test within-subject data with two or more sets of data collected from the same group under different conditions (Bryman & Bell, 2007). Therefore, the paired sample t-test will be used to test whether or not the net profit and total equity figures reported under the Chinese GAAP are significantly different to the figures reported under the IFRS.

There will be six pairs for the test. Pair 1 tests the level of difference between the amounts of net profit reported under the IFRS and Chinese GAAP in 2007, whereas Pair 2 tests the net profit results reported in 2006. Pair 3 also tests the significance level of net profit result, but to compare the net profit gap between 2006 and 2007. Similarly, Pair 4 tests the significance level of differences between the amount of total equity reported under the IFRS and Chinese GAAP in 2007, while Pair 5 tests the total equity results in 2006 between the two standards. Pair 6 also examines the significance level of difference in the gap of total equity reported in 2006 and 2007.

It should be noted that Pairs 3 and 6 will be different to Pair 1, 2, 4 and 5 in the nature of the variables used, where Pairs 1, 2, 4 and 5 use the amount of reporting figures in net profit and total equity extracted from the financial statements of the 47 sample companies; whereas Pairs 3 and 6 used the results obtained through the application of Formula 1

$$(X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}} = X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}) \text{ and,}$$

$$\text{Formula 2 } (|X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}}| = |X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}|)$$

which was previously used in testing the changing pattern of discrepancies and assessing the specific changes in net profit and total equity. In other words, Pairs 3 and 6 compare the differences in reporting figures (Pair 3 for net profit, Pair 6 for total equity) under the two sets of accounting standards in 2006 and 2007, with the differences between reporting figures expressed in absolute values. Absolute values are needed, as this does not take into account of negative figures calculated when IFRS reporting figures are smaller than the Chinese GAAP reporting figures, which in turn, enhances the accuracy of the test.

Therefore, it can be demonstrated as follows:

## Example 2

Company A's results are:

	2006		2007	
	IFRS RMB (million)	ASBE RMB (million)	IFRS RMB (million)	ASBE RMB (million)
<b>Net Profit</b>	100 (a)	120 (b)	110 (c)	150 (d)
<b>Total Equity</b>	200 (e)	240 (f)	220 (g)	300 (h)

Through the application of Formula 1 and 2:

	Amount of Gap	
	2006	2007
<b>Net Profit RMB (million)</b>	20 (i)	40 (j)
<b>Total Equity RMB (million)</b>	40 (k)	80 (l)

Hence, the six pairs will be comparing:

	Comparing	
<b>Pair 1</b>	100 (a)	120 (b)
<b>Pair 2</b>	110 (c)	150 (d)
<b>Pair 3</b>	20 (i)	40 (j)
<b>Pair 4</b>	200 (e)	240 (f)
<b>Pair 5</b>	220 (g)	300 (h)
<b>Pair 6</b>	40 (k)	80 (l)

In addition, the most important issue for interpretation is to find the pairs with less than five percent two-tailed significance. As found in Bryman & Bell, (2007), two-tailed significance indicates the distribution of the two tails of the tested statistics, and finds the likelihood that the tested statistical differences occurred by chance. In other words, for the pairs with less than five percent two-tailed significance, it indicates that true differences exist between two variables and these differences did not occur by chance. Therefore, for the interpretation of the six pairs' test results, the pairs from the total of six pairs with less than five percent two-tailed significance indicate that the reporting figures in net profit or total equity under the IFRS and Chinese GAAP are significantly different to each other, and also possibly indicate that further improvements are required for harmonising Chinese GAAP with the IFRS.

### 3.2.1.4 The Success of Accounting Harmonisation

The last assessment aims to specifically examine the success of Chinese GAAP on the accounting harmonisation with the IFRS through the application of the conservatism index initially established by Gray, (1980), further developed by Gray & Weetman, (1991) and used in Peng, (2005). The conservatism index was initially used as criteria to compare and quantify differences in the impact of accounting systems and practices, particularly on profits in a global context (Gray, 1980). It was further developed into two forms, the overall conservatism index and the partial conservatism index (Gray & Weetman, 1991). Similar to the principle found in Gray, (1980), Gray & Weetman (1991) used the overall conservatism index as a comparative criteria for the relationship between reported profits among different accounting standards in countries, while partial conservatism index measures the effect of the various items of adjustment in the reconciled statements. However, for the nature and purpose of the current research, only the overall conservatism index adopted in Gray & Weetman, (1991) will be used and further developed to the following:

#### Formula 4

$$\text{Overall Conservatism Index} = 1 - \left( \frac{X_{\text{Year}}^{\text{IFRS}} - X_{\text{Year}}^{\text{ASBE}}}{X_{\text{Year}}^{\text{IFRS}}} \right)$$

Again, the  $X_{\text{year}}^{\text{IFRS}}$  represents sample company's "X" reporting figure under the IFRS in the identified "year", while  $X_{\text{year}}^{\text{ASBE}}$  represents sample company's "X" reporting figure under the Chinese GAAP in the identified "year". To clarify the formula, an example of its application is listed below:

#### Example 3

Company A's total equity reported under IFRS:	RMB 31,957 million
Company A's total equity reported under Chinese GAAP:	RMB 31,288 million
Overall Conservatism Index = $1 - (31,957 - 31,288) / 31,957 =$	0.98

Further, similar to the previous dimensions, this formula will be re-applied to the 47 sample companies' 2006 and 2007 net profits and total equity reported under the IFRS and Chinese GAAP. In this way, the overall conservatism index in 2006 and 2007 for each sample company can be obtained. The overall conservatism index for the 47 sample companies will be added together by year and thus the averaged overall conservatism index for both 2006 and 2007 results can be obtained.

As found in Gray & Weetman, (1991) and Peng, (2005), there are three possible outcomes through the application of the formula. These are: overall conservatism index equal to one, less than one, or greater than one. The overall conservatism index equal to one indicates the full comparability of the tested reporting figures between the IFRS and Chinese GAAP, whereas overall conservatism greater than one represents the lower comparability of the reporting figures under the two sets of accounting standards (Gray & Weetman, 1991; Peng, 2005). Indeed, overall conservatism index less than one indicates the reporting figures under the IFRS and Chinese GAAP are not comparable (Gray & Weetman, 1991; Peng, 2005). Hence, based on the averaged 2006 and 2007 overall conservatism index, the success of Chinese GAAP on the accounting harmonisation with the IFRS is likely to be ascertained.

### **3.2.2 Research Question Two: The Relationship between Industry & Discrepancies**

The second research question aims to find the relationship between different categories of industries and the discrepancies in net profit and total equity reporting figures under the IFRS and Chinese GAAP. As mentioned in the earlier section of this chapter, Research Question Two will be examined from two angles. The methods of analysis for each are discussed below:

#### **3.2.2.1 The Significance of Correlation between Industry & Amount of Gap**

This assessment aims to investigate whether or not the amount of gap varies among different categories of industries.

It should be noted that the methods used for this analysis are very similar to the methods used to test the significance of differences in net profit and total equity reported under the IFRS and the Chinese GAAP in Research Question One. There, the previous assessment aimed to find the significance of differences in the amount of net profit and total equity reporting

figures under the two sets of accounting standards between 2006 and 2007; while this analysis uses the same method but with different perspectives of the tests. In other words, while the current analysis focuses on the relationship between the industries and the discrepancies, the 47 sample companies are separated into 20 different categories of industry (ie. bank or insurance, etc. and the detailed lists of industries will be discussed later in 3.2.2.2) and further compare the categorised industries with the reported discrepancies under the two sets of accounting standards in 2006 and 2007. However, since current analysis emphasises the effects of the industry on the discrepancies reported each year – due to the nature of the current analysis – the 20 different categories of industries will be presented as a whole. Hence, make up only one variable, and compared with the discrepancies in net profit and total equity under the IFRS and Chinese GAAP in 2006 and 2007 by paired sample t-tests.

As a result, six pairs will be tested. Pair 1 tests the significance level of the relationship between the industry and the amount of net profit gap in 2007. The significance level of the relationship between industry and 2006 net profit gap is tested in Pair 2. Similar to the comparison between the industries and net profit gap, Pairs 3 and 4 focus on the significance of the relationship between industry and the total equity gap. Pair 3 compares industry with the total equity gap in 2007, whereas Pair 4 compares industry with the total equity gap in 2006. With regards to the net profit and total equity gap variable in Pairs 1 to 4, the net profit and total equity gap results are obtained through the application of Formula 1

$$(X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}} = X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}) \text{ and,}$$

$$\text{Formula 2 } (|X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}}| = |X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}|)$$

In addition, the relationship between industries and the changes in net profit gap and total equity gap will also be compared in Pairs 5 and 6, where Pair 5 compares the changes in net profit gap between 2006 and 2007, whereas the changes in total equity gap between 2006 and 2007 are shown in Pair 6. With regards to the changes in the net profit and total equity gap variable in Pairs 5 and 6, the changes in net profit and total equity gap results are obtained through the application of Formula 3



$$\Delta X \text{ Gap}_{2006 \& 2007}^{IFRS \& ASBE} = |X \text{ Gap}_{2007}^{IFRS \& ASBE}| - |X \text{ Gap}_{2006}^{IFRS \& ASBE}|$$

However, it should be noted that the results obtained from Formula 3 provide both positive and negative figures of the changes in net profit and total equity gap under the two sets of accounting standards between 2006 and 2007. As a result, this may reduce the accuracy of the test if simply applying the results calculated from Formula 3 into the current analysis, as the negatives and positives cancel each other out. Therefore, before applying of results gathered from Formula 3, another formula is developed to indicate amendments were made to change the negative figures to positive figures in order to obtain absolute values of the changes in net profit and total equity gaps:

#### Formula 5

$$|\Delta X \text{ Gap}_{2006 \& 2007}^{IFRS \& ASBE}| = |X \text{ Gap}_{2007}^{IFRS \& ASBE}| - |X \text{ Gap}_{2006}^{IFRS \& ASBE}|$$

The results from Formula 5 can be used to investigate the significance of the relationship between industry and the changes in net profit and total equity gap between 2006 and 2007 in Pairs 5 and 6. Indeed, while the changes in net profit and total equity gap between 2006 and 2007 are expressed in absolute values, this does not take into account of the negative figures calculated when the gaps in 2007 are smaller than the gaps in 2006.

The following tables are used to illustrate the discussion:

#### Example 4

Assuming there are two companies:

Company A's (category of industry – bank) results are:

	2006		2007	
	IFRS RMB (million)	ASBE RMB (million)	IFRS RMB (million)	ASBE RMB (million)
<b>Net Profit</b>	100 (a)	120 (b)	110 (c)	150 (d)
<b>Total Equity</b>	200 (e)	240 (f)	290 (g)	300 (h)

Company B's (category of industry – manufacture) results are:

	2006		2007	
	IFRS RMB (million)	ASBE RMB (million)	IFRS RMB (million)	ASBE RMB (million)
<b>Net Profit</b>	200 (i)	240 (j)	220 (k)	300 (l)
<b>Total Equity</b>	400 (m)	480 (n)	440 (o)	500 (p)

Through the application of Formula 1 and 2:

	Amount of Gap – in Absolute Value			
	2006		2007	
	Company A	Company B	Company A	Company B
<b>Net Profit RMB (million)</b>	20 (q)	40 (r)	40 (s)	80 (t)
<b>Total Equity RMB (million)</b>	40 (u)	80 (v)	10 (w)	60 (x)

However, statistical test examines the mean of variables. Therefore, the averaged amount of gaps in net profit and total equity between the two companies are:

	Averaged Amount of Gap	
	2006	2007
<b>Net Profit RMB (million)</b>	$(20\text{ q} + 40\text{ r}) / 2 = \mathbf{30\text{ (A)}}$	$(40\text{ s} + 80\text{ t}) / 2 = \mathbf{60\text{ (B)}}$
<b>Total Equity RMB (million)</b>	$(40\text{ u} + 80\text{ v}) / 2 = \mathbf{60\text{ (C)}}$	$(10\text{ w} + 60\text{ x}) / 2 = \mathbf{35\text{ (D)}}$

Through the application of Formula 3 and 5:

	Changes in Gap between 2006 & 2007 (In Absolute Value)
<b>Net Profit RMB (million)</b>	30 (E)
<b>Total Equity RMB (million)</b>	25 (F)

Hence, the six pairs will be comparing:

	<b>Comparing</b>	
<b>Pair 1</b>	Industry	60 (B)
<b>Pair 2</b>	Industry	30 (A)
<b>Pair 3</b>	Industry	35 (D)
<b>Pair 4</b>	Industry	60 (C)
<b>Pair 5</b>	Industry	30 (E)
<b>Pair 6</b>	Industry	25 (F)

In addition, similar to the discussion on the interpretation of paired sample t-tests results, the most important issue for the current analysis is to find the pairs with less than five percent two-tailed significance, as those pairs indicate that there is a relationship between industry and the discrepancies.

### **3.2.2.2 The Industries Contributed the Most Significant Discrepancies**

The previous assessment aims to examine the significance of the relationship between the industry and the discrepancies of net profit and total equity under the IFRS and Chinese GAAP. This analysis focuses on identifying the industries that show the most significance differences in net profit and total equity reported under the two sets of accounting standards between 2006 and 2007.

As mentioned in the previous assessment, 20 different categories of industries were found from the 47 sample companies, and the research compared the identified industries as a whole against the discrepancies shown in 2006 and 2007 financial reports.

However, unlike the method used in the previous assessment, the current test separated the industries into categories in order to find the industries with the most significant differences in net profit and total equity under the two sets of accounting standards. The 20 categories of industries identified from the 47 sample companies are: 1) service provider, 2) electrical-appliance manufacturer, 3) machinery and tool manufacturer, 4) glass manufacturer, 5) steel, metal, aluminium and copper manufacturer, 6) airline, 7) bank, 8) coal mining, 9) power and water, 10) insurance, 11) petroleum, oil and gas, 12) toll roads, 13) railways, 14) shipping,

15) pharmaceutical, 16) cement, 17) brewing, 18) shipyard, 19) property leasing and development, 20) chemical fibre.

In addition, it should be noted that the analysis in the current test also applies Formula 4

$$(\text{Overall Conservatism Index} = 1 - (X_{\text{IFRS}} - X_{\text{ASBE}}) / X_{\text{IFRS}})$$

adopted for examining the success of the Chinese GAAP on the accounting harmonisation with the IFRS in the Dimension IV of the Section I of this chapter. Hence, the overall conservatism index of net profit and total equity for each of the 47 sample companies' 2006 and 2007 results can be obtained using the calculation. However, unlike the previous analysis, which takes the averaged overall conservatism index for net profit and total equity by year, the analysis in this assessment calculates the averaged overall conservatism index by the 20 categories of industries. Hence, the averaged overall conservatism index for each industry can be obtained and compared.

The interpretation of test results will use the same method used to test the success of accounting harmonisation in Research Question One. Again, there are also three possible outcomes through the application of the formula. Some industry categories may have shown an overall conservatism index equal to one, which indicates the full comparability of the tested reporting figures between the IFRS and Chinese GAAP reported by that particular category of industry. Some industry categories may have an overall conservatism index greater than one, which indicates the lower comparability of their reporting figures. There may also be some categories with an overall conservatism index less than one, which indicates that their reporting figures under the two sets of accounting standards are not comparable. Therefore, based on the comparison of the averaged overall conservatism index obtained from each industry, the industries that show the most significance differences in net profit and total equity reported under the IFRS and the Chinese GAAP can be identified.

### **3.2.3 Research Question Three: The Major Items Contributed to the Discrepancies by Industries**

The last research question aims to identify the major items that contributed to the differences in net profit and total equity figures reported under the IFRS and the Chinese GAAP in 2006

and 2007. It should be noted that the method of analysis for the third research question will be different from the methods used for other research questions. While Research Question One and Two were based on the statistical analysis of tests, the method used for the third research question is primarily based on the qualitative analysis of the content of the financial statements of the chosen industries.

It should be noted that there is a close link between the last dimension of Research Question Two and this research question, because the industries chosen for the content analysis are the industries that have shown the most significance differences in net profit and total equity reported under the two sets of accounting standards as identified in the last dimension of Research Question Two. The major reason for choosing this sample population of analysis is that the industries identified in the former dimension are those that have either shown the lowest comparability in their reporting figures (on net profit and total equity), or the industries have produced the largest amount of discrepancies under the two sets of accounting standards primary based on their 2007 financial results. This it implies the possibility and likelihood that certain items have caused a greater number of discrepancies in the identified industries than for other industries.

As a result, content analysis will be carried out on the identified industries' 2006 and 2007 financial statements. Since the majority of the 47 sample companies have prepared the reconciled statements for the items that show differences in net profit and total equity figures under the IFRS and Chinese GAAP, the items that caused the discrepancies under the two sets of accounting standards in the companies that fall into the identified industries can also be obtained. Indeed, three sets of figures in the net profit and total equity need to be analysed.

Firstly, it should focuses on the items that have been adjusted in the 2007 reconciled statements, as these items indicate the differences between the IFRS and 2006 ASBE. Secondly, analysis is need on the adjusted items in the 2006 reconciled statements, as that indicates the possibility of the different accounting standards between the IFRS and the old Chinese GAAP. Lastly, since an entity needs to prepare the restated amount of reporting figures if it has changed its measurement or accounting estimates for certain items (ie. business combination, investment properties, or debt restructuring, etc.) listed under the new ASBE 38 – *'First Time Adoption of ASBE'*, analysis is also needed on the restated 2006 adjusted items shown on the 2007 reconciled statement for the differences under the IFRS

and the Chinese GAAP. In a situation where the original amount of the 2006 adjusted item is different to the amount of the 2006 restated adjusted item shown on the 2007 reconciled statements, this indicates the possibility that there are changes of accounting standards under the new ASBE in relation to that particular item.

However, it should be noted that reconciled statements include the adjustment for each individual item, possibly with some negative and positive adjustments. Therefore, these may cancel each other out, and reduce the gap:

#### Example 5

Company A	Net Profit (RMB '000)			
	H-Share	A-Share	Adj.	Gap
	4,218,274	4,206,005		12,269
Reversal of provision for safe production costs under IFRS (1)			-16,359	
Deferred tax (2).			4,090	
<b>Adjusted amount</b>			<b>-12,269</b>	

## **CHAPTER FOUR**

### **PRESENTATION & DISCUSSION OF RESEARCH FINDINGS**

The purpose of Chapter Four is to present and discuss the results of this research. The chapter includes three sections: Section One presents the findings of the first research question, which aims to assess the progress of accounting harmonisation in China. Section Two presents the findings of the second research question, which focuses on whether or not the gap between the IFRS and Chinese GAAP varies among different category of industries, and further identifies the industries with the most significant discrepancies between the IFRS and Chinese GAAP. The last section presents the findings of the third research question. This aims to identify the major items contributing to the differences based on a detailed analysis of the identified industries.

#### **4.1 RESEARCH QUESTION ONE: THE PROGRESS OF ACCOUNTING HARMONISATION IN CHINA**

The first research question aims to assess the progress of harmonisation in Chinese GAAP with IFRS. As mentioned in Chapter Three (Research Methodology), this question will be investigated from four angles. Firstly, it tests the changing pattern of discrepancies in net profit total equity figures reported under the IFRS and Chinese GAAP between 2006 and 2007. It also investigates the tendency of overstatement/understatement of reporting figures under the Chinese GAAP in 2006 and 2007.

Secondly, the research aims to identify the specific changes in net profit and total equity gaps between the two sets of accounting standards in 2006 and 2007. In other words, it examines whether or not the gaps in net profit and total equity reported in accordance to the two sets of standards reduced, increased or remained consistent over the two sample periods.

Thirdly, the research examines the significance of the degree of change in both the profit gap and the equity gap between 2006 and 2007. The last test for Research Question One targets, more specifically, the success of accounting harmonisation by comparing the mean overall index for net profit and total equity between 2006 and 2007.

In brief, although the findings suggest a frequency of higher reporting figures under the IFRS than those were reported under the Chinese GAAP, evidence shows the improved progress of Chinese accounting harmonisation with the IFRS, with the efforts made in the 2006 ASBE.

#### 4.1.1 The Changing Pattern of Discrepancies in Net Profit & Total Equity

The current analysis is to examine the changing pattern of differences in both net profit and total equity reported under IFRS and Chinese GAAP between 2006 and 2007. As mentioned in Chapter Three (Research Methodology), the 2006 and 2007 financial reports provide a before-and-after comparison between the old Chinese GAAP and the new Chinese GAAP, and further allow us to examine the reporting figures under the Chinese GAAP against the IFRS. The findings of the net profit and total equity will be separately presented in Figure 1 and Figure 2. Figure 1 relates to findings on net profit, while the research result of total equity is presented in Figure 2. Both figures show the findings expressed by the percentage of companies with a total of 47 sample companies. Through the application of Formula 1,

$$X_{\text{Gap}}^{\text{IFRS \& ASBE}} = X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}$$

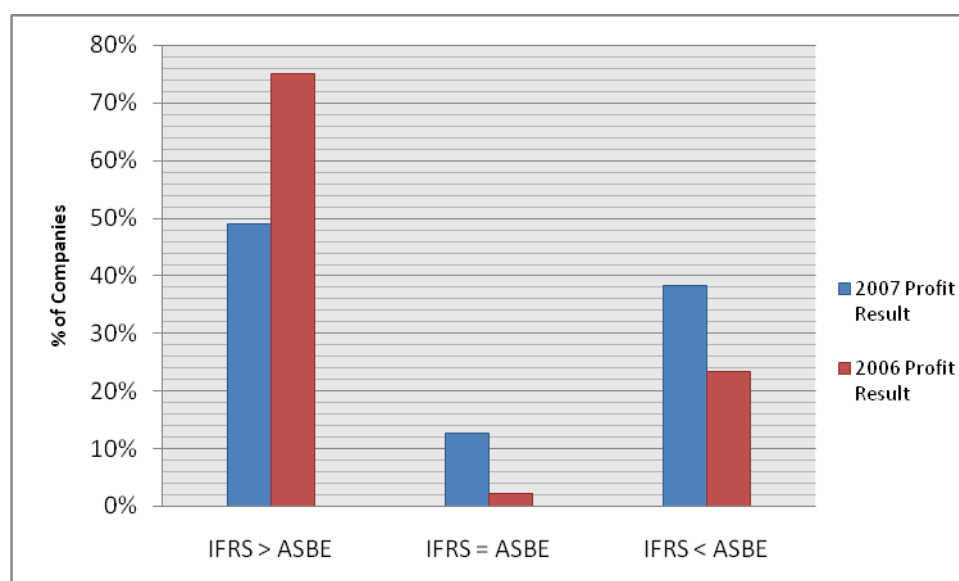
as discussed in the Research Methodology, three outcomes will be presented namely: IFRS > ASBE, IFRS = ASBE, and IFRS < ASBE. The outcome IFRS > ASBE represents a situation where the reporting figure under the IFRS is higher than the amount reported in Chinese GAAP, whereas IFRS < ASBE means the amount reported under IFRS is lower than that reported in Chinese GAAP, and IFRS = ASBE represents no difference in the amount reported under both IFRS and Chinese GAAP.

As found in Figure 1, the number of companies reporting a higher net profit under IFRS than Chinese GAAP dropped from 75% (35/47) to 49% (23/47) between 2006 and 2007; whereas, the number of companies reporting a lower net profit under IFRS than Chinese GAAP increased from 23% (11/47) in 2006 to 38% (23/47) in 2007. The summary of findings in Figure 1 can be found in Table 4.

In other words, there were fewer companies reporting a higher net profit under IFRS than Chinese GAAP in 2007 compared to 2006, while more companies reported a lower net profit under IFRS in 2007 than in 2006. However, the result still shows that the net profit reported under IFRS is frequently higher than the amount under Chinese GAAP.



**Figure 1: Comparison of IFRS Profit Result & Chinese GAAP Profit Result between 2006 & 2007 (Prepared by author)**



**Table 4: Summary of Findings in Figure 1 – Profit Results (Prepared by author)**

Year	IFRS > ASBE		IFRS = ASBE		IFRS < ASBE	
	Percentage	Number	Percentage	Number	Percentage	Number
2007	49%	23	13%	6	38%	18
2006	75%	35	2%	1	23%	11

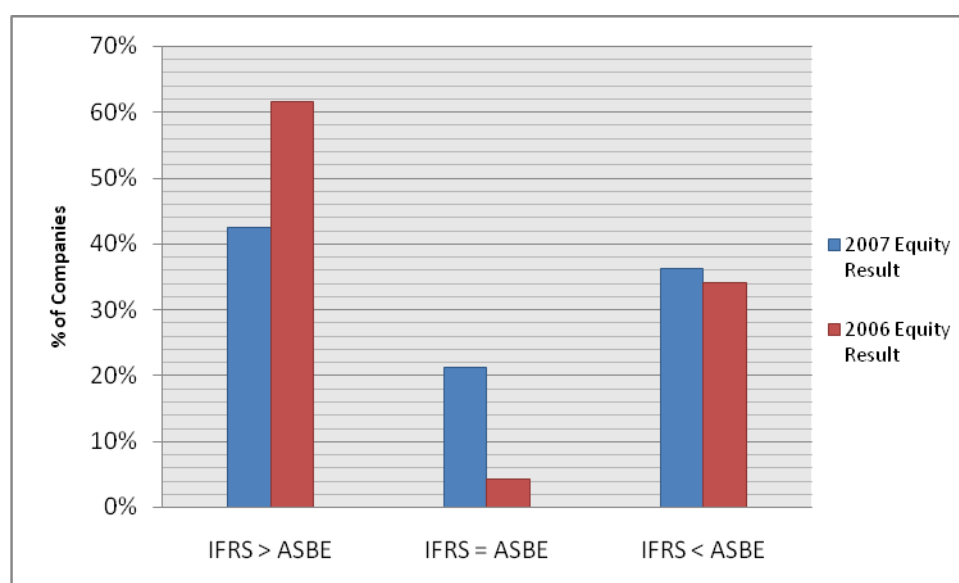
In addition to the findings discussed above, if the number of companies that produced a greater net profit under IFRS was added to the number of companies that produced lower net profit under IFRS, this shows the total number of companies with a gap in net profit in the two sample years. When the numbers are added together, it shows the total number of companies that produced a net profit gap dropped from 98% (46/47) in 2006 to 87% (41/47) in 2007. This is consistent with the findings shown in Figure 1, where the total number of companies reporting the same net profit under the IFRS and the Chinese GAAP increased from 2% (1/4) in 2006 to 13% (6/47) in 2007.

The same test that assessed the differences in net profit was also carried out to examine the changes in the equity gap between 2006 and 2007 as shown in Figure 2. As found in Figure 2, the pattern of change in the total equity gap between 2006 and 2007 was very similar to that of the net profit gap, but with greater improvement in reducing the gaps. The total number of companies that reported the same amount of total equity between the IFRS and the Chinese GAAP increased from 4% (2/4) in 2006 to 21% (10/47) in 2007. In other words, the total

number of companies that produced variances in total equity between the IFRS and the Chinese GAAP reduced from 96% (45/47) in 2006 to 7 % (37/47) in 2007. A summary of findings of Figure 2 can be found in Table 5.

However, the amount of total equity reported under international accounting tends to be higher than that reported under Chinese GAAP. In the latter, the number of companies reporting a higher equity under IFRS than Chinese GAAP dropped from 62% (29/47) to 43% (20/47) between 2006 and 2007, whereas the number of companies reporting a lower equity under IFRS versus Chinese GAAP increased slightly from 34% (16/47) in 2006 to 36% (17/47) in 2007. In other words, slightly fewer companies reported higher equity under IFRS than under Chinese GAAP in 2007 compared with 2006, while more companies reported lower equity under IFRS in 2007 than in 2006.

**Figure 2: Comparison of IFRS Equity Result & Chinese GAAP Equity Result between 2006 & 2007 (Prepared by author)**



**Table 5: Summary of Findings in Figure 2 – Total Equity Results (Prepared by author)**

Year	IFRS > ASBE		IFRS = ASBE		IFRS < ASBE	
	Percentage	Number	Percentage	Number	Percentage	Number
2007	43%	20	21%	10	36%	17
2006	62%	29	4%	2	34%	16

### 4.1.2 The Specific Changes in Net Profit & Total Equity

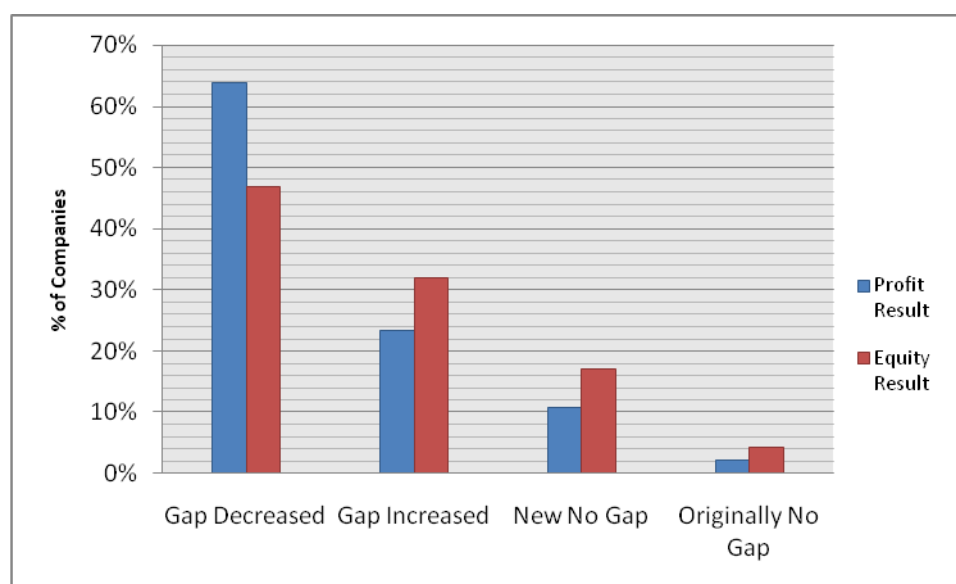
While the previous assessment examined the changing pattern of discrepancies in both net profit and total equity under IFRS reports and Chinese GAAP for the sample period, this analysis investigates the specific changes in net profit and total equity gaps between 2006 and 2007. Whether the gaps in net profit and total equity increased, decreased or remained consistent between the sample years will be examined. The findings on the specific changes in the net profit and total equity gaps will be presented in Figure 3, and expressed by the percentage of companies, with a total of 47 sample companies. Through the application of Formula 1,

$$|X \text{ Gap}_{\text{year}}^{\text{IFRS \& ASBE}}| = X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}} \text{ and,}$$

$$\text{Formula 3 } \Delta X \text{ Gap}_{2006 \& 2007}^{\text{IFRS \& ASBE}} = |X \text{ Gap}_{2007}^{\text{IFRS \& ASBE}}| - |X \text{ Gap}_{2006}^{\text{IFRS \& ASBE}}|$$

as discussed in Chapter Three (Research Methodology), there are four outcomes: Gap Decreased, Gap Increased, New No Gap and Originally No Gap for both changes in net profit and total equity gaps. The Gap Decreased section represents the percentage of companies whose reporting difference between IFRS and Chinese GAAP reduced from 2006 to 2007. The Gap Increased section represents the opposite result. The New No Gap section shows the percentage of companies with a difference in reporting figures between the IFRS and the Chinese GAAP in 2006, but where the difference was reduced to zero in 2007. The Originally No Gap section shows the percentage of companies that had no difference in reporting figures between the IFRS and the Chinese GAAP in both of the sample years. The results for both changes in net profit and total equity gap are presented on the same graph, therefore, the results for changes in net profit and total equity gap will be differentiated by two colours – the changes in net profit gap between 2006 and 2007 are presented in the blue columns, while the red columns show the result of changes in equity gap over the two sample periods. A summary of findings of Figure 3 can be found in Table 6.

**Figure 3: Comparison of Specific Changes in Profit & Equity between 2006 & 2007**  
(Prepared by author)



**Table 6: Summary of Findings in Figure 3 (Prepared by author)**

	Gap Decreased	Gap Increased	New No Gap	Originally No Gap
Profit Result	64%	23%	11%	2%
	30	11	5	1
Equity Result	47%	32%	17%	4%
	22	15	8	2

At first glance, Figure 3 shows that the changes in total equity gap under the IFRS and the Chinese GAAP between 2006 and 2007 were more evenly spread among the four classified outcomes (Gap Decreased, Gap Increased, New No Gap and Originally No Gap) than the changes in the net profit gap. This is possibly due to the fact that the change in the net profit gap is more significant than the change in the total equity gap as reported under the IFRS and the Chinese GAAP. More specifically, 64% (30/47) of companies showed a reduced net profit gap between the IFRS and the Chinese GAAP from 2006 and 2007 than the changes in the total equity gap (only 40% of companies showed a reduced equity gap between the IFRS and the Chinese GAAP from 2006 to 2007). Indeed, the percentage of companies with an increased gap in reporting figures under the IFRS and the Chinese GAAP between 2006 and 2007 was also higher in the gap of total equity figures than the gap in net profit, where 32% of companies (15/47) showed an increased gap in total equity, while only 23% of companies (11/47) showed the increased gap in net profit reported under the IFRS and the Chinese GAAP.

However, it seems that there are more companies showing no difference in the reported total equity under the IFRS and the Chinese GAAP than those showing no difference in the reported net profit between 2006 and 2007. More specifically, Figure 3 shows that 4% (2/47 sample companies) showed no difference in reported total equity between the IFRS and the Chinese GAAP in both 2006 and 2007, while only 2% (1/47 sample companies) showed no difference in net profit reported under the IFRS and the Chinese GAAP in both 2006 and 2007. However, the difference in the percentage of companies with no gap in net profit and total equity under the IFRS and the Chinese GAAP in both 2006 and 2007 was minor (only one company).

As mentioned in previous sections of this research, the latest 2006 Chinese GAAP affected the 2007 annual reports prepared by A-share companies. Another important issue that need to be looked at is the percentage of companies that originally showed a gap in net profit and total equity figures in 2006, but for whom the gap was reduced to zero in 2007. This possibly indicates the impact of the new 2006 ASBE. As found in Figure 3, it shows that the rise in the percentage of companies with no total equity gap under the IFRS and the Chinese GAAP is higher than the percentage increase of companies with no net profit gap. There is a 17% increase (8/47) for total equity, and only an 11% increase (5/47) for net profit. Nevertheless, only three more companies showed no gap in total equity than for the net profit.

With regards to the results shown in Figure 3, it seems that the effect of the new 2006 ASBE is stronger in terms of the change in net profit gap compared to the change in the total equity gap. However, Figure 3 also shows that more companies produced no difference in the amount of total equity in 2007 than those in the net profit. As a result, it is difficult to simply draw conclusions about the success of the new 2006 Chinese GAAP in the accounting harmonisation with the IFRS, and further analysis is required.

#### **4.1.3 The Significance of Differences in Net Profit & Total Equity**

The current analysis aims to examine the significance of changes in both the net profit gap and total equity gap between 2006 and 2007. As discussed in more detail in Chapter Three (Research Methodology), a statistical analysis by paired sample t-test was used to test the significance of changes in the gaps of net profit and total equity over the sample years, based on 47 sample companies.

Again, as mentioned in Chapter Three, six pairs were tested. Pair 1 tested the significance level of the difference between the amount of net profit reported under the IFRS and the Chinese GAAP in 2007. Pair 2 tested the net profit results reported in 2006 between the two standards. Pair 3 also tested the significance level of the net profit result, but to compare the changes in net profit gap between 2006 and 2007. Similarly, Pair 4 tested the significance level of the differences between the amount of total equity reported under the IFRS and the Chinese GAAP in 2007. Pair 5 tested the total equity results in 2006 between the two standards. And Pair 6 also examined the significance level of the gap between total equity reported in 2006 and 2007.

The findings of this analysis are presented in Table 7 and Table 8. Table 7 shows the descriptive statistics of the six pairs, while Table 8 provides the results of the paired sample t-test. As mentioned in Chapter Three (Research Methodology) of the research, the aim of this analysis was to find the pairs with a less than 5% two-tailed significance. This shows us that the difference between those tested pairs was significant and did not happened by chance.

As found in Table 8, of the six pairs analysed, only two (highlighted in pink) namely, Pair 2 (with 2.6% of two-tailed significance) which tested the significance level of the difference between the amount of net profit reported under the IFRS and the Chinese GAAP in 2006, and Pair 5 (with 4.2% of two-tailed significance) to test the significance level of differences between the total equity reported under the IFRS and the Chinese GAAP in 2006, showed a statistically significant difference. This finding supports the previous analysis in Figure 1 and Figure 2, where Figure 1 shows 75% of companies produced a higher amount of net profit under the IFRS than Chinese GAAP in 2006, while Figure 2 indicates a slightly lower number – but still with the majority of companies (62% of the total 47 sample companies) – produced a higher amount of total equity under the IFRS than in Chinese GAAP. Indeed, the difference between the IFRS and the Chinese GAAP for the net profit amounted to RMB 49,187 million in 2006, while the total equity amounted to RMB 164,907 million in 2006, with the mean difference, indicated in Table 8 for net profit and total equity in 2006, amounting to approximately RMB 1,047 million and RMB 3,509 million, respectively.

**Table 7: Paired Samples Statistics – Significance of Differences in Net Profit & Total Equity (Prepared by author)**

	Comparing	N	Mean (RMB '000)	Std. Deviation
Pair 1	2007 IFRS Profit	47	12,898,471	28,565,281
	2007 ASBE Profit	47	12,281,838	27,056,559
Pair 2	2006 IFRS Profit	47	9,864,726	25,239,655
	2006 ASBE Profit	47	8,818,193	22,671,663
Pair 3	2007 Profit Gap	47	654,239	2,330,469
	2006 Profit Gap	47	1,116,712	3,103,567
Pair 4	2007 IFRS Equity	47	76,999,936	161,554,094
	2007 ASBE Equity	47	74,635,302	155,382,232
Pair 5	2006 IFRS Equity	47	61,566,745	133,943,746
	2006 ASBE Equity	47	58,058,079	127,635,016
Pair 6	2007 Equity Gap	47	2,725,999	10,177,405
	2006 Equity Gap	47	3,975,055	11,368,014

**Table 8: Paired Samples T-Test – Significance of Differences in Net Profit & Total Equity (Prepared by author)**

		Paired Differences		
		Mean (RMB '000)	t-value	Sig. (two-tailed)
Pair 1	2007 IFRS Profit - 2007 ASBE Profit	616,633	1.806	0.077
Pair 2	2006 IFRS Profit - 2006 ASBE Profit	1,046,533	2.293	0.026
Pair 3	2007 Profit Gap - 2006 Profit Gap	-462,473	-1.882	0.066
Pair 4	2007 IFRS Equity - 2007 ASBE Equity	2,364,634	1.579	0.121
Pair 5	2006 IFRS Equity - 2006 ASBE Equity	3,508,666	2.087	0.042
Pair 6	2007 Equity Gap - 2006 Equity Gap	-1,249,056	-1.95	0.057

Therefore, the analysis in Table 7 and Table 8, shows that there were significant differences in the amount of net profit and total equity reported under the IFRS and the Chinese GAAP in 2006. In contrast, there was only a slight difference in the net profit (7.7% of two-tailed significance) and total equity reported (12.1% of two-tailed significance) by the two testing standards in 2007 compared with the findings for net profit and total equity in 2006. Indeed, based on the analysed findings on the amount of net profit and total equity reported in 2006 and 2007, the gaps in total equity prepared under the two sets of standards in both 2006 and 2007 are frequently smaller than the gaps in the net profit, while total equity shows 4.2% and 12.1% of two-tailed significance in 2006 and 2007, whereas 2.6% and 7.7% of two-tailed significance was presented for net profit results in 2006 and 2007 respectively. However, with regards to the changes in the net profit and total equity gaps under the IFRS and the

Chinese GAAP as tested by Pair 3 and Pair 4 (highlighted in blue), the difference was relatively small.

It should be noted that the findings in the current analysis were analysed based on the average amount of net profit gap and total equity gap reported by the 47 sample companies. Therefore, the findings may be affected by size and annual turnover of the companies (ie. the larger the company, the higher the turnover and, potentially, the larger the gap between reported figures, compared to smaller companies). As a result, further analysis is needed to investigate the success of the new 2006 Chinese GAAP in the accounting harmonisation with the IFRS.

#### 4.1.4 The Success of Accounting Harmonisation

This analysis aims to more specifically examine the success of 2006 Chinese regulation on the accounting harmonisation with IFRS by comparing the overall index for net profit and total equity between 2006 and 2007. Generally, through the application of Formula 4,

$$\text{Overall Conservatism Index} = 1 - \frac{(X_{\text{IFRS}, \text{Year}} - X_{\text{ASBE}, \text{Year}}) / X_{\text{IFRS}, \text{Year}}}{X_{\text{IFRS}, \text{Year}}}$$

As discussed in Chapter Three (Research Methodology) of this report, there are three main outcomes of this calculation. The overall index may either be equal to one, less than one, or greater than one. For those companies with an overall index equal to one, there is full comparability of the reported figures between the IFRS and the Chinese GAAP. An overall conservatism index less than one represents the opposite. Further, for the overall conservatism index greater than one, this indicates the lower comparability of the reporting figures under the two sets of accounting standards. The findings on both net profit and total equity reported gaps and overall index are presented in Table 9.

**Table 9: Comparison of Overall Index & Amount of Gap for Net Profit & Total Equity between 2006 & 2007 (Prepared by author)**

Results	N	2007		2006	
		Mean			
		Overall Index	Gap RMB '000	Overall Index	Gap RMB '000
Net Profit	47	1.01	654,239	0.91	1,116,712
Total Equity	47	1.00	2,725,999	0.97	3,975,055



As shown in Table 9, the average net profit gap reported under the IFRS and the Chinese GAAP has decreased significantly from approximately RMB 1,117 million in 2006 to approximately RMB 654 million in 2007. The average total equity gap has decreased even more from approximately RMB 3,975 million in 2006 to approximately RMB 2,726 million in 2007. Although a large number of discrepancies still exist in both net profit and total equity in 2007, it is interesting to note the findings on the overall index calculated for the net profit and total equity results.

As presented in Table 9, the average overall index for both net profit (with 0.91 overall index) and total equity (with 0.97 overall index) were less than 1 in 2006. This shows that the reporting figures for net profit and total equity under the IFRS and the Chinese GAAP are not comparable in 2006. In contrast, the average overall index for net profit changed to 1.01 in 2007, while the average overall index for total equity was equal to 1 in 2007. Hence, while the previous test (in 4.1.3 The Significance of Differences in Net Profit & Total Equity) could only show that the gap for both net profit and total equity under the two sets of standards reduced from a strong and significant level of differences in 2006 to a weak and insignificant level in 2007, the findings from this analysis indicate that there is only small divergence of the net profit reported under the IFRS and the Chinese GAAP, while full comparability of total equity reported under the two sets of standards in 2007 based on the average overall index calculated for the two years.

#### **4.1.5 Summary of Findings on Research Question One**

In summary, the results show an improvement in the harmonisation of Chinese GAAP with the IFRS from 2006 to 2007, although certain discrepancies still exist in the amount of net profit and total equity reported under the two sets of accounting standards.

More specifically, the total number of companies reporting higher net profit and total equity under the IFRS than the Chinese GAAP dropped from 75% (35/47) to 49% (23/47) for net profit and from 62% (29/47) to 43% (20/47) for total equity in 2006 and 2007. The number of companies reporting the same amount of net profit and total equity rose from 2% (1/47) to 13% (6/47) for net profit and 4% (2/47) to 21% (10/47) for total equity over the two sample years. Nevertheless, the results still show that the net profit and total equity reported under the IFRS tends to be higher than the amount reported under the Chinese GAAP.

What is more, 64% (30/47) of companies showed a reduced net profit gap, and 40% (19/47) showed a reduced total equity gap, while 32% (15/47) showed an increased total equity gap and 23% (11/47) companies showed an increased net profit gap. A greater number of companies also showed no differences in net profit and total equity after adopting the 2006 ASBE, where 11% (5/47) more companies showed no gap in net profit and 17% (8/47) more companies showed no gap in total equity.

In addition, based on the average reporting amount in 2006 and 2007, the results show the gaps in net profit and total equity changed from significantly different under the IFRS and Chinese GAAP in 2006 to only a weak and insignificant level in 2007. Consistently, in the comparison of the overall index, the results show the full comparability of total equity (overall index 1.00) reported under the IFRS and Chinese GAAP, while only a small statistical difference in net profit (overall index 1.01) reported under the two sets of accounting standards in 2007.

## **4.2 RESEARCH QUESTION TWO: THE RELATIONSHIP BETWEEN INDUSTRY & DISCREPANCIES**

The second research questions aims to find out whether or not the gap varies among different categories of industries, and to further identify the industries with the most significant discrepancies between the IFRS and Chinese GAAP. As mentioned in Chapter Three (Research Methodology) of this research, the second research question will be looked at from two angles. The first test aims to provide a general understanding of how the amount of gap in net profit and total equity can change significantly among industries; while the second test identifies the industries that show significant differences in net profit and total equity reported under the IFRS and Chinese GAAP.

The findings suggest that the discrepancies in net profit and total equity may vary among different categories, with coal-mining, insurance companies, petroleum, oil and gas refiners and the property leasing and development companies, the industries that shown the largest discrepancies in 2006 and 2007.

### **4.2.1 The Significance of Correlation between Industry & the Amount of Gap**

This analysis aims to identify the relationship between the different categories of industry and the gaps in net profit and total equity reporting figures under the IFRS and Chinese GAAP in 2006 and 2007. As mentioned in Chapter Three (Research Methodology), very few research studies have analysed the reporting differences between the IFRS and Chinese GAAP according to different industry categories. Lin and Wang, (2001) investigated three Chinese-listed companies with different firm features and found a tendency for deviations in the financial disclosures among the three sample companies. Only a little information was provided in Lin and Wang, (2001) to show the direct relationship between industries and the discrepancies of reported figures under the IFRS and Chinese GAAP.

Therefore, the current analysis aims to provide general understandings of how the gap in net profit and total equity may vary among different industries, and to identify how the relationship between industries and the net profit and total equity gaps varied from 2006 to 2007.

A statistical analysis by paired sample t-test was used for this analysis. As mentioned in Chapter Three, the 47 sample companies fell under 20 different industry categories (e.g. manufacturers, airlines, bank and insurance companies). However, for the purpose of this analysis, these 20 different industry categories will be compiled into a single variable “industry” that represents the 20 industry categories among the 47 sample companies.

Therefore, six pairs were tested. Pair 1 tests the significance of the relationship between the industry and the amount of net profit gap in 2007, whereas the significance level of the industry and 2006 net profit gap is tested in Pair 2. Similar to the tests for profit results, Pair 3 tests the significance between the industry and the total equity gap in 2007, while Pair 4 tests the relationship between industry and the 2006 total equity gap. The relationship between industries and the changes in net profit gap and total equity gap are compared in Pairs 5 and 6, where Pair 5 compares the changes in the net profit gap between 2006 and 2007, and the changes in total equity gap between 2006 and 2007 are shown in Pair 6. The results of the paired sample t-test are provided in Table 10. Similar to the discussion on other paired sample t-tests mentioned in 4.1.3 (testing the significance of differences in net profit and total equity), the importance of this analysis is to find the pairs with less than 5% two-tailed significance, as this shows that the relationship between industries and the tested gap was significant and did not happen by chance.

**Table 10: Paired Samples T-Test: Significance of the Relationship between Industry & Gaps (Prepared by author)**

		Paired Differences		
		Mean	t-value	Sig. (two-tailed)
Pair 1	Industry - 2007 Profit Gap	-654,231	-1.925	0.06
Pair 2	Industry - 2006 Profit Gap	-1,116,703	-2.467	0.017
Pair 3	Industry - 2007 Equity Gap	-2,725,991	-1.836	0.073
Pair 4	Industry - 2006 Equity Gap	-3,975,046	-2.397	0.021
Pair 5	Industry - Change in profit gap between 2006 & 2007	-572,235	-2.378	0.022
Pair 6	Industry - Change in equity gap between 2006 & 2007	-1,548,806	-2.473	0.017

As shown in Table 10, of the four pairs that test the significance level of the relationship between industries and the net profit and total equity gap in 2006 and 2007, only two pairs (highlighted in pink), namely, Pair 2 (with 1.7% two-tailed significance), which tests the significance of the relationship between the industry and the amount of net profit gap reported under the IFRS and Chinese GAAP in 2006; and Pair 4 (with 2.1% two-tailed significance), which tests the significance level of the relationship between the industry and the total equity gap under the two sets of accounting standards in 2006, showed statistically significant relationship. In contrast, the relationship between industry and both the net profit and total equity gap in 2007 was relatively weak (with a 6% two-tailed significance for industry and net profit gap, and an even weaker relationship with a 7.3% two-tailed significance for industry and total equity gap in 2007). These findings are consistent with the analysis from 4.2.1 (The Significance of Correlation between Industry & Amount of Gaps), where the results show that discrepancies in net profit and total equity under the IFRS and Chinese accounting standard dropped to a relatively insignificant level in 2007. Hence, it also reduces the significance level of the relationship between industry and the reporting differences in 2007.

Further analysis is needed to pinpoint the findings from Pair 5 and Pair 6. These test the significance of the relationship between industry and the changes in the gaps of net profit and total equity reported under the two sets of standards between 2006 and 2007 (highlighted in blue). Pair 5 indicates that there is a strong relationship (with a 2.2% two-tailed significance) between industry and the changes in net profit differences reported under the IFRS and Chinese GAAP. An even stronger relationship between industry and the changes in total equity gaps under the IFRS and Chinese GAAP was found in Pair 6 (a 1.7% two-tailed significance). In other words, the changes in discrepancies for net profit and total equity between 2006 and 2007 are significantly affected by the different categories of industry.

Indeed, these findings are also supported and explained in the analysis in 4.1.3. As found in 4.1.3, the results show that although the reported gaps in both net profit and total equity dropped to insignificant levels in 2007, there was no significant drop in the differences for both net profit and total equity gaps between 2006 and 2007. Thus, when the findings from Part I and this analysis are read together, it implies that certain categories of industry, both in 2006 and 2007, caused a significant number of the discrepancies in net profit and total equity reported under the IFRS and Chinese GAAP.

## 4.2.2 The Industries Contributing the Most Significant Discrepancies

This analysis aims to find the industries that show significant differences in net profit and total equity reported under the IFRS and Chinese GAAP based on the 47 sample companies. As with the more detailed discussion in Chapter Three (Research Methodology) of this report, the Formula 4,

$$\text{Overall Index}_{\text{year}} = 1 - (X_{\text{year}}^{\text{IFRS}} - X_{\text{year}}^{\text{ASBE}}) / X_{\text{year}}^{\text{IFRS}}$$

that was used in the analysis of the success of accounting harmonisation between the IFRS and Chinese GAAP in 4.1.4, will also be applicable for this analysis. However, it should be noted that the 47 sample companies made up a total of 20 different industry categories (ie. companies engaged in selling services, electrical-appliance manufacturers, machinery and tool manufacturers, glass manufacturers, steel manufacturer, metal, aluminium and copper, airlines, banks, coal and mining companies, power and water companies, insurance companies, petroleum, oil and gas companies, companies engaged in the design and development of toll roads, railways, shipping companies, pharmaceutical companies, cement producers, brewing companies, shipyards, property leasing and development companies, and chemical fibre companies).

For the purpose of this analysis, the overall index for both net profit and total equity reported in 2006 and 2007 will be calculated separately for the average overall index presented by 20 different industry categories. Again, as discussed in Chapter Three (Research Methodology), and previous analysis, an overall index of 1 represents full comparability of the reported figures between the IFRS and Chinese GAAP, while an overall index greater than 1 indicates a lower comparability of reported figures between the two sets of accounting standards, and an overall index of less than 1 means the reported figures under the two sets of accounting standards are not comparable. The findings of net profit and total equity average overall index are presented separately in Table 11 and Table 12, where Table 11 shows the average overall index of net profit results between the IFRS and Chinese GAAP in 2006 and 2007, and the findings for the total equity result overall index are presented in Table 12.

As shown in Table 11, it is not surprising that there are more industries producing average full comparable net profit figures between the IFRS and Chinese GAAP in 2007 than in 2006.

Specifically, of the 20 categories of industry analysed, only the service-provider industry, represented by just one company out of the 47 sample companies, showed full comparable net profit (with an average overall index of 1) between the two sets of standards in 2006. Six industries (service providers; steel, metal, aluminium and copper manufacturers; banks; power and water companies; railway company; and shipyard), representing a total of 17 companies out of 47, showed full comparable net profit figure (with an average overall index of 1) between the IFRS and Chinese GAAP in 2007.

**Table 11: Descriptive Statistics – Overall Index & Amount of Gap Calculated by Industries for Net Profit (Prepared by author)**

Industries	N	2007		2006	
		Mean			
		Overall Index	RMB '000	Overall Index	RMB '000
Service provider	1	1	0	1	2,568
Manufacturer - Electrical appliances	5	0.95	53,921	0.86	8,701
Manufacturer - Machinery & tool	3	1.27	1,864	0.89	13,596
Manufacturer - Glass	1	0.95	4,746	0.95	304,491
Manufacturer - Steel, metal, aluminium & copper	5	1	9,890	1.01	316,185
Airlines	3	1.36	228,072	0.89	368,995
Banks	5	1	104,400	0.98	2,446,400
Coal & mine companies	1	0.83	537,152	0.74	623,644
Power & water companies	4	1	27,118	0.87	616,117
Insurance companies	2	0.77	7,182,500	0.62	6,103,654
Petroleum, oil & gas companies	2	0.95	4,455,657	0.89	6,897,852
Toll roads	3	1.03	29,581	0.91	82,766
Railway	1	1	5,926	0.92	60,645
Shipping companies	3	1.01	183,581	0.81	254,180
Pharmaceutical companies	3	1.04	7,855	1.02	4,658
Cement	1	1.01	14,073	0.96	54,864
Brewing	1	1.04	19,231	0.97	12,970
Shipyard	1	1	2,097	1.1	-26,982
Property leasing & development	1	0.71	135,022	0.85	60,100
Chemical fibre	1	0.8	4,495	0.92	3,468
Total	47	1.01	654,239	0.91	1,116,712

What is more, five more industry categories (highlighted in yellow), three toll-road developers (with a 1.03 average overall index), three shipping companies (with a 1.01 average overall index) one cement supplier (with a 1.01 overall index), three pharmaceutical companies and one brewing company (with a 1.04 overall index), showed a slightly lower comparability of net profit figures between the two sets of standards in 2007. Only two industries (steel, metal, aluminium and copper manufacturers; and shipyards) showed on average slightly lower comparable net profit figures (with an average overall index of 1.01 and 1.1, respectively) between the two sets of standards in 2006. Furthermore, it is not surprising that the number of industries showing non-comparable net profit figures reported between the IFRS and Chinese GAAP, significantly decreased from 16 industries out of the total of 20 industries in 2006 to seven industries in 2007.

These findings support the previous analysis in 4.2.1 analysis, where the results indicate that the significance of the relationship between industry and net profit gap reported under the two sets of standards was much higher in 2006 than in 2007. So, while more industries show full or nearly full comparable net profit figures between the IFRS and Chinese GAAP in 2007 than in 2006, there's also a reduction in the significance of the relationship between industry and the net profit differences of the two sample years. It also leads to a higher level of net profit comparability from averaged non-comparable in 2006 to a lower but nearly full comparable net profit figure between the two sets of accounting standards in 2007.

Although Table 11 indicates improvements in the 2006 Chinese regulation to the harmonisation with the IFRS, it also shows that nine industry categories presented significant discrepancies in net profit figures reported under the two sets of accounting standards in 2007. These were machinery and tool manufacturers (with an average overall index of 1.27), three airline companies (with an average overall index of 1.36), a total of six electrical-appliance and glass manufacturers (with an average overall index of 0.95), one coal-mining company (with an overall index of 0.83), two insurance companies, two petroleum, oil and gas companies (with an average overall index of 0.95), one chemical company (with an average overall index of 0.8) and one property-leasing and development company (with an overall index of 0.71). With regards to the nine identified industry categories, only two categories – airlines and machinery and tool manufacturers – showed a significantly lower comparability of net profit figures reported under the IFRS and Chinese GAAP, while the remaining seven showed non-comparable net profit figures between the two sets of



accounting standards in 2007. Indeed, four industries (highlighted in red): coal-mining companies, insurance companies, petroleum, oil and gas companies, and property leasing and development companies, produced the largest average amount of net profit gap, with a more than RMB 100 million difference in net profit prepared under the IFRS and Chinese GAAP in each of the four industries.

Aside from the findings on net profit, the same test used to investigate the industries showing significant differences in net profit reported under the IFRS and Chinese GAAP, was also applied to tests the total equity reported figures.

**Table 12: Descriptive Statistics – Overall Index & Amount of Gap Calculated by Industries for Total Equity (Prepared by author)**

Industries	N	2007		2006	
		Mean			
		Overall Index	RMB '000	Overall Index	RMB '000
Service provider	1	1	0	1	67
Manufacturer - Electrical appliances	5	1.03	106,679	1.02	67,113
Manufacturer - Machinery & tool	3	1.01	7,437	0.99	20,646
Manufacturer - Glass	1	1.5	72,554	1.29	69,752
Manufacturer - Steel, metal, aluminium & copper	5	1	35,596	0.92	3,509,524
Airline	3	0.98	82,647	1.05	766,765
Bank	5	1	1,887,200	1	1,418,200
Coal & mine companies	1	0.92	1,801,847	0.95	904,758
Power & water companies	4	0.99	403,623	0.9	3,157,895
Insurance companies	2	0.9	19,937,500	0.75	25,189,329
Petroleum, oil & gas companies	2	0.97	22,679,469	0.94	30,201,582
Toll roads	3	0.98	730,009	1	622,233
Railway	1	1.03	617,178	1.04	772,883
Shipping companies	3	0.98	645,354	1	284,732
Pharmaceutical companies	3	0.98	62,479	0.97	67,554
Cement	1	1.03	296,692	1.02	133,298
Brewing	1	1	0	1	23,707
Shipyard	1	1	0	0.87	161,733
Property leasing & development	1	0.89	996,291	0.9	852,928
Chemical fibre	1	1.02	140,828	1.01	101,057
Total	47	1	2,725,999	0.97	3,975,055

As shown in Table 12, it should be noted that many industries showed full or at least the lower comparability of total equity reporting figures between the IFRS and Chinese GAAP in 2007. Five industries (highlighted in pink): service providers; manufacturers of steel, metal, aluminium and cooper; banks, brewing companies; and shipyards) showed an average of full comparable total equity figures (with an average overall index equal to 1) between the two sets of standards, while five industries (highlighted in blue) showed at lower comparability of total equity reporting figures (with an average overall index greater than 1) under the two sets of standards.

In 2006, there were five industries (highlighted in yellow): service providers, banks, toll-road design-and-development companies; shipping companies; and brewing companies, that also showed a full comparability of total equity between the IFRS and Chinese GAAP. While five industries (highlighted in grey): electrical-appliance manufacturers, glass manufacturers, airlines, railways, and suppliers of cement and chemical fibres, showed a lower comparability of the total equity figures in the two sets of accounting standards. These findings may be explained in the analysis in 4.2.1 (The Significance of Correlation between Industry & Amount of Gaps), where the results indicate that the significance of relationship between the industry and total equity gap reported under the two sets of standards was significantly higher in 2006 than in 2007. Hence, while more industries show full or nearly full comparable total equity figures between the IFRS and Chinese GAAP in 2007 than in 2006, the significance of the relationship between industry and the net profit differences also dropped for the two sample years. This also leads to a higher level of net profit comparability from averaged non-comparable in 2006 to an overall full comparable total equity figure between the two sets of accounting standards in 2007.

Again, although Table 12 indicates improvements in the 2006 Chinese regulation to the harmonisation with the IFRS, which shows overall full comparability of the total equity figures between the IFRS and Chinese GAAP, it also shows that four industry categories (highlighted in red) presented significant discrepancies, resulting in non comparability of total equity figures reported under the two sets of accounting standards in 2007. These industries are similar to those identified in Table 11, where coal-mining companies, insurance companies, petroleum, oil and gas companies, and property-leasing and development companies revealed a reporting figure of total equity under the two sets of accounting standards that was no generally not comparable.

### **4.2.3 Summary of Findings on Research Question Two**

Firstly, the paired sample t-tests show a strong relationship between the industry and the amount of gaps in net profit and total equity reported under the IFRS and Chinese GAAP in 2006, while only insignificant levels of correlation were found between the industry and net profit and total equity reported under the two sets of standards in 2007.

Secondly, when comparing the changes in net profit and total equity gaps between 2006 and 2007 results against the industry, there is evidence that significant relationships exist between the tested variables. This may indicate that the changes in discrepancies in the net profit and total equity between the two sample periods are significantly affected by different categories of industry.

Finally, when comparing the mean overall index and the reporting gaps calculated for the 20 categories of industry, there is evidence that property leasing and development, coal-mining companies, insurance companies, and petroleum, oil and gas refiners are the industries that show relatively large discrepancies in net profit and total equity under the IFRS and Chinese GAAP over the sample periods.

### **4.3 RESEARCH QUESTION THREE: MAJOR ITEMS CONTRIBUTING TO THE DISCREPANCIES BY INDUSTRIES**

The last research question aims to identify the major items that contributed to the differences in net profit and total equity figures reported under the IFRS and Chinese GAAP. Not all the 20 sample companies will be analysed, rather, the discussion will focus on the four major industries (Insurance, petroleum, oil and gas companies, property-leasing and development companies, and coal-mining companies) as identified in 4.2.2 (Industries Contributing the Most Significant Discrepancies).

As a result, 4.3.1 to 4.3.4 will discuss the items that contributed to the differences in the four identified industries. Certain items that repeatedly occurred in these industries will be discussed separately in 4.3.5, while 4.3.6 will provide a brief summary of the findings for Research Question Three.

#### **4.3.1 Category of Industry – Insurance**

The current analysis aims to discuss the items that contributed to the discrepancies between the IFRS and Chinese GAAP in the insurance industry. The companies that fall into the insurance industry as specified in this report are those principally engaged in selling and providing services focused around life-insurance business activities. The business activities of insurance companies are regulated by the China Insurance Regulatory Commission (CIRC), where the CIRC issues the licenses for insurance companies and also regulates the trading activities of insurance companies in China. The Chinese GAAP that specifically relates to the accounting and financial reporting of insurance companies is set out in the new ASBE 25 – “*Direct Insurance Contracts*” and ASBE 26 – “*Reinsurance Contracts*”, where ASBE 25 specifically deals with the recognition, measurement and disclosure requirements of income, expense, assets and liabilities that arise in relation to the direct insurance contracts issued by an insurer. Whereas ASBE 26 is the new introduced standard, which sets out the recognition, measurement and disclosure requirements of reinsurance contracts that were issued by a former insurer where the second insurer shares both the cost and insurance premium with the former insurer.

Compared with the new ASBE 25, the old Chinese GAAP seems to have wider scope, but with a relatively more general application of the accounting and financial reporting to the

insurers rather than specified by insurance contracts, as the dominant application as prescribed by the ASBE 25. In addition, the old Chinese GAAP seems to have less detailed description of the application of the standards with relatively more issues remain silent, while more detailed information is covered under the new ASBE 25 for the determination and identification of insurance contracts. For example, the concept of insurance risks introduced under the new ASBE 25 para. 4 and the ASBE 25 para. 5 permits the unbundling of direct insurance contracts into separate items if the insurance risks and other risks can be separately measured and if the similarities to the IFRS can be identified, where the issues mentioned were not covered by the old Chinese GAAP.

Furthermore, the new ASBE 25 has classified the direct insurance contracts by life insurance and non-life insurance, and prescribes separate accounting treatments to life and non-life insurances. For example, for non-life insurances, the ASBE 25 para. 8 states that the income of premium is determined by the amount specified in the non-life insurance contracts. Conversely, for life insurances, the income is determined in accordance with the amount that will supposedly be received by each settlement or by one-off payments on accrual basis as required by ASBE 25 para. 8. The ASBE 26 has clarified many issues that were not clearly covered by the old Chinese GAAP. For example, as stated by the ASBE 26 para. 5, the income, expenses, assets and liabilities arising from the reinsurance contracts is not permitted to be offset against the related direct insurance contracts, while these issues were not clearly stated under the old Chinese GAAP. Indeed, with regards to the ASBE 26 para. 6, para 7 and para 8, the standards require that the income, expenses and relevant assets and liabilities that are generated by the former insurer of the reinsurance contracts be measured on a gross-accrual basis, whereas the old Chinese GAAP permits the recognition upon the receipt or issuing of statements of the reinsurance transactions.

In addition, in a comparison between IFRS and the new ASBE 25 and ASBE 26, the IFRS 4 – *“Insurance Contracts”* applies to both direct insurance contracts and reinsurance contracts and does not separate the two types of insurance contracts, as is done under the Chinese GAAP. Furthermore, while the Chinese GAAP prescribes the specific requirements in relation to income, expenses, assets and liabilities arising from insurance contracts, the IFRS 4 sets out the general accounting requirements for the insurance contracts.

Of the 47 sample companies collected, only two fall into the insurance industry, namely *China Life Insurance Company Limited (the “China Life Insurance”)* and *Ping An Insurance (Group) Company of China Limited (the “Ping An Insurance”)*. The reconciled statements extracted from the two sample companies’ financial reports are listed in Table 13 to 15. Table 13 and 14 list the reconciled statements of the adjusted items in net profit and total equity for Ping An Insurance, respectively, while Table 15 lists the reconciled items in net profit for China Life Insurance (the reconciled items in total equity for China Life Insurance were not analysed, as the reconciled statement of total equity was not provided in China Life Insurance’s financial statement).

**Table 13: Ping An Insurance (Group) Company of China Limited – Profit Adjustments**  
(Prepared by author)

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Net profit reported under Chinese GAAP</b>	<b>15,086</b>	<b>7,342</b>	<b>5,986</b>
<b>Adjusted items:</b>			
Policy acquisition costs	9,373	5,480	5,480
Policyholders' reserves for life insurance	(4,988)	(4,723)	(6,544)
Unearned premium reserves	113	(16)	(16)
Claim reserves	-	-	149
Financial assets & liabilities	-	-	3,096
Others	(13)	(33)	100
Deferred tax	(883)	(212)	(413)
<b>Net profit reported under IFRS</b>	<b>18,688</b>	<b>7,838</b>	<b>7,838</b>

**Table 14: Ping An Insurance (Group) Company of China Limited – Equity Adjustments**  
(Prepared by author)

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Total equity reported under Chinese GAAP</b>	<b>107,234</b>	<b>45,260</b>	<b>36,668</b>
<b>Adjusted items:</b>			
Policy acquisition costs	41,305	31,866	31,866
Policyholders' reserves for life insurance	(35,262)	(30,023)	(35,762)
Unearned premium reserves	199	86	86
Claim reserves	-	-	(1,401)
Financial assets & liabilities	-	-	16,935
Others	(107)	(127)	(177)
Deferred tax	(1,547)	(687)	(1,840)
<b>Total equity reported under IFRS</b>	<b>111,822</b>	<b>46,375</b>	<b>46,375</b>

**Table 15: China Life Insurance Company Limited – Profit Adjustments (Prepared by author)**

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Net profit reported under Chinese GAAP</b>	<b>28,116</b>	<b>14,384</b>	<b>9,601</b>
<b>Adjusted items:</b>			
Policy acquisition costs	4,019	5,653	5,653
Policyholders' reserves for life insurance	6,366	2,489	(5,803)
Unearned premium reserves	101	81	81
Claim reserves	-	-	262
Financial assets & liabilities	-	-	15,393
Revaluation & depreciation of fixed assets	112	93	93
Others	-	-	(3)
Deferred tax	165	(2,744)	(5,321)
<b>Net profit reported under HKFRS</b>	<b>38,879</b>	<b>19,956</b>	<b>19,956</b>

In general terms, the two companies both made adjustments in policy acquisition costs, policyholders' reserves for life insurance, unearned premium reserves, claim reserves, and financial assets and liabilities, while China Life Insurance made an additional adjustment on the revaluation and depreciation of fixed assets. The adjustment on the financial assets and liabilities and the adjustment on revaluation and depreciation of fixed assets are identified as a repeated item, which also occurred in other sample companies, as identified in this report. As a result, these two items will be discussed in 4.3.5 (General Items Contributing to the Differences), while the remaining four items will be discussed as follows:

#### **4.3.1.1 Adjustment on Policy Acquisition Costs**

One of the major items that contributed to the differences for both companies is the adjustment made for the insurance policy acquisition costs. These costs are defined under the ASBE 25 para.16 to include costs such as the handling costs and commission expenses incurred in relation to the acquisition of new insurance policies. As per ASBE 25 para. 17, these handling costs or the commission expenses should be included in the income statement when it is incurred and it is consistent with the old Chinese GAAP. Indeed, since the recognition of insurance policy acquisition costs remains unchanged under the new ASBE 25 and the old Chinese GAAP, the amount of restated 2006 reporting figures showing in the 2007 reconciled statement, are the same as the original figures showing in the 2006 reconciled statement.

However, in contrast to the ASBE 25, the IFRS 4 requires these new insurance policy-acquisition costs to be deferred and amortised over the expected life of the insurance contracts at either of two rates, namely either to be measured at a constant percentage of the present value of estimated gross profits expected to be realised over the life of the insurance contract, or at a constant percentage of expected premiums.

As a result of the different treatment of the insurance policy acquisition costs, there has been up to RMB 4,019 million in net profit difference for China Life Insurance in 2007, while the both the original and restated 2006 results shown a difference in net profit of 5,653 million. With regards to Ping An Insurance, the company has shown a difference of RMB 9,373 million in net profit and RMB 41,305 million in total equity in 2007, while the 2006 results shown the differences in net profit and total equity were RMB 5,480 million and 31,866 million, respectively. Furthermore, while the same amount of adjustment was made with regards to the policy acquisition costs for both original and restated figures for the two sample companies, this may indicate that there were no specific changes in the old Chinese GAAP to the new Chinese standards to harmonise with the IFRS.

#### **4.3.1.2 Adjustment on Policyholders' Reserves for Life Insurance**

As found in ASBE 25 para. 10, the policyholders' reserves are the reserves recorded and provided to meet the future insurance obligations arising from life insurance by the insurer. It should be noted that the measurements of policyholders' reserves are governed by the CIRC's regulation, where the CIRC's regulation requires the adoption of actuarial valuation methods and further requires that the policyholders' reserves for life insurance should provide the amount greater than the statutory minimum standard. However, under the IFRS, the measurement of policyholders' reserves is set out in the IFRS, which requires that reserves in relation to the life insurance be measured with the net level premium valuation method. In other words, the policyholders' reserves are calculated in accordance with the actuarial assumptions with regards to mortality, persistency, or expenses established at the time of the issue of the policy. As a result, there is a difference of up to RMB 6,366 million in net profit in 2007 for the China Life Insurance, while the 2006 restated reconciled results for net profit was 2,489 million. For Ping An Insurance, the company has shown a difference of RMB 4,988 million in net profit and RMB 35,262 million in total equity in 2007, while the 2006



restated results show the differences in net profit and total equity to be RMB 4,723 million and 30,023 million, respectively.

In addition, it should be noted that the reconciled amount for the policyholders' reserve between the IFRS and Chinese GAAP in 2006 is different to the restated reconciled amount as shown in the 2007 reconciled statements of both companies. This indicates changes in the old Chinese GAAP and the new Chinese GAAP. However, the changes were not made due to the changes in ASBE 25, which relates to the direct insurance contracts as mentioned above, rather from the change in the ASBE 22 – *“Financial Instruments: Recognition and Measurement”*. Under the new ASBE 22, the standard introduces a number of new types of financial instruments for both the financial assets<sup>1</sup> and financial liabilities<sup>2</sup> not covered by the old Chinese GAAP. More specifically, the new ASBE 22 also covers recognition, measurement, and disclosure accounting requirements for receivables, payables, derivatives, cash deposits, preferences shares and convertible bonds in addition to debt and equity securities originally covered in the old Chinese GAAP. The new ASBE 22 also measures the financial instruments at fair value for the initial measurement method as required by the IAS 39 – *“Financial Instruments: Recognition and Measurement”*.

Therefore, the Chinese GAAP requirements on the recognition and measurement of financial instruments are consistent with the IFRS after the changes in the new ASBE 22. As a result, this reduces the net profit difference by RMB 1,821 million and RMB 5,739 million in total equity difference for the Ping An Insurance 2006 reporting figures, while the net profit difference for China Life Insurance decreased with an amount of RMB 8,292 million in the 2006 reporting figures. Indeed, with the analysis of the reconciled statement on the policyholders' reserve, it seems that the Chinese GAAP on the recognition and measurement of financial instrument is consistent with the IFRS. However, due to the Chinese insurance regulation, in particular required by the CIRC, there is the possibility that the amount of policyholders' reserve under the Chinese GAAP may differ from the amount under the IFRS.

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<sup>1</sup> The financial assets covered by the new ASBE 22 include: held-to-maturity profit and loss, available-for sale investments, financial assets measured at fair value in profit and loss, and loans and receivables.

<sup>2</sup> The financial liabilities covered by the new ASBE 22 include: financial liabilities measured at fair value in profit and loss, and other financial liabilities measured at amortised cost using the effective interest method.

#### **4.3.1.3 Adjustment on Unearned Premium Reserves**

As per ASBE 25 para.10, the unearned premium reserves are reserves made for the unexpired portion of in-force but non-life insurance policies. More specifically, these reserves are made to disclose the future insurance liabilities on insurance policies with a period of less than one year. There are two criteria in relation to the unearned premium reserves under the Chinese GAAP, which are governed by both ASBE 25 and CIRC regulations. The first requires the unearned premium reserves to be measured at the actuarial valuation results as per ASBE 25 para.11, which is the 1/365 method, the same as set out in IFRS 4. However, the second criteria as set out by the CIRC (Baojianfa [1999] No. 90) requires that the unearned premium reserves should not be less than 50 percent of the retained premium for the current reporting period.

As a result, this different measurement of unearned premium reserve has resulted in RMB 113 million of net profit reporting differences, and RMB 35,262 million in equity differences under the IFRS and Chinese GAAP for Ping An Insurance's 2007 reporting figures, while China Life Insurance has made an adjustment of RMB 101 million for net profit. Indeed, while comparing the reconciled amount of the unearned premium reserve reported in 2006 with the 2006 restated reconciled amount reported in 2007 reconciled statements, both of the amounts are the same. Therefore, it seems that the differences of unearned premium reserve reported under the IFRS and Chinese GAAP were likely to have been caused by the different measurement of the unearned premium reserve required by the CIRC and the IFRS, rather than the ASBE 25 and IFRS.

#### **4.3.1.4 Adjustment on Claim Reserves**

In its 2006 original result, Ping An Insurance made an adjustment with regards to the difference in claim reserve under the IFRS and Chinese GAAP for an amount of RMB 149 million in net profit and RMB 1,401 in total equity, while China Life Insurance made an adjustment of RMB 262 million for the same item. However, in the comparison with the restated reconciled figures shown in the 2007 results for both of the two companies, there was no such adjustment made in 2007, which possibly indicates the effective changes in the new ASBE 25 and ASBE 26. As required by the two standards, adequacy tests should be

undertaken for the estimating reserves<sup>3</sup> of the insurance policies at the end of each accounting period. Furthermore, in a situation where the test indicates that the current estimate of reserves was not adequate, changes need to be made accordingly. Hence, the new ASBE 25 and ASBE 26 is consistent with the IFRS in this particular requirement. However, an adequacy test on a timely basis was not required under the old Chinese GAAP. As a result, while the adequacy test was undertaken and changed the estimate that best measures the claim reserves under the IFRS but not under the old Chinese GAAP in 2006, it leads to a different amount of net profit and total equity reported under the two sets of standards in 2006. Conversely, an adequacy test was undertaken and changes the estimates as required under both the IFRS and the new ASBE 25, therefore reporting figures of claim reserves are consistent under the two sets of accounting standards.

#### **4.3.2 Category of Industry – Coal-Mining**

The current analysis aims to identify the items that contribute to the differences under the IFRS and Chinese GAAP in the coal-mining industries. The companies that fall into the category of coal-mining industry are those principally engaged in coal mining and the production of coal products. Of the 47 sample companies, only one fits into the coal-mining industry category, namely the *Yanzhou Coal Mining Company* (“*Yanzhou Coal Mining*”). The reconciled statement on the net profit and total equity 2007 results extracted from the company’s financial reports are listed in Table 16. However, the reconciled items in total equity and net profit for Yanzhou Coal Mining were not analysed, as the 2006 financial report could not be obtained.

As found in the reconciled statements for the differences between the IFRS and Chinese GAAP, Yanzhou Coal Mining has made adjustments in three main items. There are the adjustment of reform and specific development funds, the adjustment for Wei Jian Fei and work safety expense, and adjustment for the different treatment of business combination under the IFRS and Chinese GAAP. However, an adjustment for the different treatment of business combination and work safety expense under the two sets of accounting standards are also likely to occur in other industry categories, and are not specific to the coal-mining industry. The discussion on this item (adjustment for business combination) will be explained

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<sup>3</sup> The related reserves for life insurances include: claim reserves, policyholders’ reserves. The related reserve for health insurance is long-term reserve.

in 4.3.5 (General Items Contributing to the Differences). As a result, only the adjustment made on reform and specific expense fund and Wei Jian Fei and work safety expense will be discussed here.

#### 4.3.2.1 Adjustment on Wei Jian Fei & Safety Expense

The items that have caused the largest discrepancies are found in the adjustment of the Wei Jian Fei and work safety expense. The Wei Jian Fei are the production maintenance expenses required by the Chinese government authorities specifically for the coal-mining industry. As required by the Chinese government, Wei Jian Fei is calculated and recorded as the cost of sales and credited to the long-term payables based on the raw coal mined with the purpose of technical improvement and the production maintenance of coalmines. Furthermore, as required by the Chinese regulation “Caijian [2004] #119 – *Method for Accrual and Usage of Work Safety Expense*”, companies engaged in coal-mining activities should incur the safety expenses based on the unit of production of coal volume with the purpose of improving safety standards and the maintenance of coal production machinery. Similar to the Wei Jian Fei, the provision for safety expense is credited to the long-term payables and the provision is reduced when the expenditure actually occurs. However, in contrast to the Chinese regulations, these expenses are regarded as period expenses that are only recognised when they actually occur. As a result, these provisions specifically applied to coal-mining industries have caused up to RMB 343 million in discrepancies in net profit and RMB 1,001 million in total equity differences in 2007.

**Table 16: Yanzhou Coal Mining Company Limited – Profit & Equity Adjustments**  
(Prepared by author)

	Net Profit	Total Equity
	RMB (million)	
<b>Figures reported under Chinese GAAP</b>	<b>2,693</b>	<b>19,616</b>
<b>Adjusted items:</b>		
Wei Jian Fei & work safety expense	343	1,001
Reform & specific expense funds	164	612
Business combination	(6)	417
Deferred tax	33	(232)
Other	3	4
<b>Net profit reported under IFRS</b>	<b>3,230</b>	<b>21,418</b>

#### **4.3.2.2 Adjustment on Reform & Specific Development Fund**

Similar to Wei Jian Fei and safety expense, the provision for reform and specific development fund is required by the Chinese regulation. In light of the Chinese regulation “Caiqi [2004] #28 – *Notice of Setting up Reform and Specific Development Fund for Provincial Key Corporations*”, the reform and specific development fund should be provided by coal-mining industries based on the unit of coal-production volume with the intention of spending it on future mine construction. Similar to the Wei Jian Fei and safety expenses, the provision for reform and specific development fund is credited to the long-term payables and the provision is reduced when the expenditure is actually incurred. As a result, the provision for reform and specific development funds have resulted in the second largest difference, RMB 164 million in net profit gap and RMB 612 million in the equity gap, reported by Yanzhou Coal Mining under their IFRS and Chinese GAAP annual reports.

#### **4.3.3 Category of Industry – Petroleum, Oil & Gas**

The companies that fall into the petroleum, oil and gas industry as specified in this report are those principally engaged in the exploration, development and production of petroleum, oil and gas products. The Chinese GAAP that relates to the accounting and financial reporting of petroleum, oil and gas companies are set out in ASBE 27 – “*Extraction of Petroleum and Natural Gas*”. The ASBE 27 is a new standard that applies to the recognition, measurement and disclosure requirement of assets and liabilities arising in relation to the exploration, exploitation and production of petroleum, oil and natural gas products. In a comparison of the new ASBE 27 and the old Chinese GAAP, the new ASBE 27 tends to formalise the current market practice with regards to the petroleum, oil and gas development industries and clarifies the areas that not clearly covered under the old standards. For example, the new ASBE 27 requires the successful efforts method<sup>4</sup> to be adopted for expenditures arising from the exploration of petroleum, oil and natural gas, and clarifies the recognition and measurement model for petroleum, oil and gas properties. Further, the ASBE 27 requires the costs of obtaining the interests, wells and the related facilities to be recognised and measured with the historical costs.

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<sup>4</sup> Successful efforts model relates to the treatment of expenditures arising from the exploration. More specifically, the successful efforts model requires the expenditures on exploratory drilling costs and the related spending on facilities to be capitalised when the entities find that the well contains proved reserves after the drilling of a well.

Of the 47 sample companies analysed earlier in this section, only two fall into this category of industry namely, *China Petroleum and Chemical Corporation* (“*China Petroleum*”), and *PetroChina Company Limited* (“*PetroChina*”). The reconciled statements extracted from the two sample companies’ financial reports are listed in Table 17 to 20. Table 17 and 18 list the reconciled statements of the adjusted items in net profit and total equity for China Petroleum, respectively, while Table 19 and 20 list the reconciled items in net profit and total equity for PetroChina. However, since the 2006 financial report could not be obtained for PetroChina, only the restated amount will be discussed for the 2006 results.

**Table 17: China Petroleum & Chemical Corporation – Profit Adjustments (Prepared by author)**

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Net profit reported under Chinese GAAP</b>	<b>57,153</b>	<b>52,983</b>	<b>50,664</b>
<b>Adjusted items:</b>			
Depreciation of oil & gas properties	523	2,478	2,478
Land-use rights	30	30	30
Business combination	-	-	1,010
Pre-operating expenditure	-	-	703
Gain on Debt restructuring	-	-	486
Government grants	-	-	12
Deferred tax	1,037	(453)	(345)
<b>Net profit reported under IFRS</b>	<b>58,743</b>	<b>55,038</b>	<b>55,038</b>

**Table 18: China Petroleum & Chemical Corporation – Equity Adjustments (Prepared by author)**

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Total equity reported under Chinese GAAP</b>	<b>326,347</b>	<b>281,799</b>	<b>254,875</b>
<b>Adjusted items:</b>			
Depreciation of oil & gas properties	11,339	10,816	10,816
Land use rights	(1,042)	(1,072)	(1,072)
Business combination	-	-	27,406
Pre-operating expenditure	-	-	(64)
Government grants	-	-	576
Deferred tax on above adjustment & deferred tax	(3,886)	(4,886)	(5,880)
<b>Total equity reported under IFRS</b>	<b>332,758</b>	<b>286,657</b>	<b>286,657</b>

**Table 19: PetroChina Company Limited – Profit Adjustments (Prepared by author)**

	2007	2006
		Restated
	RMB (million)	
<b>Net profit reported under Chinese GAAP</b>	<b>143,494</b>	<b>142,747</b>
<b>Adjusted items:</b>		
Depreciation of oil & gas properties	7,625	9,284
Revaluation of fixed assets	457	81
Impairment of loss	-	4
Disposal difference due to impairment loss	(142)	-
Safety funds	3,559	-
Other	57	14
Deferred tax	179	(2,733)
<b>Net profit reported under IFRS</b>	<b>155,229</b>	<b>149,397</b>

**Table 20: PetroChina Company Limited – Equity Adjustments (Prepared by author)**

	2007	2006
		Restated
	RMB (million)	
<b>Total equity reported under Chinese GAAP</b>	<b>715,071</b>	<b>567,595</b>
<b>Adjusted items:</b>		
Depreciation of oil & gas properties	79,325	71,700
Revaluation of fixed assets	(409)	(866)
Impairment of loss & the resulted disposal difference	92	234
Safety funds	3,559	-
Other	(135)	263
Deferred tax	(21,156)	(21,335)
<b>Total equity reported under IFRS</b>	<b>776,347</b>	<b>617,591</b>

As found in the reconciled statements, for the differences between the IFRS and Chinese GAAP for the two companies, the adjustment on depreciation of oil and gas properties and the adjustment on safety funds are the common adjusted items for both of the two companies. In addition, China Petroleum has also made adjustments in relation to the land-use rights, business combination, pre-operating expenses, gain on debt restructuring and government grants, while PetroChina has made adjustments in relation to the revaluation of fixed assets and impairment of losses. However, only the adjustment on the depreciation of oil and gas properties, pre-operating expenses, gain on debt restructuring, government grants, and impairment losses will be discussed in the current analysis, while the remaining four items (land-use rights, business combination, revaluation of fixed assets and safety funds) are the repeated in other industries, and will be discussed in 4.3.5 (General Items Contributing to the Differences).

#### **4.3.3.1 Adjustment on Depreciation of Oil & Gas Properties**

With regards to the adjustment of depreciation of oil and gas properties<sup>5</sup> made by China Petroleum and PetroChina in both 2006 and 2007, the new ASBE 27 introduces the unit of production method, which is consistent with the IFRS. Therefore, the new ASBE 27 provides the option to use the method to depreciate the oil and gas properties either with the straight-line method or the use of the unit-of-production method, while the old Chinese GAAP only permits the use of the straight-line method.

However, both of PetroChina and China Petroleum used the straight-line method to depreciate the oil and gas properties under the Chinese GAAP and used the unit-of-production method under the IFRS. This has caused the largest amount of difference for both of the companies. PetroChina showed a difference of RMB 7,625 million in net profit and RMB 79,325 million in total equity, while China Petroleum incurred a net-profit difference of RMB 523 million and RMB 11,339 million in difference in total equity reported under the two sets of standards of their 2007 results. Indeed, when comparing the reconciled amount of the oil and gas depreciation reported in 2006 with the 2006 restated reconciled amount reported in the 2007 reconciled statements, both of the amounts are the same. This may indicate that the differences of oil and gas property depreciation reported under the IFRS and Chinese GAAP were likely caused by the options provided for the different methods of depreciation for oil and gas properties chosen by the companies, rather than a difference between ASBE 27 and IFRS.

#### **4.3.3.2 Adjustment on Pre-operating Expenditure**

China Petroleum made an adjustment on the pre-operating expenditure in the 2006 original reconciled amount between the IFRS and Chinese GAAP. Pre-operating cost relates to the expenditures spent during the start-up period, for example, the pre-operating costs for the function of new facilities or business, spending on start-up activities or expenditures on introducing a new product or process. Under the old Chinese GAAP, the standard required

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<sup>5</sup> The depreciation of oil and gas properties refers to the value of the oil and gas properties that were transferred to the cost of oil and gas products being developed in the current period of development progress.



pre-operating costs to be treated as deferred expenses until the beginning of such operations if the pre-operating costs did not meet the criteria of intangible assets<sup>6</sup>.

In contrast, the IAS 38.68 requires such pre-operating costs to be charged into the profit and loss incurred. As a result, in 2006, the company made an adjusted amount of RMB 703 million in net profit and RMB 64 million in total equity in relation to the different treatment of pre-operating expense under the IFRS and Chinese GAAP. However, in a comparison between the old Chinese GAAP and the new ASBE 6, the ASBE 6.6 requires such pre-operating expenditures that do not meet the criteria of an intangible asset to be expensed when incurred. Hence, the new ASBE 6 is consistent with the IFRS in this particular requirement and, therefore, no reconciled amount was made by the China Petroleum for such different treatment of pre-operating expenditure under the IFRS and Chinese GAAP in 2007 and the restated 2006 result.

#### **4.3.3.3 Adjustment on Gain on Debt Restructuring**

China Petroleum also made an adjustment in relation to the different measurement of the restructuring of debt between the IFRS and Chinese GAAP in its 2006 reconciled statement. As found in the company's 2006 reconciled statement, China Petroleum made adjusted amount of RMB 486 millions in net profit in relation to the gains from debt restructuring, while the comparative restated reconciled figure of this item did not appear in the 2007 reconciled statement, which possibly reflects the change in accounting policies under the old Chinese GAAP and the new Chinese GAAP.

With regards to the old Chinese GAAP, the standard defines the issue of debt restructuring with a more general term that covers all the arrangements between the debtor and creditor that result in changes or modifications to the conditions in debt obligations. Indeed, the assets or equity interests that relate to the debt restructuring were recorded at carrying amount with any difference that resulted from debt restructuring recognised in the capital reserve. The new Chinese GAAP relating to the debt restructuring is set out in the ASBE 12 – “*Debt Restructuring*”. The new standard redefines the concept of debt restructuring to the event that a creditor approves concessions to a debtor in accordance to the mutual agreement between

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<sup>6</sup> The criteria to recognise intangible assets include: the asset is separable or identifiable while the costs of such intangible assets are reliably measurable with future economic benefits.

the creditor and debtor or a judgement by court as per ASBE 12.2. Indeed, the major change between the old Chinese GAAP and the ASBE 12, is the introduction of the fair-value-measurement method for assets or equity interests received or surrendered between a creditor or debtor as set out in ASBE 12.5<sup>7</sup> and ASBE 12.10<sup>8</sup>.

Furthermore, both ASBE 12.5 and ASBE 12.10. require the differences arising from debt restructuring to be credited to the income statement, which is generally consistent with the IAS 39 that covers the accounting policies for the recognition and measurement of financial instruments<sup>9</sup>. As a result of the change between the old Chinese GAAP and the new ASBE 12, the original adjustment made for debt restructuring gain shown in China Petroleum's 2006 reconciled statement does not seem to have appeared under the restated 2006 comparative figures in the 2007 reconciled statement.

#### **4.3.3.4 Adjustment on Government Grants**

The last item for which China Petroleum made an adjustment in the 2006 reconciled statement for the difference between the IFRS and Chinese GAAP, relates to the treatment of government grants. Under the old Chinese GAAP, the standard required government grants in the form of monetary items to be recognised as income on a cash basis, while non-monetary government grants relating to assets should be credited to capital reserve. In contrast, the new ASBE 16 – “*Government Grants*” requires government grants to be measured at the accrual basis. More specifically, grants in the form of monetary items are charged to income statements either by recognised in other income, or by a deduction against the related expenses as per ASBE 16.8.

However, ASBE 16.7 requires assets-related grants to be initially recognised as deferred income and further recorded in the income statement based on a systematic basis over the useful life of the asset. Indeed, it should be noted that the new ASBE 16 is generally

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<sup>7</sup> ASBE 12.5 sets out the accounting policies for debtors.

<sup>8</sup> ASBE 12.10 sets out the accounting policies for creditors.

<sup>9</sup> It should be noted that the IFRS does not prescribe accounting policies specifically for debt restructuring as is done under the Chinese GAAP. Hence, issues surrounding debt restructuring are covered in the scope of financial instrument. Nevertheless, the principals of accounting measurements relating to debt restructuring between the IFRS and Chinese GAAP are generally consistent with each other, where both sets of accounting standards adopt the fair value measurement method.

consistent with the IFRS after the changes made from the old Chinese GAAP. However, in addition to the method of treating the asset-related grants in deferred income at the initial measurement as required under the new ASBE 16.7, the IAS 20 – “*Accounting for Government Grants and Disclosure of Government Assistance*” also permits the grants to be offsets against the related expense<sup>10</sup>.

Therefore, as a result of the different treatment of asset-related government grants under the IFRS and the old Chinese GAAP, China Petroleum made adjustments of RMB 12 million in net profit and RMB 576 million in the total equity reported under the IFRS and Chinese GAAP in its 2006 results. However, in a comparison between the original adjustment made on the asset-related grant in the 2006 reconciled statement and the restated 2006 comparative figure of the adjustment shown in the 2007 reconciled statement, the asset related grants that originally included in the capital reserve under the old Chinese GAAP in 2006, are now being treated as deferred income and recorded in the income statement over the useful life of the related asset under the new ASBE 16.7 in 2007. Therefore, in China Petroleum’s 2007 reconciled statement, the restated 2006 comparative reconciled figure did not include the adjustment of government grants.

#### **4.3.3.5 Adjustment on Impairment of Loss & Disposal difference Due to Impairment Loss**

In addition to the items identified above, PetroChina made adjustments relating to the reversal of impairment loss under the IFRS. It should be noted that the ASBE 27 para. 7 sets different requirements for the impairment of mineral interests in proved and unproved properties, where the ASBE 27 requires entities to undertake an impairment test for mineral interest in unproved properties at least once a year, while the impairment test for mineral interest in proved properties should be taken when there is an indication of impairment as required by ASBE 8 – “*Impairment of Assets*”. Furthermore, as required by both ASBE 8 and ASBE 27, the entities are not allowed to reverse the impairment loss, which is consistent with the old Chinese GAAP.

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<sup>10</sup> For example, to deduct the grant from the carrying amount of the related asset by reducing the depreciation expenses if the grants relating to a depreciable asset.

However, in contrast to the Chinese GAAP, the IAS 36 allows the reversal of impairment loss recognised in previous periods in a situation where the recoverable amount of the long-term assets is higher than its carrying amount. This has led to a difference of RMB 4 million in PetroChina's profit reported under the IFRS and Chinese GAAP in 2006, with a subsequent adjustment on the account for the disposal of that particular asset in 2007.

#### 4.3.4 Category of Industry – Property Leasing & Development

The companies that fall into the property-leasing and development industry as specified in this report are those principally engaged in land and property development, property leasing, and property investment. Of the 47 sample companies, only one fell into the property-leasing and development category, *Beijing North Star Company Limited (Beijing North Star)*. The reconciled statement extracted from the sample company's financial reports is listed in Table 21 and 22. Table 21 lists the reconciled statement of the adjusted items in net profit for Beijing North Star, while Table 22 lists the adjusted items in total equity for the company.

**Table 21: Beijing North Star Company Limited – Profit Adjustments (Prepared by author)**

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Net profit reported under Chinese GAAP</b>	<b>328</b>	<b>339</b>	<b>335</b>
<b>Adjusted items:</b>			
Revaluation of investment property	11	32	32
Depreciation of investment properties	35	38	38
Revaluation of fixed assets	2	6	6
Land-use rights	(60)	(19)	(19)
Business combination	(3)	-	-
Financial assets & liabilities	-	-	3
Effect of change in tax rate	151	-	-
Other	(1)	(1)	-
<b>Net profit reported under HKFRS</b>	<b>463</b>	<b>395</b>	<b>395</b>

**Table 22: Beijing North Star Company Limited – Profit Adjustments (Prepared by author)**

	2007	2006	2006
		Restated	Original
	RMB (million)		
<b>Total equity reported under Chinese GAAP</b>	<b>8,232</b>	<b>8,040</b>	<b>8,045</b>
<b>Adjusted items:</b>			
Revaluation of investment property	668	656	656
Depreciation of investment properties	551	516	516
Revaluation of fixed assets	(282)	(284)	(284)
Land-use rights	(92)	(32)	(32)
Financial assets & liabilities	-	-	(3)
Effect of change in tax rate	151	-	-
Other	-	2	-
<b>Total equity reported under HKFRS</b>	<b>9,228</b>	<b>8,898</b>	<b>8,898</b>

As per the reconciled statements for the differences between the IFRS and Chinese GAAP for Beijing North Star, five major items required adjustment, namely revaluation of investment property, depreciation of investment properties, revaluation of fixed assets, land-use rights, business combination, financial assets and liabilities. Nevertheless, only the adjustments made on the revaluation of investment property and depreciation of investment properties will be discussed in this analysis. The remaining three items will be discussed in 4.3.5 (General Items Contributing to the Differences), as those three items also occurred in other industries.

#### **4.3.4.1 Adjustment on Revaluation of Investment Properties**

It is clear that the major issues surrounding the analysis of the property-leasing and development industry is the recognition, measurement and disclosure of investment properties under the two sets of accounting standards. However, it should be noted that the issues relating to investment properties are not specific to the property-leasing and development industry, but also apply to other industries that hold a certain number of investment properties. Nevertheless, companies engaged in property leasing often holding more investment properties than companies in other industries. As a result, the property-leasing and development industry has more obvious significant differences in relation to the measurement of investment properties than other industries.

With regards to the adjustment made for the value of investment property held by Beijing North Star, the new Chinese GAAP that relates to the issue is set out in ASBE 3 –

*“Investment Property”*. In a comparison between the old and new Chinese GAAP, the old Chinese GAAP requires the assets held as investment property to be included as either fixed assets, which are subject to depreciation, or to be recognised as other long-term assets, which subject to amortisation for property developers. Hence, the investment properties are recorded and presented in the same line as fixed assets or other long-term assets in the annual reports under the old Chinese GAAP rather than presented in an additional line that specifically relates to the investment properties as the new ASBE 3 requires. In other words, the new ASBE 3 provided a more detailed disclosure of the investment properties than under the old Chinese GAAP.

Furthermore, the most significant change in the new ASBE 3 has also provided an option for the subsequent measurement of investment properties, while the old Chinese GAAP only permits the cost model. In other words, the revaluation model may be used for the subsequent measurement of investment properties if the entities can provide evidence that the fair value of the investment properties can be reliably determinable on a continuing basis. Indeed, in the situation where the fair value is used under the new ASBE 3, the entities are no longer providing the depreciation or amortisation for investment properties as was required under the old Chinese GAAP. Rather, the new ASBE 3 requires entities to account for the difference between the carrying amount and the fair value of the investment properties in the profit and loss, which is in a way similar to the requirements of the IFRS, where the IAS 40 – *“Investment Property”* allows both the cost model and the revaluation model for the subsequent measurement of investment properties.

However, with the old Chinese GAAP only allowing the cost model and a relatively stricter application of the fair value model than the IFRS, this leads to a rare situation where Chinese companies use the revaluation model for subsequent measurement of investment properties under the Chinese GAAP. Hence, where the investment of real properties held by Beijing North Star are carried at fair value under the IFRS but cost value under the Chinese GAAP for both 2006 and 2007, this has contributed approximately RMB 11 million in the total net profit difference and RMB 668 million of the total equity difference reported under the two sets of accounting standards in 2007. The difference in the results of the net profit and total equity equate to RMB 32 million and RMB 656 million, respectively in 2006.

#### 4.3.4.2 Adjustment on Depreciation of Investment Properties

The different amount of investment properties recorded under the IFRS and Chinese GAAP may further influence the depreciation amount of the investment properties.

As mentioned, the investment of real properties is measured at cost in the majority of situations under the Chinese GAAP. Only do rare circumstances (where evidence shows the fair value of the investment real property can be reliably determinable on a continuing basis) permit the revaluation model. Therefore, for the investment in real properties carried at fair value, the ASBE 3 para. 11 further requires that this continue to be measured at fair value at each balance date until the disposal of the real properties. However, for the investment in real properties carrying the cost model, the ASBE 3 requires that the real properties be depreciated in accordance with the ASBE 4 – *“Fixed Assets”*. Certain changes were undertaken in the new ASBE 4, where the new ASBE 4 adopts the single general accounting practice for both the initial and subsequent measurement of the fixed assets, whereas the old Chinese GAAP adopts two separate recognition principles for the initial and subsequent measurement of fixed asset.

Furthermore, the dismantling and removal expenditure that used to be prohibited for capitalisation under the old Chinese GAAP is now permitted under the new ASBE 4. However, it also should be pointed out that the changes in the new ASBE 4 are more likely to be changes to the more detailed description and explanation of applying the standards, rather than changes in the measurement method of fixed assets from the old Chinese GAAP to the new ASBE 4. More specifically, only the cost model may be used for the subsequent measurement of fixed assets for both the old and new Chinese GAAP, while the revaluation model is also permitted under the IFRS. In other words, for investment properties that carried the cost model under the Chinese GAAP, the ASBE 4 requires the investment properties to be carried at cost less the accumulated depreciation.

In contrast, IFRS permits revaluation and the IAS 40 para. 55 requires that the investment in real properties continue to be measured at fair value until the disposal of properties. In other words, no depreciation is required under the IFRS. As a result, for the investment in real properties that are carried at cost model under Chinese GAAP but revalued under the IFRS, there will be a differential caused by depreciation under the Chinese GAAP. Indeed, for a company that held a large amount of investment in real property, such as Beijing North Star,

the depreciation (RMB 35 million in net profit and RMB 551 million in total equity) may have caused large discrepancies between the IFRS and Chinese GAAP.

### **4.3.5 General Items Contributing to the Discrepancies**

The current analysis discusses the repeated items that required adjustment between the IFRS and Chinese GAAP by the four identified industries (insurance, coal mining, petroleum and property leasing and development). Four items will be discussed in this analysis: financial assets and liabilities, revaluation and depreciation of fixed assets, business combination, and land-use rights.

#### **4.3.5.1 Adjustment on Financial Assets & Liabilities**

Three companies were analysed to find out the items that contributed to the discrepancies under the IFRS and Chinese GAAP, which resulted in adjustment of the financial assets and liabilities. These companies were Beijing North Star, Ping An Insurance, and China Life Insurance. Similar to the findings on 4.3.1.2 (Adjustment on Policyholders' Reserves for Life Insurance), the ASBE 22 – *“Financial Instruments: Recognition and Measurement”* is the new standard introduced under the Chinese GAAP that covers the recognition, measurement, and disclosure accounting requirements for financial assets and liabilities.

Generally, the requirements relating to the financial assets and liabilities under the Chinese GAAP are similar and consistent with the standards under the IFRS. The most significant change relates to permission to use fair value measurement for the initial measurement of financial instruments and the newly introduced types of financial assets (held-to-maturity profits and loss, available-for-sale investments, financial assets measured at fair value in profit and loss, loans and receivables) and financial liabilities (financial liabilities measured at fair value in profit and loss and other financial liabilities measured at amortised cost using the effective interest method) .

In other words, the Chinese GAAP requirements on the treatment of financial instruments are generally consistent with the IFRS. As a result, this reduced the large discrepancies of RMB 15,393 million in net profit for China Life Insurance, RMB 3,096 million in net profit and RMB 16,935 million in equity for Ping An Insurance, while Beijing North Star reduced the differences of RMB 3 million for both net profit and equity reported under the two sets of accounting standards.



#### 4.3.5.2 Adjustment on Business Combination

Three companies, Yanzhou Coal Mining, China Petroleum and Beijing North Star, have made adjustments in relation to business combination.

China Petroleum made adjustments in relation to the goodwill arising from long-term equity investments acquired through business combination involving entities not under common control in their 2006 original reconciled statement. However, no same adjustment was being made in the 2006 restated figures, which may possibly indicate the changes in the new Chinese GAAP.

Under the old Chinese GAAP, the standard only permits the assets, liabilities and contingent liabilities purchased by the investor from the investee to be measured at the carrying amount showing in the investee's book, with any excess of the cost of investment to be recognised as goodwill and subjected to amortisation or, in a situation where the cost of investment is less than the carrying amount of the investee's net identifiable assets, negative goodwill is recognised and should be credited to the income statement. However, in contrast to the old Chinese GAAP, the new ASBE 20 – “*Business Combination*” requires similar standards, which is generally consistent with the IFRS 3 – “*Business Combination*” to adopt the fair value model for the measurement of the investee's assets, liabilities and contingent liabilities purchased by the investor at the combination date. Indeed, similar to the IFRS 3, the ASBE 20.4 further requires the differences between the costs of business combination and the interests purchased by the investor over the investee's net identifiable assets to be recognised as goodwill, which is subject to impairment tests at least once a year, or to be recognised in the income statement for negative goodwill.

In other words, the new ASBE 20 introduces the fair value measurement and prohibits the amortisation of goodwill, which is generally consistent with the IFRS 3, while the old Chinese GAAP requires the use of a carrying amount for the measurement of the investee's net identifiable assets and the amortisation of goodwill, which is different to the treatment under the IFRS. As a result, China Petroleum made an adjusted RMB 1,010 million in net profit and RMB 27,406 million in total equity that arose from the different accounting policies applied to long-term equity investment acquired through business combination involving entities not under common control between the IFRS and the old Chinese GAAP in 2006. Furthermore, since the new ASBE 20.4 is generally consistent with the IFRS 3 on this

particular issue, there was no similar adjustment made in the 2006 restated amount in the 2007 reconciled statement for China Petroleum.

Nevertheless, differences still exist between the IFRS and the new ASBE 20 for Yangzhou Coal Mining and Beijing North Star in the measurement of long-term equity investment purchased through business combination involving entities under common control. Under IFRS, assets and liabilities purchased by the company during business combination are measured at the fair value of identifiable assets and liabilities at the date of acquisition regardless of whether the business combination involves entities under common control or not, with the excess of purchasing consideration paid recognized as goodwill. However, under the Chinese GAAP, assets and liabilities purchased by the company in business combination involving entities under common control are measured at the carrying amount at the date of combination. The excess carrying value of purchase consideration paid by the company over its share of carrying value of identifiable net assets for business combination involving entities under common control reduces the share premium of capital reserve or retained earnings. As a result, there are differences between the two standards for business combination involving entities under common control.

#### **4.3.5.3 Adjustment on Revaluation of Fixed Assets**

The two companies, Beijing North Star Company and PetroChina, that were analysed to ascertain the items contributing to the discrepancies under the IFRS and Chinese GAAP, made adjustment in relation to the revaluation and depreciation of fixed assets. Chinese GAAP regulations relating to fixed assets are set out in the ASBE 4 – “*Fixed Assets*”). Similar to the issues explained in 4.3.4.1 (Adjustment on Revaluation of Investment Properties) and 4.3.4.2 (Adjustment on Depreciation of Investment Properties), the changes made in ASBE 4 from the old Chinese GAAP are more likely to be the changes to a more detailed description and explanation of applying the standards, rather than changes in the measurement method of fixed assets.

Therefore, only the cost model is allowed for the subsequent measurement of fixed assets under the Chinese GAAP, while the IFRS permits both the revaluation and cost models, which cause differences in the amount of fixed assets recorded under the two set of accounting standards. As a result, for the fixed assets carried at the cost model under the Chinese GAAP but revalued under the IFRS for Beijing North Star and PetroChina, there

were differences of RMB 2 million in profit and RMB 282 million in equity for Beijing North Star, while PetroChina incurred differences of RMB 457 million and RMB 409 million in net profit and total equity, respectively.

#### **4.3.5.4 Adjustment on Land-use-rights**

Two companies, China Petroleum and Beijing North Star Company, analysed to ascertain the items contributing to discrepancies under the IFRS and Chinese GAAP, made adjustments in relation to the land-use rights. The adjustment in relation to land use right is considered to be a frequently occurred item due to the unique environment in China. The Chinese government owns all land in China, and therefore, no private ownership of lands. As a result, all business and individual lease lands from the Chinese government for a maximum period of 75 years.

The Chinese GAAP separates the recognition and measurement of land-use rights by two standards. The ASBE 6 – “*Intangible Assets*” covers the land-use right acquired for business or individual private use, while ASBE 3 – “*Investment Properties*”) also applies to the land-use right for sale or rental of what are considered to be investment properties.

As mentioned in 4.3.4.1 (Adjustment on Revaluation of Investment Properties), the major change in the Chinese GAAP from the old standards to the new ASBE 3 is the option provided for the revaluation model. In other words, in a situation where the land-use rights are held as an investment property, the ASBE 3 requires the land-use right to be measured by cost model and subjected to amortisation unless the fair value of the land-use rights can be obtained with reference to a price quoted from an active market on a continuous basis. However, both cost model and revaluation model are permitted under the IFRS, where IAS 40 para. 55 requires that the assets continue to be measured at fair value at each balance date until the disposal of properties. In other words, neither amortisation nor impairment of land-use rights is required under the IFRS. As a result, the land-use rights held by China Petroleum and Beijing North Star determined by the fair value under the IFRS but measured by the cost model under the Chinese GAAP for both 2006 and 2007, caused a significant difference of RMB 30 million in net profit and RMB 1,042 million in equity for China Petroleum. Beijing North Star incurred differences of RMB 60 million in net profit and RMB 92 million in total equity.

#### **4.3.6 Summary of Findings on Research Question Three**

With regards to the insurance companies, four common items required adjustments between the IFRS and Chinese GAAP. These were adjustment on policy acquisition costs, adjustment on policyholders' reserves for life insurance, adjustment on unearned premium reserves and claim reserves. However, of the four adjusted items that specifically relate to the insurance companies, only the adjustment on policy acquisition costs, and claim reserves were likely to be caused by the different measurement and treatment requirements under the IFRS and Chinese GAAP. The adjustment on unearned premium reserves and policyholders' reserves for life insurance seems to a result of the different requirements under the CIRC and the IFRS rather than the Chinese GAAP and the IFRS.

Similar to the insurance industry, the discrepancies in the reporting figures (safety expense and specific development funds) that specifically relate the coal-mining industry also seem to have occurred due to the specific requirements imposed on the industry by the Chinese regulations.

With regards to petroleum, oil and gas refiners, the depreciation of oil and gas properties is the major concern of this particular industry group. Although the new Chinese GAAP is generally consistent with the IFRS on the method used to deprecate oil and gas properties, the options for the method under the Chinese GAAP may cause large discrepancies if entities used different depreciation method under the two sets of accounting standards. Furthermore, for the adjustment on pre-operating expenditure, gain on debt restructuring, and government grants; the observation for the petroleum industry suggests the likelihood of the convergence between the IFRS and Chinese GAAP.

The adjustment on the revaluation and the subsequent difference in the depreciation of investment properties caused large discrepancies for investment properties. Nevertheless, these differences were caused by the options provided under the Chinese GAAP after changes made from the old to the new Chinese GAAP.

Besides, the new Chinese GAAP has made generally consistent changes to the IFRS in relation to the treatment of financial instruments and business combination involving entities not under common control. However, the accounting regulations for business combination under common control and the revaluation of fixed assets still showed discrepancies between

the two sets of accounting standards. Finally, the measurement options provided under the IFRS and the Chinese GAAP for land-use rights categorised as investment properties may also have led to differences under the two sets of accounting standards.

## CHAPTER FIVE

### SUMMARY & CONCLUSIONS

The purpose of this chapter is to summarise and provide conclusions for the findings in the study, followed by a discussion of limitations and suggestions for future research.

As mentioned in Chapter One, the purpose of this research is to ascertain the progress of the move to align the Chinese accounting systems with the IFRS based on the 2006 ASBE that took effect from 1 January 2007. A before-and-after sample design that examines both the 2006 and 2007 financial data was used to provide a better understanding of the changes made from the 2001 ASBE to the 2006 ASBE. This also provided an indication of the progress made by the 2006 ASBE in the process to harmonise Chinese GAAP with the IFRS. Financial data were collected from the 47 Chinese-listed companies that issued both A- and H-shares in 2006 and 2007. The three main objectives of the research are presented by three research questions. Firstly, it examined whether or not the Chinese GAAP had harmonised with the IFRS after the implementation of the 2006 ASBE. Secondly, it investigated the relationship between industries and the degree of discrepancies in the harmonisation. Lastly, the research identified the major items that contributed to the discrepancies reported by the industries.

The remainder of this chapter has four main sections: Sections One to Three provide a summary and conclusions of the findings from the three research questions, while the last section discusses the limitations of the current research and recommendations for future research.

#### 5.1 CONCLUSIONS ON THE PROGRESS OF ACCOUNTING HARMONISATION IN CHINA

The first research question aims to investigate the progress of harmonisation in Chinese GAAP with the IFRS. Again, this research question is tested from four different dimensions as listed as below:

**Dimension I:** Tests the pattern of changes in the net profit and total equity gaps reported between the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension II:** Identifies the specific changes in net profit and total equity gaps reported between the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension III:** Investigates the significance of changes in the amount of net profit and the total equity gap between 2006 and 2007.

**Dimension IV:** Examines the success of accounting harmonisation in Chinese GAAP with the IFRS between 2006 and 2007.

The first dimension tested the tendency for overstatement/understatement in reporting figures prepared in accordance to the Chinese GAAP, while the second examined whether the gaps increased, decreased, or remained consistent over 2006 and 2007. Dimension Three investigated the significance of changes in net profit and total equity gaps between 2006 and 2007, while the last dimension tested the success of accounting harmonisation by comparing the mean overall index for net profit and total equity between 2006 and 2007.

A comparison of the net profit and total equity amount reported under the IFRS and Chinese GAAP in the 2006 and 2007 results of the 47 sample companies, showed that the number of companies reporting higher net profit and total equity under IFRS than the Chinese GAAP dropped from 2006 to 2007, while the number of companies reporting the same amount of net profit and total equity increased from 2006 to 2007. Nevertheless, the results still show evidence that net profit and total equity prepared in accordance to the IFRS tends to be higher than reported under the Chinese GAAP in both 2006 and 2007. This finding is consistent with Kuan & Noronha, (2007) but contrary to Chen et al., (1999, 2002), Lin & Wang, (2001) and Hussain et al., (2008). Chen et al., (1999, 2002), and Lin and Wang, (2001) found that there is a tendency for a higher amount of net profit to be reported under Chinese GAAP than in the IFRS. Hussain et al., (2008) contended that a similar number of cases reported higher IFRS earnings to those reporting higher Chinese GAAP earnings, rather than a frequency of higher Chinese GAAP than IFRS earnings.

Different findings may be attributed to the different sample periods used in previous research. Chen et al., (1999, 2002) covered a sample period from 1994 to 1997, and 1997 to 1999, while Lin and Wang, (2001) examined a sample period from 1995 to 1998. Although their sample periods overlapped, this may be an indication that reporting figures prepared under the 1992 and 1998 ASBE tend to be significant higher than IFRS earnings.

With regards to Hussain et al., (2008), the study covered a sample period from 2000 to 2003, which was subject to the 1998 and 2001 ASBE, and found there were similar numbers of cases reporting higher Chinese GAAP earnings to those reporting higher IFRS earnings. Findings in Hussain et al., (2008) may be considered as a turning point between the overstatement and understatement of Chinese GAAP earnings. With findings before Hussain et al., (2008), 1992 and 1998 ASBE earnings were significantly higher than the IFRS earnings, while Hussain et al., (2008) found cases reporting higher Chinese GAAP earnings were similar to those reporting higher IFRS earnings. Indeed, although Kuan and Noronha, (2007) also examined the 2001 ASBE, their study investigated 2004 financial results and found the reporting figures under the IFRS tended to be higher than those reported under the Chinese GAAP.

The combined findings from previous studies and this research, indicate that earnings under the Chinese GAAP moved from a tendency for overstatement to a more conservative level. This finding may be attributed to the changed objective of financial reporting in China.

Furthermore, while investigating whether the amount of gap in net profit and total equity increased, decreased, or remained consistent over 2006 and 2007, the evidence shows that 64% (30/47) of companies showed a reduced net profit gap, and 40% (19/47) showed a reduced total equity gap, with a relatively small number of companies (15/47 in total equity and 11/47 in net profit) showing an increased in reporting gaps under the IFRS and Chinese GAAP, and an increased number of companies (5/47 in net profit and 8/47 in total equity) showed no differences in net profit and total equity after adopting the 2006 ASBE. Findings are summarised in Table 23.

**Table 23: Summary on the Specific Changes in Net Profit & Total Equity Gaps between 2006 & 2007 (Prepared by author)**

	<b>Gap Decreased</b>	<b>Gap Increased</b>	<b>New No Gap</b>	<b>Originally No Gap</b>
<b>Profit Result</b>	64%	23%	11%	2%
	30	11	5	1
<b>Equity Result</b>	47%	32%	17%	4%
	22	15	8	2



A more direct finding on the success of the 2006 ASBE to harmonise the Chinese GAAP with the IFRS was found in the statistical comparison of net profit and the total equity amount reported by the 47 sample companies under the IFRS and Chinese GAAP in 2006 and 2007. Evidence showed the differences in net profit and total equity reported under the two sets of accounting standards changed from substantial differences in 2006 to a weak and insignificant level in 2007 (Table 24). This finding is consistent with the result in the comparison of the mean overall index of net profit and total equity reported in 2006 and 2007 by the 47 sample companies. There the results showed the non-comparability of net profit and total equity reported under the IFRS and Chinese GAAP in 2006, with full comparability of total equity and nearly full comparability of net profit reported under the two sets of accounting standards in 2007 (Table 25). These findings indicate the progress of harmonising the Chinese GAAP with the IFRS after the implementation of 2006 ASBE, with a downward trend of reporting gaps between the two sets of accounting standards from 2006 to 2007.

However, unexpected results were shown in the research. Although statistical tests found the differences in net profit and total equity prepared under the IFRS and Chinese GAAP moved from significantly different in 2006 to an insignificant level in 2007, statistical tests did not find significant differences between the 2006 net profit reporting gap and the 2007 net profit reporting gap, nor between the 2006 equity reporting gaps and the 2007 equity reporting gap (Table 24). In other words, although there was a downward trend of reporting gaps from 2006 to 2007, the reduced net profit and total equity gaps under the IFRS and Chinese GAAP from 2006 to 2007 did not show a statistical importance. There are many possible factors that could account for this finding.

Firstly, although absolute values were used to compare the changes in net profit and total equity gap between 2006 and 2007 (details of using absolute values were explained in Chapter Three – Research Methodology), the comparison was mainly based on comparing the difference of the gap reported under the two sets of accounting standards in 2006 and 2007. The amount may still include a certain number of individual items that require either a plus or minus amount in the adjustments prepared by the sample companies. As a result, the negative and the positive amount of adjusted items may cancel each other out. Therefore, it may reduce the gaps reported by the sample companies, which further reduced the amount of change in net profit and the total equity gap between 2006 and 2007.

**Table 24: Summary of the Significance of Differences in Reporting Gaps between 2006 & 2007 (Prepared by author)**

Comparing Variables	Significance
2007 IFRS Profit - 2007 ASBE Profit	Insignificant
2006 IFRS Profit - 2006 ASBE Profit	Significant
2007 IFRS Equity - 2007 ASBE Equity	Insignificant
2006 IFRS Equity - 2006 ASBE Equity	Significant
2007 Profit Gap - 2006 Profit Gap	Insignificant
2007 Equity Gap - 2006 Equity Gap	Insignificant

**Table 25: Summary of the Comparison of Overall Index of Gap in Net Profit & Total Equity between 2006 & 2007 (Prepared by author)**

Results	2007		2006	
	Overall Index	Comparability	Overall Index	Comparability
Net Profit	1.01	Nearly Fully Comparable	0.91	Not Comparable
Total Equity	1.00	Fully Comparable	0.97	Not Comparable

Second, this finding may also indicate that there are certain numbers of sample companies reporting a relatively larger net profit and total equity gap under the IFRS and Chinese GAAP. This caused a larger amount of gaps reported in 2007 regardless of the changed standards in the 2006 ASBE. Lastly, earnings management, management incentives, and the lack of accounting infrastructure to protect fraud in China may also possibly have caused the inaccurate reporting figures under the Chinese GAAP. This may, in turn, enlarge the reporting-figure gaps between the IFRS and Chinese GAAP.

## **5.2 CONCLUSIONS ON THE RELATIONSHIP BETWEEN INDUSTRY & DISCREPANCIES**

The second research question aims to establish whether the gap varies among different industry categories, and to identify those industries that show the most significant discrepancies between the IFRS and Chinese GAAP. This research has separated the 47 sample companies into 20 different industry categories: service providers, electrical-appliance manufacturers, machinery and tool manufacturers, glass manufacturers, manufacturers of steel, metal, aluminium and copper, airlines, banks, coal-mining companies, power and water suppliers, insurance companies, petroleum, oil and gas refiners, toll roads, railways, shipping companies, chemical and pharmaceutical companies, cement, brewing, shipyard, property-leasing and development companies.

This research differs from previous studies that targeted specific industries and analysed the impacts of certain accounting regulations on those particular industries. There was often a lack of direct examination of the impact and relationship certain industry categories might have on the discrepancies in the reporting figures under two different sets of accounting standards. Therefore, this research directly investigates how different categories of industry may influence the reporting gaps between the IFRS and Chinese GAAP.

The relationship between the industry and the reporting discrepancies under the IFRS and Chinese GAAP was examined from two dimensions:

**Dimension I:** Tests the significance of the relationship between the different categories of industry and the gaps in net profit and total equity under the IFRS and Chinese GAAP in 2006 and 2007.

**Dimension II:** Identifies the industries that have shown the most differences in net profit and total equity under the IFRS and Chinese GAAP in 2006 and 2007.

First, the research examined the relationship between different industry categories and the net profit and total equity gaps under the two sets of accounting standards with the aim of providing a general understanding of how the gap may have varied among different industries. Second, the research identified the industries that showed the most significant

differences in the reporting of net profit and total equity figures under the IFRS and Chinese GAAP.

Through the application of paired sample t-test to compare the industry against the reporting net profit and total equity discrepancies under the IFRS and Chinese GAAP in 2006 and 2007, the evidence showed that the reporting net profit and total equity discrepancies in 2006 were significantly correlated with the different industry categories. However, only a weak and insignificant relationship was found between industry and the 2007 reporting discrepancies. This finding may be attributable to the progress made by the 2006 ASBE to harmonize Chinese accounting with the IFRS. More specifically, while evidence showed the reporting differences in net profit and total equity under the IFRS and Chinese GAAP reduced from a substantial difference in 2006 to an insignificant level in 2007, this may also possibly reduced the significance level of the relationship between industry and the reporting discrepancies in 2007.

Nevertheless, strong correlations were found in the comparison of industry against the changes in profit gap and total equity gaps between 2006 and 2007. This finding supports the assumption made in finding on the progress of accounting harmonization in Research Question One. It was suggested that certain numbers of sample companies reported a relatively larger net profit and total equity gap under the IFRS and Chinese GAAP, which resulted in insignificant differences between the 2006 and 2007 reporting gaps. In other words, this finding suggests that there are certain numbers of industries from the 47 sample companies that reported a larger number of discrepancies in both 2006 and 2007. This resulted in the unexpected insignificant level of differences between the changes in the reporting gaps in 2006 and 2007; regardless the discrepancies in net profit and total equity were changed from substantially different in 2006, to an insignificant level in 2007.

The industries that contributed the largest amount of discrepancies in net profit and total equity in 2006 and 2007 were examined through the comparison of the average overall index and amount of reporting gaps in industries. As found in Van Der Tas, (1992), banks and insurance companies undertook activities that are very different to other industries. Furthermore, Luther (1996) contended that extractive industries are unique due to their finite lifespan, the lack of a direct relationship between costs and revenues, and the uncertainty associated with exploration. Findings from this research are partially consistent with Van Der

Tas, (1992) and Luther, (1996). The research found evidence that the insurance companies and the petroleum, oil and gas refiners showed the two greatest net profit and total equity gaps under the IFRS and Chinese GAAP, whereas coal mining, and property leasing and development companies demonstrated relatively non-comparable reporting figures and a large amount of discrepancies under the two sets of accounting standards.

However, in contrast to Van Der Tas, (1992), there was no evidence of reporting discrepancies in net profit and total equity by the banking industry in this current research. Rather, the banking industry showed almost full comparability of net profit and total equity figures under the IFRS and Chinese GAAP in both 2006 and 2007. The difference in the findings of Van Der Tas, (1992) and this research may be attributed to the different accounting standards examined in the two studies, where Van Der Tas, (1992) analysed the major characteristics of the European accounting standards, while the Chinese GAAP is examined here.

### **5.3 CONCLUSIONS ON THE MAJOR ITEMS CONTRIBUTING TO THE DISCREPANCIES BY INDUSTRIES**

The last research question aims to identify the major items that contributed to the differences in net profit and total equity figures reported under the IFRS and Chinese GAAP. These items were not examined from the entire sample population of the 20 identified industries. Rather, the analysis was carried out by examining the four industries (insurance companies, coal mining industries, petroleum, oil and gas refiners and the property leasing and development company) that showed either the largest amount of discrepancies under the IFRS and Chinese GAAP or the lowest non-comparable figures under the two sets of accounting standards as identified in 4.2 (The Relationship between Industry & Discrepancies).

The research investigated the reconciled statements for the items showing differences in net profit and total equity figures under the IFRS and Chinese GAAP in 2006 and 2007 for the four identified industries. It firstly examined the adjusted items as shown in the 2007 reconciled statements, as those adjusted items possibly indicate the differences of requirements between the IFRS and the new Chinese GAAP. Then the adjusted items in the original 2006 reconciled statements were investigated, as that indicates the likelihood of differences between the IFRS and the old Chinese GAAP. Lastly, the research examined the restated 2006 adjusted items shown on the 2007 reconciled statement for possible changes between the old and the new Chinese GAAP.

Similar to VanDerTas, (1992) and Luther, (1996), this research found that insurance companies and petroleum, oil and gas refiners showed a certain number of discrepancies specifically related to the industry in question and very different to other analysed industries. The accounting treatments of policy acquisition costs, policyholders' reserves for life insurance, unearned premium reserves and claim reserves that specifically relate to the insurance companies required adjustment reported under the IFRS and Chinese GAAP. However, of the four adjusted items in the insurance industry, only two items, the adjustment on policy acquisition cost and claim reserves, account for the actual differences caused by the different accounting treatments required by the two sets of accounting standards. In contrast, the adjustments made on policyholders' reserves and unearned premium reserves were caused by the specific requirements imposed by the non-accounting Chinese regulations established by the government.

Another non-accounting Chinese regulation that may have caused dissimilar reporting figures under the IFRS and Chinese GAAP relates to safety funds. The safety expenditures are required by the non-accounting Chinese regulation on the businesses engaged in petroleum refining, coal mining or other activities involving the production of dangerous products. And this type of regulation may, in turn, cause discrepancies under the IFRS and Chinese GAAP by incurring safety expenses, which require different recognition methods under the IFRS.

In addition, the method used for depreciating oil and gas properties may be a major concern for petroleum, oil and gas refiners. The unit-of-production method is a newly introduced method for oil and gas property depreciation under the new Chinese GAAP, which is consistent with the IFRS. However, the option is also provided for entities to either use the straight-line or unit-of-production method for depreciating oil and gas properties under the Chinese GAAP. Similarly, options are also provided for the depreciation of fixed assets, revaluation of investment properties and land-use rights categorised as investments, which may also cause discrepancies in the reporting figures under the IFRS and Chinese GAAP if entities chose a different depreciation method under the two sets of standards

On the other hand, efforts can be seen from the changes made in relation to the treatment of pre-operating expenditure, gain on debt restructuring, government grants, treatment of financial instruments and business combination involving entities not under common control. The changes in the accounting treatments of these items are generally consistent with the IFRS and further show the likelihood of convergence between the IFRS and Chinese GAAP.

Without a doubt, based on the evidence gathered from the examination of the three research questions, it can be seen that China has made great improvements to align its accounting with the international standards with the changes made in the 2006 ASBE. However, discrepancies still exist between the two sets of accounting standards especially on some standards that specifically relate to certain categories of industries. This means financial-report users need to pay attention when analysing Chinese financial reports.

Further, concerns also arose with regards to the options of measurement or depreciation methods provided under the Chinese GAAP. Options provided under the accounting standards allow entities to chose the method of measurement that best reflects their operation status. However, at the same time, these options may also provide opportunities for earnings management due to the lack of accounting infrastructure in the current situation, and the close

relationship between entities and government, which may in turn to create strong incentives for management to manipulate the entities' operating results. As a result, it is essential for China to move swiftly to develop an accounting infrastructure, through accounting education and by encouraging ethical conduct of accountants and auditors to prevent and detect fraud.



## **5.4 LIMITATIONS & RECOMMENDATIONS FOR FUTURE RESEARCH**

The purpose of this report is to assess the progress of Chinese accounting in harmonising with the IFRS and to establish underlying items that cause differences under the IFRS and Chinese GAAP in industries. However, limitations exist in the current research and these must be considered when reading the results.

Firstly, only four categories of industry were analysed to assess which items contributed to discrepancies under the two sets of accounting standards. Some of the items identified specifically relate to the analysed industries and thus cannot be applied and generalised to other categories of industry. Furthermore, with the limited sample size for examination, it is to be expected that there would be additional items contributing to the differences under the two sets of standards that have not been analysed. As a result, it is suggest that further research examine in more depth the items that contributed to the discrepancies by investigating a larger sample size.

Secondly, the research used financial data collected from the Chinese-listed companies that concurrently issue both H- and A-shares. These companies have a relatively higher quality of reporting environment than other domestic firms, thanks to the employment of Big Four auditors. With domestic firms that are not audited by Big four audit firms and do not prepare two sets of financial reports, there are still doubts as to the reliability of their financial information. Furthermore, since these companies are required to provide reconciled statements for the reporting differences between the Chinese GAAP and the IFRS, these two abovementioned reasons may increase incentives for management to reduce the reporting gaps between the two sets of accounting standards or simply reduce the gaps through the arrangement of international auditors. Therefore, future research may examine the financial information collected from domestic Chinese-listed firms to provide a thorough understanding of the progress made in the 2006 ASBE.

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## APPENDIX 1

[R]: Required treatment for all companies complying with IFRS.

[B]: Benchmark treatment that is recommended or preferred according to IFRS.

[A]: Allowed treatment that is not required or forbidden by IFRS.

[F]: Forbidden treatment that is not permitted by IFRS.

### INVENTORIES

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
1	Determination of cost of goods sold (CGS)	Specific identification, FIFO, weighted average, moving average, or LIFO.	Specific identification method, weighted average, moving average, or LIFO.	Specific identification, FIFO, weighted average, moving average, or LIFO.	Dissimilar items: specific identification [R]; Similar items: FIFO and weighted average [B]; LIFO [A].
2	Determination of ending inventory cost	Use cost method.	Use either cost or LCM (the lower of cost and net realizable value (NRV) method.	Same as IFRS.	Use LCM method. [R]
3	Recognition of inventory impairment and reversal of impairment	Not addressed.	Same as IFRS.	Same as IFRS.	Recognized as the difference between the cost and NRV in the income statement in which the impairment occurs. [R]

4	Determination of CGS of low value inventories	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Either written off in full when issued for use or amortized based on the number of times that they are expected to be used.	Same as determination of CGS of other inventories. That is, for dissimilar items, specific costs are attributed to the specific individual items of inventory [R]. For similar items, use FIFO and weighted average. [B] LIFO. [A]
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## ACCOUNTING POLICIES, CHANGES IN ACCOUNTING ESTIMATES, AND ERRORS

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

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

## ACCOUNTING POLICIES, CHANGES IN ACCOUNTING ESTIMATES, AND ERRORS

<b>Item</b>	<b>Topic</b>	<b>1992 Chinese GAAP</b>	<b>1998 Chinese GAAP</b>	<b>2001 Chinese GAAP</b>	<b>2002 IFRS</b>
9	Adjusting event and non-adjusting event	Not addressed.	Same as IFRS.	Same as IFRS.	Financial statements should be adjusted for adjusting event, while not be adjusted for non-adjusting event. Non-adjusting event should be disclosed if such events affect user decisions.
10	Sales return and sales cut-off	Not addressed.	Same as IFRS.	Same as IFRS.	Considered as adjusting event.
11	Dividends declared	Not addressed.	Not addressed.	Cash dividends are considered as adjusting events. Stock dividends are considered as non-adjusting events.	Both cash and stock dividends are considered as non-adjusting events.

## CONSTRUCTION CONTRACTS

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

## INCOME TAXES

<b>Item</b>	<b>Topic</b>	<b>1992 Chinese GAAP</b>	<b>1998 Chinese GAAP</b>	<b>2001 Chinese GAAP</b>	<b>2002 IFRS</b>
15	Recognition of tax expense or income	Same as IFRS, but does not list inapplicable situations.	Same as IFRS, but does not list inapplicable situations.	Same as IFRS, but does not list inapplicable situations.	Recognized as income or expense and included in net profit or loss for the period.
16	Treatment for deductible temporary differences	Use tax payable method (ie. The effect of time differences is not recognized. That is, income tax expense equals income tax payable for the current period).	Use either tax payable method or tax effect accounting method (ie., the effect of temporary differences should be recognised).	Use either tax payable method or tax effect accounting method.	Use the tax effect accounting method.

17	Treatment for timing difference when there are changes in tax rates or imposition of new taxes.	Not addressed.	Use either liability method (ie., adjustments should be made to the income tax amounts originally recognised with respects to temporary differences. Any reversal of the effect on income tax in respect of temporary differences should be made at the current tax rate) or deferred method (it., no adjustment should be made. any reversal should be made at the original tax rate).	Use either liability method or deferred method.	Use liability method. [R]
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### PROPERTY, PLANT AND EQUIPMENT (PP&E)

<b>Item</b>	<b>Topic</b>	<b>1992 Chinese GAAP</b>	<b>1998 Chinese GAAP</b>	<b>2001 Chinese GAAP</b>	<b>2002 IFRS</b>
18	Determination of depreciation method, estimated useful life, and residual value of PP&E	Determined by the government.	Same as IFRS.	Same as IFRS.	Determined by management and should reflect the pattern in which the asset's economic benefits are consumed by the enterprise. [R]
19	PP&E and construction in process (CIP) on balance sheet date.	Carried at cost less accumulated depreciation.	Carried at cost less accumulated depreciation.	Same as IFRS benchmark treatment.	Report the asset as cost less accumulated depreciation and accumulated impairment losses. [B] Report the asset as a revalued amount, being its FMV at the date of revaluation less subsequent depreciation and impairment. Revaluations should be carried out regularly, so that the carrying amount of an asset does not differ materially from its FMV at the balance sheet date. [A]

20	Recognition of impairment of PP&E and CIP	Not addressed.	Not allowed.	Same as IFRS.	Impairment is recognised as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. Recoverable amount is the higher of net selling price and the value in use. [R]
21	Accounting for reversal of impairment	Not addressed.	Not allowed.	Same as IFRS.	Recognised when a previously recognized impairment loss may have decreased on balance sheet date and reported as a profit in the income statement. [R]
22	PP&E received as a capital contribution	Measured at carrying value of invested assets. If revaluated value is larger than carrying value, then revaluated value should be used.	Measured at carrying value or appraisal value.	Measured at an amount agreed by all parties involved.	Measured at FMV. [R]
23	Exchange of dissimilar PP&E	Not addressed.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at FMV of the asset acquired. Gain or loss is recognized. [R]



24	Exchange of similar PP&E	Not addressed.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at the carrying amount of the asset surrendered. No gain or loss is recognized.	Measured at carrying value of the asset surrendered, no gain or loss recognized. However, if the FMV of the asset acquired is less than carrying value of the asset surrendered, an impairment loss should be recognised. [R]
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## LEASES

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
25	Operating lease incomes/payments	Not addressed.	Same as IFRS.	Same as IFRS.	Recorded as income/expense on straight-line basis over the lease term. [R]
26	Depreciation method for a leased asset	Not addressed.	Consistent with that for owned assets.	Same as IFRS.	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]

27	Lessee measurement of assets and related liability acquired from a finance lease	Measured at the price listed in agreement plus expenditures that get the asset ready for use.	Measured at the price listed in agreement plus expenditures that get the asset ready for use.	Same as IFRS except that PP&E is reported at lower of lessor's carrying amount and PV of MLP. The asset could also be reported at undiscounted MLP if leased asset are 30% or less of total assets.	Report PP&E at lower of FMV or present value (PV) of minimum lease payment (MLP). Report liability as long term liability at MLP. Report the difference as unrecognised finance charge. [R]
28	Discount rate used to measure the PV of MLP in a finance lease	Not addressed.	Not addressed.	Use the rate that discounts the MLP and unguaranteed residual value back to the lessor's carrying amount of the leased asset. If that is unknown, use the discount factor specified in the lease agreement. If both are unknown, use the lessee's bank borrowing rate.	Use the rate that discounts the MLP and unguaranteed residual value back to the FMV of the leased asset. If that is unknown, use lessee's incremental borrowing rate.
29	Allocation of unrecognised finance charge of a finance lease by lessee	Not addressed.	Not addressed.	Allocated over lease term using either effective interest method, straight line method, or sum of the years' digit method.	Allocated over lease term using effective interest method.[R]

30	Initial direct costs of a finance lease by lessee	Not addressed.	Not addressed.	Same as IFRS	Expensed. [R]
31	Initial direct costs of a finance lease by lessor	Not addressed.	Not addressed.	Expensed.	Either expensed or amortized over the lease term. [R]
32	Lessor measurement of a finance lease	Not addressed.	Not addressed.	Same as IFRS.	Recorded as a receivable, at an amount equal to the net investment in the lease. [R]
33	Lessor measurement of income from a finance lease.	Not addressed.	Not addressed.	Same as IFRS.	Based on pattern reflecting a constant periodic rate of return of the lessor's net investment outstanding in respect of the finance lease. [R]

## ACCOUNTING FOR GOVERNMENT GRANTS AND DISCLOSURE OF GOVERNMENT ASSISTANCE

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
34	Government grant received to fund a specific project	Not addressed.	Recognized as equity upon the completion of the project.	Recognized as equity upon the completion of the project.	Recognized as income over project period.

## THE EFFECTS OF CHANGES IN FOREIGN EXCHANGE RATES

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
35	Initial recognition of foreign currency transaction	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date or the exchange rate prevailing at the beginning of the month.	Use spot rate on transaction date. [R] Use average rate of the period if they are a reasonable approximation of actual. [A]
36	Monetary items reported on balance sheet date	Same as IFRS.	Same as IFRS.	Same as IFRS.	Use closing rate on balance sheet date. [R]
37	Exchange differences in the normal operation	Recognized as income/expense in the period in which they arise for both monetary and non-monetary items.	Same as IFRS.	Same as IFRS.	Be consistent with that for depreciable assets that are owned by the lessee/lessor. If there is no reasonable certainty that the lessee will obtain ownership at the end of lease, the asset is depreciated over the shorter of the lease term or the life of the asset. [R]

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

## BUSINESS COMBINATION

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
41	Recognition of goodwill	Not addressed.	Same as IFRS	Same as IFRS	As an asset [R]; as an adjustment to shareholders equity [F]
42	Measurement of goodwill	Not addressed.	Same as the IFRS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer' share of FMV of identifiable net assets are used.	Same as the IFRS except that, if not 100% of the shares were acquired, the acquirer's share of the carrying value rather than acquirer' share of FMV of identifiable net assets are used.	Measured as the difference between the cost of the acquisition and the acquiring enterprises share of the FMV of the identifiable assets acquired less liabilities assumed [R]
43	Amortization of goodwill	Not addressed.	Amortized over the period specified in the acquisition plan. If no period is specified, amortized over no more than 10 years.	Amortized over the period specified in the acquisition plan. If no period is specified, amortized over no more than 10 years.	Amortized over its estimated useful life on a straight line basis, which is presumed to be no more than 20 years.



44	Amortization of negative goodwill	Not addressed	Amortised over the investment period specified in the purchase contract. If no investment period is specified, amortized over no less than 10 years.	Amortised over the investment period specified in the purchase contract. If no investment period is specified, amortized over no less than 10 years.	To the extent related to expected future losses, if such losses are identified in the acquisition plan, amortize as the losses are incurred. Than, an excess of negative goodwill, to the extent allocated to the fair values of acquired identifiable non-monetary assets. any remaining excess recognised as income immediately.
45	Measurement of minority interest	Not addressed.	Only benchmark treatment of IFRS is allowed.	Only benchmark treatment of IFRS is allowed.	Measured as the minority's proportion of the pre-acquisition carrying amounts of the assets and liabilities [B]. Measured as the minority's interest being stated at its proportion of the FMV of the assets and liabilities.

## BORROWING COSTS

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

## CONSOLIDATED AND SEPARATE FINANCIAL STATEMENTS

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
47	Consolidation	Required when ownership is greater than 50%.	Same as IFRS	Same as IFRS.	Required when ownership is greater than 50% or there is substance control over the investee enterprises. [R]
48	Accounting for investments in subsidiaries and associates	Must use equity method.	Must use equity method.	Must use equity method.	May use cost, equity, or available-for-use method [R]
49	Recognition for impairment of subsidiaries and associates	Not addressed.	Same as IFRS	Same as IFRS.	Recognized impairment as a loss on the income statement. Impairment is measured as the difference between an asset's carrying amount and its recoverable amount on balance sheet date. [R]
50	investor has joint control	Not addressed.	Not addressed.	Must use proportionate consolidation method.	Use Proportionate consolidation method. [ B] Use equity method. [A]

51	Gain on disposal of a subsidiary as a result of issuance of additional shares by the subsidiary to third party.	Not addressed.	Not addressed.	Recognized into equity. Recognition of gain is not permitted.	Usually recognized as gain. [R]
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## PROVISIONS, CONTINGENT LIABILITIES AND CONTINGENT ASSETS

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

## INTANGIBLE ASSETS

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
54	Amortization of intangible assets	Amortized over the life specified in the law. If the life is not specified in the law, amortize over useful life. If the useful life is not specified, amortized in no less than 10 years.	Amortize over the shorter of the life specified in the law and the life specified in the acquisition contract. If the useful life is not specified in contract or law, amortized over the estimated useful life in no more than 10 years.	Amortize over the shorter of the life specified in the law and the life specified in the acquisition contract. If the useful life is not specified in contract or law, amortized over the estimated useful life in no more than 10 years.	Amortise over the estimated useful life, which is presumed to no more than 20 years. [R]
55	Intangible assets on balance sheet date	Carried at cost less amortization. Recognition of impairment loss is not allowed.	Carried at cost less amortization. Recognition of impairment loss is not allowed.	Same as IFRS benchmark treatment.	Carried at cost less any amortization and impairment loss. [B] carried at a revalued amount (based on FMV) less any amortization and impairment losses. Revaluation of intangible assets is permitted only if fair value can be determined by reference to an active market. Such markets are expected to be rare for intangible assets. [A]

56	Recognition of impairment	Not addressed	Not addressed.	Same as IFRS.	Recognized as the difference between the asset's carrying amount and its recoverable amount on balance sheet date and recorded as a loss in the income statement. Recoverable amount is the higher of net selling price and the value in use. [R]
57	Accounting for reversal of impairment	Not addressed	Not addressed.	Same as IFRS.	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
58	Pre-operating expenses	Deferred as an asset until the entity begins operation. Then amortized in no less than five years.	Deferred as an asset until the entity begins operations. Then amortize in no more than five years. If the amount is not material, charged to expense at the first month of operation.	Deferred as an asset until the entity begins operations. Then charged to expense at the first month of operation.	Charged to expense when incurred. [R]

59	Research and development (R&D) costs.	All development costs are capitalized.	Only registration and legal costs of intangible assets are capitalized. All other R&D costs are expensed.	Only registration and legal costs of intangible assets are capitalized. All other R&D costs are expensed.	Expense all research costs. Capitalize development costs if certain criteria are met.
60	Intangible asset received as a capital contribution.	Measured at carrying value of asset surrendered.	Measured at carrying value of asset surrendered or at appraisal value.	Measured at an amount agreed by all parties involved, except measured at the investor's carrying amount when contributed at the time of an initial issue for shares.	Measured at FMV. [R]
61	Intangible asset received in a non-monetary transaction	Not addressed.	Not addressed.	Measured at carrying amount of asset surrendered.	Measured at FMV. [R]



62	Land use rights	Treated as intangible assets and reported as cost less amortization.	Treated as intangible assets and reported as cost less amortization.	Recognized as an intangible asset until the construction or development starts; then accounted for as CIP. Once construction is completed, treated as PP&E or investment property and reported at cost less accumulated amortization and impairment losses.	Treated as prepaid lease payment and accounted for as and operating lease. Reported as cost less accumulated amortization and impairment losses on balance sheet.
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## FINANCIAL INSTRUMENTS: RECOGNITION AND MEASUREMENT

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
63	Criteria for the determination of bad debt allowance	Based on a government approved rate from 0.3% to 0.5%.	Same as IFRS.	Same as IFRS.	Based on the criteria determined by the company. [R]
64	Carrying value of accounts receivable on balance sheet date	Same as IFRS.	Same as IFRS.	Same as IFRS.	Carried at net realizable value (NRV) with a write-down recognized in net profit or loss.
65	Short term investments on balance sheet date	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at either cost or LCM. If measured at LCM, any write-down is recognized in net profit or loss.	Measured at LCM with a write-down recognized in net profit or loss.	Measured at FMV. Changes in FMV are recognised in net profit or loss. [R]
66	Dividends received on short term investments on balance sheet date.	Not addressed.	Recognised as a reduction of the carrying value of short term investments.	Recognised as a reduction of the carrying value of short term investments.	Recognized as revenue when receivable.

67	Long term investments in equity securities on balance sheet date	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at cost less impairment with a write down recognized in net profit or loss.	Measured at cost less impairment with a write down recognized in net profit or loss.	Measured at FMV with changes in FMV recognized either in net profit or loss, or in equity until the investment is sold. [R]
68	Long term investments in debt securities on balance sheet date.	Measured at cost at acquisition. Disclose market value in the notes of financial statements.	Measured at amortized cost subject to impairment, with a write down recognized in net profit or loss.	Measured at amortized cost subject to impairment, with a write down recognized in net profit or loss.	If classified as held to maturity, measured at amortized cost subject to impairment. If classified as available for sale, measured at FMV with value changes recognized either in net profit or loss, or in equity until the investment is sold. [R]
69	Amortisation of premium or discount on long term debt investments.	Use straight line method.	Either effective interest rate method or straight line method.	Either effective interest rate method or straight line method.	Use effective interest rate method.

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

74	Accounting for reversal of impairment of financial instruments	Not addressed.	Same as IFRS.	Same as IFRS.	Recognized as a profit in the income statement if a previously recognized impairment loss may have decreased on balance sheet date. [R]
75	Debt restructuring	Not addressed.	Not addressed.	The difference between the carrying amount of the debt and the restructured amount of the debt is generally recognized as equity.	The difference between the carrying amount of the debt and the restructured amount of the debt is generally recognized as income.

## INVESTMENT PROPERTIES

Item	Topic	1992 Chinese GAAP	1998 Chinese GAAP	2001 Chinese GAAP	2002 IFRS
76	Measurement on balance sheet date	Not addressed.	Carried at cost less accumulated depreciation.	Carried at lower of cost less accumulated depreciation and net recoverable value.	Measured either at cost or FMV. Once method is selected, it must be used for all investment property. Change of method is permitted only if this results in a more appropriate presentation. [R]
77		Same as IFRS.	Same as IFRS.	Same as IFRS.	Measured at cost.

*Source: Peng, S. (2005). The harmonization of Chinese accounting standards with international accounting standards: an empirical evaluation. Unpublished Dissertation for the Degree of Doctor of Philosophy, Virginia Commonwealth University, Virginia, page 145-164.*

## APPENDIX 2

Description	IFRS	US GAAP	CAS
Revaluation of PPE and intangibles	May use either revalued amount or historical cost.	Revaluations prohibited.	Revaluations prohibited.
Property interests held as operating	Accounted for as investment property if held for investment and if measured at the value with value changes in profit or loss. Otherwise upfront payments are treated as prepayments.	Always treated as prepayment.	Classify either as intangible assets or as investment property without requiring use of the FV through P&L.
Reversal of impairment loss	Required for all assets, other than goodwill if certain criteria are met.	Prohibited.	Prohibited.
Related parties	Disclosed.	Fully disclosed.	State controlled entities regarded far less often as related parties.
Defined-benefit pension plans	Liability should be the total of the PV of the obligation, plus unrecognized actuarial gain, minus unrecognized past service costs and minus the FV of plan assets.	Similar to IFRS.	Not addressed beyond an accrual principle.
Measurement basis of agricultural crops livestock, orchards and	FV with value changes recognized in profit and loss.	Generally historical cost.	Cost with FV used only if there is clear evidence of measurement reliability.

forest

Cash flows presentations	Requires indirect method.	Direct preferred but indirect allowed.	Requires direct method.
Development costs	Capitalised.	Expensed.	Capitalised if certain criteria are met.

*Source: Baker, C. A., & Moore, W. B. (2008). Chinese accounting: the new revolution. The Journal of 21st Century Accounting, 8(1), 1-6, page 2-4.*





