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Improving Corporate Internet Reporting in China

A thesis

submitted **in fulfilment**

of the requirements for the degree

of

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by

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ABSTRACT

For decades companies have disseminated information through traditional paper-based methods such as annual reports. This traditional method of reporting is limited by numerous issues and so cannot properly reflect the current state of the business world. Corporate Internet Reporting (CIR), however, differs from paper-based reporting in that it offers various benefits such as wide coverage and unlimited information capacity. Currently, there is an increasing trend for companies to utilise CIR to disclose information to stakeholders. In China, however, firms are lagging behind in the uptake of this technology. With limited CIR literature in the Chinese context, and no CIR practice model to guide Chinese companies, the provision and quality of their CIR practices are low.

The aim of this research is to develop and apply a CIR practice model for Chinese public listed companies and, further, to make recommendations as to the improvement of Chinese CIR practice. To achieve this purpose, a disclosure index was constructed with the support of 25 panel experts, 46 questionnaire survey participants, and 40 interviewees from various stakeholder groups. The index was then applied to three groups of the largest 25 Chinese companies that are listed in either A shares, A+B shares, or A+H shares on the Shanghai, Shenzhen, and Hong Kong Stock Exchanges. The collected data were quantified and analysed to determine the extent and quality of Chinese firms' CIR practices; in addition, several factors that may influence the level of CIR practices of Chinese listed companies were examined.

The research outcome indicated that the current level of Chinese CIR was poor in both extent and quality, and an extensive information gap between the expectations of Chinese stakeholders and the actual practices of Chinese corporations was identified. It is contended that factors such as low recognition of the organisation-stakeholder relationship and a lack of generally accepted CIR theoretical framework and practice guidelines have contributed to the current level of Chinese CIR practices. It was also found that A and A+H shares groups report significantly more than the A+B shares group, and firms in finance and insurance industry tend to disclose and offer significantly more information and website features than corporations in the other two business sectors (manufacturing and others). Lastly, a significant correlation was found in factors such as firm size, profitability-PAT and institutional ownership, and profitability-ROE. However, no significant relationship was identified for the other two determinants (state ownership and public ownership). It is believed that the findings of this research can assist in the improvement of current Chinese CIR as well as the development of CIR practice guidelines applicable to the Chinese context.

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CHAPTER ONE

RESEARCH INTRODUCTION

1.1 INTRODUCTION

The traditional paper-based reporting is one of the popular methods that have been used by corporations for decades. This traditional way of reporting has been identified as untimely, irrelevant, and no longer able to properly reflect the current state of the business world. Corporate Internet Reporting (CIR), on the other hand, allows flexible presentation, wide coverage, greater timeliness, almost unlimited information capacity, and opportunities for higher corporate accountability. As a result of these many advantages, companies around the world are utilising CIR not only for disclosing mandatory information, but also for providing additional information to the public. Various studies have shown that CIR may be a tool that can reduce information asymmetry between companies and stakeholders. However, studies have also shown that, if the information provided by companies in their CIR does not respond to the information demands of stakeholders, the information gap will continue to exist. With these notions in mind, this research examines how the information needs of Chinese stakeholders have been met by three groups of Chinese companies that list in A shares, or dual list in A+B shares or A+H shares. This research aims to analyse the extent¹ and quality² of information and user support and technological features in Chinese listed companies' CIR, and to develop a model of CIR practice for the Chinese context.

This introductory chapter is organised as follows:

- 1.2 Background
- 1.3 Problem Statement
- 1.4 Research Purpose and Objectives
- 1.5 Methodology and Method
- 1.6 Outline of the Thesis
- 1.7 Scope and Limitations

¹ Extent refers to the provision of disclosure items.

² Quality refers to information comprehensiveness, information timeliness, and user support and technological features' accessibility and usability (Please refer to Chapter 6 for details.).

1.2 BACKGROUND

For decades companies used traditional paper-based methods, such as annual reports, to publish and disseminate information. This traditional method of reporting has been identified as untimely, irrelevant, and lacking in the ability to properly reflect the current state of the business world (Richardson & Scholz, 2000; Davis, Clements, & Keuer, 2003; Lodhia, Allam, & Lymer, 2004). Information users are required to wait (e.g., days, weeks, or months) before the paper-based report is delivered. This time lag tends to significantly reduce the relevance and usefulness of the information to users. CIR, however, differs from traditional reporting. CIR is the use of the companies' website to provide voluntary and mandatory information about the performance of corporations (Poon, Li, & Yu, 2003). It allows flexible presentation, wide coverage, tractability (e.g., messaging, live posting, and chatting features), and fast (or real time) access. Frankel, Johnson, and Skinner (1999), Debreceeny, Gray, and Rahman (2002), and Ettredge, Richardson, and Scholz (2002) believe that firms tend to mitigate information asymmetry by making disclosure through additional channels such as CIR. With greater use of CIR, the quality of reporting by companies may be enhanced, and as a result, reduce the information gap between companies and stakeholders.

As indicated in previous studies, companies in developed countries such as Germany (Marston & Polei, 2004), the US (Kelton & Yang, 2008), the UK (Deller, Stubenrath, & Weber, 1999; Abdelsalam & Street, 2007), Australia (Chan & Wickramasinghe, 2006), and New Zealand (Oyelere, Lasward, & Fisher, 2003) all showed an increase in the usage of Internet reporting to provide information to a wide range of stakeholders. In Asia, companies in countries like Thailand (Davey & Homkajohn, 2004), and Malaysia (Khadaroo, 2005) have demonstrated an increased use of CIR to disclose information to the public in order to enhance both communication with stakeholders and corporate transparency.

However, China, a country with one of the largest markets in the world, is lagging behind in the uptake of this technology. Previous studies identified several problems in the extent of Chinese CIR. Haw, Qi, and Wu (2000), and Xiao, Yang, and Chow (2004) found that listed companies in China are more willing to provide regulated information on their CIR, but they lack the willingness to

disclose non-regulated information voluntarily. This problem may be because, in Chinese culture, people are unwilling to disseminate information about their wealth and business operations (Wong, 1985; Redding, 1990). This disinclination may be one of the reasons why Chinese companies are well known for having a tendency to withhold information. However, with such reporting behaviour, a wider information gap is likely to occur between companies and stakeholders (Lev, 1992). Lack of timeliness has also been identified as one of the key deficiencies in Chinese CIR (MacGee & Yuan, 2009). MacGee and Yuan (2009), Muhoro, MacGee, and Yuan (2009), and Dai (2010) stated that Chinese companies tend to take longer to disclose information than non-Chinese companies do, and that Chinese firms do not satisfy the accounting information users' demand in timeliness matters.

Studies also indicate that in many instances Chinese companies use CIR as a tool for releasing falsified information. In Xiao's (2004) research, he listed several cases related to information falsification in China, and stated that some companies in China have disclosed untrue information to gain favour with the public and to attract investment. Apart from information falsification, the quality of accounting information disclosed by Chinese companies is also an issue. Zheng and Qi (2011) showed that the quality of accounting information disclosed by Chinese companies (either paper-based or on the Internet) is relatively low when compared to that provided by companies in countries such as the US and the UK. Another major problem in Chinese CIR is that Chinese listed companies often release positive information only and cover up as much negative news as possible; furthermore, it is rare for Chinese companies to respond to information demands and information feedback from Chinese stakeholders (Gu, 2004). In regard to CIR problems that were identified by various studies, Chinese companies need to realise that the information demands of Chinese stakeholders are no longer the same as those required decades ago. As the Chinese market has now become more open and globalised, Chinese stakeholders are able to learn from their Western counterparts in valuing the importance of more timely, comprehensive, and relevant information. With that, the level of the quality of Chinese CIR is thus becoming more and more important in the Chinese business environment.

Currently, there are few studies on improving the quality of Chinese CIR and very little information can be found in regard to responding to the information demands of Chinese stakeholders. Additionally, no CIR practice model based on the perspective of Chinese stakeholders has yet been developed to suggest appropriate information items to include in Chinese CIR. As Mainland Chinese citizens have been able to purchase the three types of shares (A, B, and H shares) that are available in the Chinese stock markets since 2002, it would be appropriate to examine whether Chinese companies that are listed or dual-listed under these three types of shares have met the information expectations of Chinese stakeholders. Therefore, a research study is needed to develop a model of CIR practice that is based on the information needs of various Chinese stakeholder groups. This model may be able to suggest information items and user support functions that should be included in Chinese CIR. In doing so, the model may assist Chinese companies in better responding to the information demands of Chinese stakeholders. From that model, the level of the extent and quality in Chinese CIR may be improved, with the result that enhanced Chinese CIR practice could then reduce the information asymmetry between Chinese companies and stakeholders.

1.3 PROBLEM STATEMENT

It is contended that because no CIR practice model has been developed, from the perspective of Chinese stakeholders, to guide Chinese listed companies and there are few studies on improving the extent and quality of Chinese CIR, the overall level of Chinese CIR practice is still relatively low when compared to CIR in developed countries such as the US and UK. This omission may cause high information asymmetry between Chinese listed companies and Chinese stakeholders (Shen, 2004; Lin et al., 2005).

1.4 RESEARCH PURPOSE AND OBJECTIVES

The purpose of the research is to develop and apply a CIR practice model for Chinese public listed companies and, further, to make recommendations as to the improvement of Chinese CIR practice. To achieve this end, the research has three primary objectives:

- To develop a qualitative disclosure index, from the perspective of Chinese stakeholders;
- To assess the extent and quality of CIR practice by Chinese listed corporations that are listed in either A shares, A+B shares, or A+H shares;
- To explore the factors which may determine the extent and quality of CIR practice by Chinese listed companies.

Based on the above three primary objectives, the following specific objectives were developed:

1. To develop a qualitative disclosure index from the perspective of Chinese stakeholders for assessing the extent and quality of CIR of Chinese public listed companies;
2. To apply the index to the CIR of Chinese listed companies. Since Chinese stakeholders are able to purchase the three types of Chinese shares that are available in the Chinese stock market, it would be reasonable to examine the extent and quality of information and user support and technological features in the CIR of companies that list or dual-list under these shares. Thus, three groups of companies will be evaluated. Each group includes the largest 25 Chinese companies that are listed in either A shares, A+B shares, or A+H shares on the Shanghai, Shenzhen, and Hong Kong Stock Exchanges;
3. To examine the findings and assess the extent and quality of the content of websites in the light of the index;
4. To explore the possible factors which may determine the extent and quality of CIR practices of Chinese listed companies; and,
5. To make recommendations about Chinese CIR in the light of the investigative findings. This investigation will provide ideas on how CIR may be improved in future to better meet the expectations of Chinese stakeholders.

1.5 METHODOLOGY AND METHOD

This research implements the pragmatist paradigm using a mixed methods approach. The pragmatist paradigm incorporates qualitative approaches and complements these with aspects of quantitative methods, using subjective

processes and acknowledging the biases, values, knowledge, culture, and traditions of the researcher and of the stakeholders. Qualitative approaches were used to collect the opinions from Chinese experts and stakeholders in constructing the draft normative Chinese CIR model. Quantitative approaches were used for gathering information on the weightings of each index item from Chinese stakeholders, for examining the extent and quality of information and user support and technological features provided in CIR of the three groups of Chinese listed companies, and for exploring the factors that may determine the extent and quality of CIR practices in the Chinese context.

The research methods for the study include a literature analysis, data collection from a panel of experts, a questionnaire survey, interviews, and analysis of Chinese CIR.

1.6 OUTLINE OF THE THESIS

The thesis is presented in seven chapters as follows:

- Chapter One** **An Overview:** This chapter provides an introduction to the research. It includes brief background information about the research topic, problem statement, research purpose and objectives, methodology and methods, outline of the thesis, and the scope and limitations of the research.
- Chapter Two** **Background Information:** This chapter provides a setting for the research topic. The thesis begins with an introduction to the changes in the Chinese business environment, and then proceeds to offer a brief discussion on the status of CIR practice in China.
- Chapter Three** **Review of Literature:** This chapter provides an extensive review of the extant literature in relation to the origin, motivation drivers, research instruments, and previous studies of CIR practice. Several limitations of Chinese CIR studies are also identified here.

- Chapter Four** **Theoretical Background of the Research:** This chapter provides a theoretical background for the current research by combining five theories: agency theory, stakeholder theory, legitimacy theory, signalling theory, and institutional theory. From this theoretical combining, an explanatory framework of Chinese CIR is formed and then discussed.
- Chapter Five** **Research Methodology and Methods:** This chapter first introduces the researcher's philosophical background and how it has influenced the choice of the methodology for this study. The chapter continues by discussing the methodological assumptions that guide the research and outlines and justifies the research methods.
- Chapter Six** **Construction of CIR Qualitative Disclosure Index:** This chapter presents and describes the process for the construction of a CIR qualitative disclosure index which was employed as an instrument for analysing the website of the sampled corporations. The development process of the index consists of four steps: selection and categorisation of CIR index items, weighting the items, developing qualitative criteria for the items, and pilot tests.
- Chapter Seven** **Results, Analysis, and Discussion:** This chapter provides an analysis and description of the extent and quality of the CIR practices by the three groups of Chinese listed companies. Various analyses such as item by item, information asymmetry, current CIR level and the application of the CIR theoretical framework, scores by listing status and industrial sectors, significance test, and the associations between CIR and a series of determinant factors were conducted to interpret the results.
- Chapter Eight** **Summary, Recommendations, and Conclusion**

1.7 SCOPE AND LIMITATIONS

1.7.1 Scope

The scope of the study is limited to three groups of the largest (based on market capitalisation) 25 companies that are listed or dual listed in A shares, A+B shares, or A+H shares in the year 2012.

1.7.2 Limitations

The results from the investigation of three groups of Chinese listed companies were gathered in the year 2012. This research is restricted to the top 25 companies in the A, A+B, or A+H shares categories. These companies exclude minor corporations but do account for 80% of the market capitalisation in the Chinese stock market. Lastly, the CIR practice model created in this study was solely based on the perspective of Chinese stakeholders; no foreign stakeholders were participated in this study.

In the next chapter, a review of the changes in the Chinese environment and the status of CIR practices in China are presented.

CHAPTER TWO

BACKGROUND INFORMATION

2.1 INTRODUCTION

Prior to the economic reform that commenced in 1978, the Chinese economy was centrally planned and a closed market. The reform has led the economy into liberalisation and has changed the business environment through adaptation to the Western economic model, including modern business structures. One of the results of the reform has been the transformation of the business environment in recent years. Listed companies have started to adopt Corporate Internet Reporting (CIR) to provide their information online. However, there is wide variability between corporations in the amount of their online disclosures and the quality of their websites. It is this variability which is the driving force behind this research. In this chapter the background to the adoption and utilisation of the CIR practice in China will be introduced. The structure is as follows:

- 2.2 The Changes in the Chinese Economy, Society and Business Environment, and the Adoption of CIR
- 2.3 CIR Practice in China
- 2.4 Summary

2.2 THE CHANGES IN THE CHINESE ECONOMY, SOCIETY, AND BUSINESS ENVIRONMENT, AND THE ADOPTION OF CIR

This section covers the background of the Chinese economic reform, the key economic reform policies, as well as the changes in the Chinese economy, society, and the business environment, and the adoption of CIR.

2.2.1 The Background of the Chinese Economic Reform

Prior to the economic reform, the Chinese economic model was based on the Soviet model of central planning, which featured concentration of authority in the central government (Qian, 2000). Enterprises had limited autonomy, and private entrepreneurship was forbidden. After ten years of the Cultural Revolution (1966-1976) and 30 years of a socialist planned economy (1949-1978), China faced a

serious shortage of consumer products and services, low morale in factories, and a high unemployment rate (Naughton, 2007). Faced with these problems, economic reform was advocated by leaders such as Deng Xiao Ping in the Chinese Communist Party (CCP).

Initially, the idea of reform was opposed and faced hard criticism from ideological conservatives. Even the reformers themselves refused to challenge the socialist ideology openly for fear of losing their political legitimacy. However, as economic reform was inevitable, a series of regulations (e.g., only allowing a maximum of eight employees in a private enterprise) were developed as a compromise to restrict the growth of private enterprises (Tsai, 2002; Zhou, 2009). It was not until Deng Xiao Ping's southern tour in 1992, in which he strongly advocated the benefits of the economic reform, and that the 14th CCP Party Congress decided to implement a more pragmatic approach to the private sector, and several restrictions were abolished (Zhou, 2011). In 1997, the 15th CCP Party Congress removed the ideological discrimination against private entrepreneurship by agreeing that the private sector is equally as important as the public sector in the economy (Atherton, 2008; Zhou, 2011). This shift was a major breakthrough in Chinese politics, as it indicated a change in the ideology of the CCP and the attitude of government towards private ownership (Qian, 2000). Another political gesture was made in 2001 by allowing private entrepreneurs to join the CCP (Zhou, 2009). This gesture showed the acceptance of economic reform by members of Congress, and that the discrimination against the market economy had changed. The policies in the reform era not only helped the growth of the Chinese economy, but also led to a series of changes in Chinese society and the business environment, which have influenced the adoption of CIR practices. The next section discusses two of the key policies in the reform.

2.2.2 The Key Economic Policies in the Chinese Economic Reform

The two most influential policies appear to be privatisation of Chinese businesses, and market liberalisation. Each is briefly discussed.

Privatisation of Chinese Businesses

The 1978 economic reform involved the transfer of many State-Owned Enterprises (SOEs) to private hands. Many failing and weak, small SOEs were

sold via public auctions, or went through a corporate transformation to become a private company (Sun & Tong, 2003). As wholly private ownership of medium and large size SOEs was not permitted by the government, these enterprises were transformed into publicly listed firms on the Chinese stock market (Sun & Tong, 2003; Gibbons & Kulkarni, 2011).

Apart from privatising the SOEs, the formation of privately owned companies was also legalised. Chinese citizens were granted the freedom to form their own private businesses in the early 1980s; however, each business was allowed to hire a maximum of only eight employees. Despite the restriction on the number of employees, these privately owned enterprises have made significant achievements in business performance (Qian & Xu, 1993; Qian, 2000). As a result, this restriction was officially abolished in 1984, and by the late 1980s the government had started to encourage people to invest in or buy shares in enterprises (Qian, 2000). In order to attract further investment (both domestic and foreign) and capital infusions for Chinese enterprises, the government implemented another key economic policy: market liberalisation.

Market Liberalisation and the Chinese Stock Market

As part of the trend towards economic reform, the government decided to open the door to foreign investors allowing them to enter the Chinese market. In 1980, foreigners were permitted to form joint ventures with domestic businesses in various special economic zones³ such as Shenzhen, Shantou, and Zhuhai (Zhou, 1984; Qian, 2000). As these were successful, the government then opened up the market in 1984 by declaring 14 cities, including Shanghai and Tianjin, as special economic cities. The local authorities of these special economic cities were permitted to set up “development zones”, and were authorised by the government to implement more liberal policies to attract foreign capital and technologies (Qian, 2000; Geng & Zhao, 2009). In order to attract investment from both home and abroad, in 1990 the government decided to develop the Chinese stock market and two stock exchanges were established.

³ Special Economic Zones (SEZ) were an experimental instrument for the Chinese Government in the late 1970s and early 1980s to test if a market economy could be adapted and imported into the socialist economy of China. These zones have received extraordinary powers and privileges to implement more liberal economic policies (Osborne, 1986, p. 9; Carter & Harding, 2011, p. 59).

The Chinese Government established the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) to attract capital injections into the publicly listed SOEs and privately owned enterprises in the development zones (Seddighi & Nian, 2004; Zhang & Zhao, 2004; Wei, Xie, & Zhang, 2005). At the same time, tradable and non-tradable (state-owned and institutional shares⁴) A shares⁵ were introduced. Tradable A shares are listed on both stock exchanges and are available to domestic investors (Zhang & Zhao, 2004; Ferguson & McGuinness, 2004; Schuppli & Bohl, 2009; Yi & Davey, 2010). Non-tradable shares, however, cannot be traded on the Chinese stock market, and they are normally held by the central government, local governments, and domestic companies where the state is the majority shareholder (Zhang & Zhao, 2004; Seddighi & Nian, 2004; Yeh, Shu, Lee, & Su, 2009; Hu, Tam, & Tan, 2009; Yi & Davey, 2010; Berkman, Cole, & Fu, 2010). In order to draw further overseas investments, B Shares⁶ were made available on the SHSE and SZSE for foreign investors in 1992 (Qiao, Chiang, & Wong, 2006; Mei, Scheinkman, & Xiong, 2009). When Hong Kong became part of China in 1997, H shares were added to the Chinese stock market and these are traded on the Hong Kong Stock Exchange (HKSE). As part of the stock market development, Chinese securities regulations allowed companies to be either single listings (listed on A shares or B shares) or dual listings (listed on both A shares and B shares or H shares), as these were expected to attract both domestic and foreign investments for listed companies. It is also worth noting that firms that dual list in A and B shares are generally smaller in size (based on the market capitalisations) when compared with the ones that list in A or dual list in A and H shares (A or A+H shares contain some of the largest corporations in the Chinese market.).

In 2013, the Chinese Government established the China (Shanghai) Pilot Free Trade Zone to further attract foreign investment and trading in the Chinese market. In this zone, the government opened up 18 tightly regulated service sectors such

⁴ Institutional Shares are also known as Legal Person Shares.

⁵ In 2002, the Chinese Government abolished ownership restrictions, and Qualified Foreign Institutional Investors (QFII) are allowed to buy A shares on the secondary market.

⁶ In February 2001, the Chinese government permitted individual domestic investors with legal foreign currency accounts to own and trade B shares (Liu & Liu, 2007; Mei, Scheinkman, & Xiong, 2009).

as shipping, law, engineering, hospitals, performing arts agencies, and talent management agencies to foreign investments (Watt & Chan, 2013; Barboza, 2013; Philips, 2013). Other revolutionary policies in this zone include allowing interest rates to be determined by the market, the possibility of minimum restrictions on Internet services, and permitting firms to convert money more freely from RMB⁷ to foreign currencies and transfer the money overseas (Watt & Chan, 2013; Davis & Silk, 2013). Although this zone is to be tested for a three-year period before similar zones can be established elsewhere in China, it is possible to believe that the Chinese economy has moved from central planning towards a market economy.

2.2.3 The Changes in the Chinese Economy, Society, and Business Environment, and their Influence on the Adoption of CIR

Chinese Economy

The implementation of the two key economic policies has produced positive results in the Chinese economy. First, it brought a period of great prosperity for exporting and manufacturing industries in China. Due to flexible working hours (Chinese workers can work overtime or during weekends to meet production deadlines.) and low labour costs (Duhigg & Bradsher, 2012), foreign corporations such as Guess, Apple, and Toyota have outsourced their production to Chinese manufacturing companies for the past two decades. This move has transformed China into becoming one of the largest exporters and earning it the name of “the world’s workshop” (Nolan, 2005; van der Wath, 2013). Statistics show that the exports of goods and services from China have increased steadily for the past 30 years. For instance, in 1980 Chinese exports of goods and services were only US\$20.1 billion. However, this number had increased to US\$57.3 billion in 1990, US\$279.5 billion in 2000, and reached US\$2,296 billion in 2012 (The World Bank, 2013). This considerable increase in the Chinese export of goods and services is one of the key factors that has facilitated the steady growth of the Chinese economy in the past three decades. As the numbers show, the annual Gross Domestic Product (GDP) percentages have increased steadily over the three decades despite a minor setback in 1990. For instance, the annual GDP growth was 7.8% in 1980, and, although the economic growth slowed down to 3.8% in

⁷ RMB is Ren Min Bi, the Chinese currency.

1990, it increased again to 8.4% in 2000. In 2010, the annual GDP percentage growth once again reached over 10.4%, and in 2012, the GDP was maintained at a growth rate of 7.8% (The World Bank, 2013). The consistent growth of the Chinese economy provides an opportunity for changes in the structure of Chinese society.

Chinese Society

Two of the key changes in the transformation of Chinese society have been the increasing education level of Chinese citizens, and the emergence of the middle class. As the Chinese economy is growing rapidly, the percentage of secondary school graduates attending tertiary education is also increasing. According to the data from The World Bank, the percentage of tertiary education enrolments in China increased from 1% in 1980, 3% in 1990, 8% in 2000, to 27% in 2011 (The World Bank, 2013). With this growing trend, it is possible that the enrolment percentage will reach over 50% in the near future. Furthermore, according to Wang (2013) the number of Chinese students studying abroad has also increased hugely over the past three decades. For instance, from 1978 to 2000 only 340,000 students studied abroad (undertaking either secondary or tertiary education). However, in 2011 339,700 students went overseas to pursue foreign education, with the percentage of students studying abroad growing at 28.2% per year since 1999.

As more Chinese people are receiving higher education either in Mainland China or abroad, their earning ability is also growing. This growth in earnings has led to the emergence of the middle class in Chinese society. Barton, Chen, and Jin (2013) stated that in 2002 only 4% of Chinese households earned between US\$9,000 and US\$34,000. However, in 2012 this percentage rose to 68%, and they predict that by 2022 more than 75% will reach this income level. Barton et al. (2013) further stated that an increasing number of the middle class tend to be globally minded as many of them have received higher education overseas. They will not only be the driving force to influence the market and economic policies, but also to facilitate the development of the Chinese economy in the future.

Chinese Business Environment

Similarly, the economic reform has changed the Chinese business environment in several ways. First is the emergence of non-state shareholders. The release of non-tradable shares on the stock market has led to a growth in the number of non-state shareholders (Xu, Wang, & Jin, 2010). For instance, in 2008, 2009 and 2010 the Chinese Government released 7,540 million, 2,887 million, and 1,190 million worth of RMB of non-tradable shares respectively (China Securities Registration and Settlement Statistical Yearbook, 2008, 2009, 2010). The number of non-state shareholders has increased greatly – by 15.2% in 2009, and 11.2% in 2010 (China Securities Registration and Settlement Statistical Yearbook, 2008, 2009, 2010). Along with the growth in non-state shareholders, the number of foreign investors has also grown considerably throughout the years as a result of market liberalisation and the establishment of stock exchanges which have attracted large foreign investment into China.

Second is the increase in the number of foreign investors. Statistics show that individual foreign investors increased from 238,020 in 2008 to 247,440 in 2010. As for institutional investors abroad, the number went up from 23,300 in 2008 to 25,200 in 2010 (China Securities Registration and Settlement Statistical Yearbook, 2009, 2010). The increase in the number of foreign investors has also pushed up Foreign Direct Investment (FDI) in China from US\$17.1 billion in 2008 to US\$24.3 billion in 2010 (The World Bank, 2013). As these statistics show, there is every possibility that the number of foreign investors and the amount of FDI in China will continue to grow for many years to come.

Furthermore, as the government opened the market to the world, it attracted various modern technologies such as the Internet. This technology was first made available in China in the mid-1990s; however, the growth of Internet usage has increased greatly over time. By the end of 2008, China replaced the US as the largest Internet user in the world; by 2010, China had over 420 million Internet users; this technology has become the most influential medium in China (Liang & Lu, 2010; Arlt & Thraenhardt, 2011; Yang, Zhang, & Tang, 2012).

The Adoption of CIR in China

From the discussion above, it can be seen that the economic reform has positively changed the Chinese economy, society, and business environment. These changes have altered the information demand of many stakeholders, a demand which in turn has had an impact on the adoption of CIR in listed companies. In the past, Chinese listed firms tended to communicate with stakeholders through traditional reporting methods such as releasing paper-based annual, interim, and quarterly reports. However, with the growing number of non-state shareholders and overseas investors, and the increasing number of highly educated investors (many of whom may be from the middle class and are globally minded), the demand for more transparent and timely information has increased (Piotroski & Wong, 2012). Consequently, communication between Chinese firms and their investors via traditional reporting methods has become difficult (Koreto, 1997; Ashbaugh, Johnstone, & Warfield, 1999; Arussi, Selamat, & Hanefah, 2009; Piotroski & Wong, 2012). Chinese corporations have become aware of the need for an alternative information dissemination tool. In the late 1990s, listed companies started to utilise the Internet for reporting purposes, and in recent years many of them have begun to adopt CIR to explore the possibility of furthering such a reporting practice (Xiao et al., 2004; Zhu & Liu, 2008). Currently, as pointed out by Lin, Xin, Yang, and Chen (2005) and Zhu and Liu (2008), the trend for Chinese companies to adopt CIR is growing rapidly. With this clear interest in CIR, this study contends that it is timely and useful to conduct an investigation into Chinese listed companies' CIR practice.

In summary, business privatisation and market liberalisation have changed China's economy, society, and business environment. The emergence of non-state shareholders, the increase in foreign and more highly educated investors, and the availability of the Internet have encouraged Chinese listed companies to adopt CIR practice to communicate with their investors. The next section provides an understanding of the extent to which Chinese companies have adopted and utilised CIR and several issues in Chinese CIR practices.

2.3 CIR PRACTICE IN CHINA

2.3.1 Preliminary Research on the Status in Chinese CIR Practice

When compared to that of more developed countries such as the US and UK, the CIR experience for firms in China is still relatively limited. However, evidence shows that there is an increasing trend for Chinese companies to adopt CIR practice. Studies conducted by Xiao et al. (2004), Lin et al. (2005), He and Zhang (2007), and Zhu and Liu (2008) indicate that many listed companies already have a website, and several of them have used the Internet to disclose corporate information such as financial statements, corporate social responsibility reports, and stock quotes on these websites. However, as the preliminary research of this study found, the quantity of corporate information and website features differ from company to company. For instance, there is a difference in the quantity of information disclosed and features included on the websites of the top 25 companies⁸ (based on market capitalisation) that list on A shares or dual-list on A+B shares or A+H shares.

Some companies, such as the Industrial and Commercial Bank of China (ICBC) and Nanjing Bank, disclose extensive corporate information online which not only includes financial data, but also other nonfinancial information e.g., corporate social responsibility reports and health and safety reports (Xiao et al., 2004; Lin et al., 2005; He & Zhang, 2007; ICBC, 2011; Nanjing Bank, 2011). However, other listed Chinese corporations utilise the Internet only for the purposes of marketing and public relations (PR). For example, Wuhan Steel Corporation did not provide any financial data or annual reports on its website; information covered only product descriptions and awards received (Wuhan Steel, 2011). The unregulated nature of CIR practice may account for such wide variation in the information content included on the websites of Chinese listed companies.

As with other countries such as Germany and the UK, there are no standards or regulations to govern and enforce CIR practice in China. As a result, studies such as Haw et al. (2000), Chen (2005), Liu and Anbumozhi (2009), McGee and Yuan (2009), Kolk, Hong, and van Dolen (2010), and Xiao (2011) indicate that the issues embedded in the reporting practice of many Chinese listed firms could also

⁸ Data were collected in June 2011.

affect their practice of CIR. These issues are briefly discussed in the following section.

2.3.2 Issues in Chinese CIR Practice

In this section, lack of voluntary disclosure on additional information, untimeliness of information, and low quality on the disclosed information are the issues that will be discussed.

Lack of Voluntary Disclosure on Additional Information

The first shortcoming of Chinese reporting practice is the lack of voluntary disclosure on additional information. As pointed out by Haw et al. (2000) and Xiao et al. (2004), Chinese companies are willing to disclose information that is required by regulations; however, anything beyond that is rarely provided, and only few firms will release nonregulated information voluntarily. Consistent with this view, Zhao (2007) and Qi (2009) stated that, compared to companies in countries such as the US and UK, Chinese firms seldom respond to information requests other than those from government officials, and this lack of response indicates that corporations in China lack awareness of the need for corporate transparency. Although recent articles (e.g., Chen & An, 2011; Wen, 2011) report that the amount of additional information disclosed by Chinese firms has increased, the willingness to disclose voluntarily, however, is still low, and the usefulness of the extra information published either on paper or online has not yet improved. Faced with these issues, Yang, Ren, and Dong (2011) recommend that a guideline for voluntary reporting is needed to assist and encourage Chinese companies to improve their level of additional information disclosure.

Untimeliness of Information

It is evident that Chinese firms generally take longer to disclose information than companies in the US and the EU do (Zhu, Song, & Zhang, 2005; McGee & Yuan, 2009; Wang, 2010; Xiao, 2011; McGee & Yuan, 2012). Similarly, online information items such as stock quotes, press releases, and digitised annual reports on companies' websites are often found to be outdated, and they are seldom updated in a timely manner. Liu and Zhu (2008) also found that Chinese companies usually disclose their annual reports right before the regulated date (90 days after the end of an accounting period), and that it is rare to find up-to-date

digitised annual reports available on a corporate website a month or two before the reporting deadline. These findings indicate that Chinese companies tend to ignore the information users' demand for timeliness (Muhoro et al., 2009; Dai, 2010). If this problem continues, it may cause a significant loss of reputation and ability when it comes to raising capital for Chinese companies in the future (McGee & Yuan, 2012).

Low Quality on the Disclosed Information

The quality of the disclosed information has long been an issue in many Chinese corporations. In the past, several Chinese companies that listed either on the Chinese or the US stock market deliberately manipulated accounting numbers and disclosed them either on paper or online to gain public favour and to attract investment (Xiao, 2004; Huang, 2008; Liu, 2011; Xiao, 2011; Zhao, 2011). Their dishonest reporting led to court actions in the US and/or China; many of the perpetrators were found guilty and sanctioned (Xiao, 2004; Zhang, 2010; Wang, 2011). These incidents drew the attention of many scholars who expressed their doubts about the quality of information disclosed by corporations. For instance, Xiao (2004), Huang (2008), Zhang (2010), Liu (2011), Xiao (2011), and Wang (2011) revealed their concerns in regard to the poor reporting quality, and they worried this could damage the reputation of Chinese corporations significantly at the international level. Zheng and Qi (2011) agreed with the view expressed above and indicated that the information quality of Chinese publicly listed firms (either paper-based or on the Internet) is relatively poor when compared to that provided by companies in countries such as the US and UK. These scholars all urged the Chinese Government to amend the reporting regulations to ensure the information quality came up to the international standard. To relieve these concerns and to build the image of corporate transparency, Chinese officials began to develop a series of regulations to ensure improvement in the reporting quality. Although several authors were optimistic about the actions taken by government, they still maintained doubts about the current information quality, and a hope that it can be improved in the near future (Zheng & Qi, 2011; Xiao, 2011).

From the discussion above, it is evident that there are several concerns surrounding the reporting practice in China. These issues could result in a loss in the ability to obtain capital infusion, and also damage the reputation of Chinese corporations. Although the government has started to develop a series of new reporting regulations, whether these new rules will be effective in improving the information quality is still in doubt. Thus, several scholars believe future observation and research on the outcome of these regulations is needed. On this basis, this study contends that more research should be undertaken to investigate the reporting practice, especially CIR, in China. This investigation will enable the determination of a list of information items which can serve as a guideline for listed companies to follow. It is possible that this guideline can also offer a blueprint from which the Chinese Securities Commission can develop future CIR practice regulations.

2.4 CHAPTER SUMMARY

The economic reform has transformed the Chinese economy from a centrally planned to a market economy. Privatisation of businesses and liberalisation of the market are two key economic policies that have changed the Chinese business environment. The emergence of non-state shareholders, the increase in foreign investors, and the availability of the Internet have encouraged Chinese listed companies to adopt CIR. Studies show there is an increasing trend for listed companies to implement this reporting method. However, various studies have indicated that because of issues with the Chinese reporting practice, the quality of CIR in China is poor and the information is untimely. Consequently, the current study contends that future research is needed in order to develop a practice model of online reporting for Chinese companies to follow.

In the next chapter, a review of previous studies about CIR will be presented.

CHAPTER THREE

REVIEW OF LITERATURE

3.1 INTRODUCTION

Corporate Internet Reporting (CIR) has been increasingly recognised as an important tool for corporations to enhance communication with stakeholders, to reduce information asymmetry and agency costs, and to project an image of corporate transparency (or corporate legitimacy) (Jones & Xiao, 2004; Aly, Simon, & Hussainey, 2010; Sánchez, Dominguez, & Álvarez, 2011; Almilia & Luciana, 2011). The research and published literature with respect to the deficiencies of traditional reporting, drivers of CIR adoption, research instruments of CIR, and the extent and quality of CIR practices are growing commensurate with this trend (e.g., Hanafi, Kasim, Ibrahim, & Hancock, 2009; Kelton & Yang, 2008; Khadaroo, 2005). In this chapter, a comprehensive literature review regarding the origin of CIR, the CIR research instruments, and prior studies of CIR practices is conducted. The structure of the chapter is organised around the following themes:

- 3.2 From Traditional Paper-based Reporting to Corporate Internet Reporting
- 3.3 The Drivers for Adopting Corporate Internet Reporting
- 3.4 Prior Research Regarding CIR Practice
- 3.5 Chapter Summary.

3.2 THE ORIGIN OF CIR: FROM TRADITIONAL PAPER-BASED REPORTING TO CORPORATE INTERNET REPORTING

3.2.1 Deficiencies in Traditional Paper-based Reporting

The traditional paper-based reporting method involves distributing printed copies of annual or interim reports to people such as shareholders, financial analysts, and directors. This reporting method enjoys wide global acceptability and has for decades been the sole reporting medium for maintaining corporate and investor communication. Nevertheless, the paper-based reporting method has several important deficiencies. First, the method is not timely (Wallman, 1995; Richardson & Scholz, 2000). Moreover, the production of paper-based reports is time consuming, and often, by the time reports are issued, the information may be out of date. Thus, paper-based reports may not properly reflect the current state of the business, making it difficult for users to gain an understanding from them of the big picture in a rapidly changing business context (Wallman, 1995; Richardson & Scholz, 2000; Davis et al., 2003; Lodhia et al., 2004).

Second, traditional paper-based reports may not always be as detailed as some stakeholders might hope for (Koreto, 1997; Ashbaugh et al., 1999; Lohia et al., 2004). A reason is that a printed report has a limited page length, a factor which constrains the amount of information that can be included. Third, the traditional paper-based reporting method offers less accessibility (Koreto, 1997; Ashbaugh et al., 1999) than its electronic counterpart. Due to the increase in global investments and stakeholders, paper-based reports are unable to reach an increasing range of stakeholders (Arussiet et al., 2009). Companies will usually mail printed reports to people such as shareholders, directors, and managers but other stakeholders may have to request access to companies' reports. Lastly, the traditional reporting method does not offer interactive features to stakeholders (Kelton & Yang, 2008). This shortcoming indicates the inability of paper-based reports to offer different analytical document formats such as XBRL or Excel, or provide users with supporting functions such as hyperlinks and search features (Kelton & Yang, 2008).

Given the limitations of traditional paper-based reporting, an alternative communication channel is needed to match today's business environment. The Internet has given companies an opportunity to explore an alternative information reporting tool which offers many more features and functions than paper-based reports can provide. This information technology has revolutionised and transformed traditional corporate reporting into Internet reporting. The next section discusses the benefits of the Internet and its influence on financial reporting.

3.2.2 Internet Technology and Financial Reporting

Increasingly, the Internet has become an information technology tool used by companies to make financial and nonfinancial information available to wide audiences (Jones & Xiao, 2004; Almilia & Luciana, 2011). Using the Internet for reporting provides corporates with many benefits such as flexible presentation, wide coverage, and unlimited information capacity; its use can also help companies to create an image of modernity and transparency (Craven & Marston, 1999; Allam & Lymer, 2003; Khadaroo, 2005; Kelton & Yang, 2008; Mohamed & Oyelere, 2008; Arussi et al., 2009; Mohamed, Oyelere, & Al-Busaidi, 2009; Aly et al., 2010; Dâmaso & Lourenço, 2011). The trend towards using the Internet for information disclosure has led to an alternative reporting method: Internet Financial Reporting (IFR).

IFR uses the Internet to publish financial information about the the performance of firms to a wide range of stakeholders (Li et al., 2003; Poon et al., 2003). It is a tool and a distribution channel that offers complementary and extended information which firms can use to respond to and meet the rapidly growing information demands of stakeholders (Debreceeny et al., 2002; Smith & Pierce, 2005; Salehi, Moradi, & Pour, 2010). This reporting method may be much more reactive to the current business environment than traditional reporting methods, because IFR offers two advanced dimensions: presentation and content (FASB, 2000).

IFR supports dynamic forms of presentation such as direct user interaction with corporate databases and multimedia sound and video (Allam & Lymer, 2003; Marston & Polei, 2004). In the content dimension, IFR can digitise companies'

paper-based reports into various document formats such as PDF files and make them available online (Marston & Polei, 2004; Xiao et al., 2004). IFR may also include other additional content features such as videos of annual shareholder meetings and live recordings of analyst meetings (Debreceeny et al., 2002). Due to the features that these dimensions can offer, there is currently an increasing trend of companies' using the Internet to provide financial information.

Studies show that the number of companies that have implemented IFR to disclose information has increased greatly since the late 1990s. Louwers, Pasewark, and Typpo's (1996) investigation of 150 companies in the US found that 97 of the sample companies had a website, but that only 35 firms provided fully digitised annual reports. Petravick and Gillett (1996) conducted a similar study and found that 69% of the Fortune 150 companies had a website and 81% of those companies included some financial information. Gray and Debreceeny (1997) found that 98% of the Fortune 50 companies had a website and 68% had digitised annual reports available on their website. In another study, of 45 sample corporations from England, France, and Germany, Debreceeny and Gray (1999) found that 36 firms had presented their annual statements on their website. By 1999, most of the largest 30 companies in Germany, Australia, the US, the UK and Sweden were using the Internet to disclose corporate financial information to stakeholders (Xiao et al., 2004).

More recent studies such as Allam and Lymer (2003), Davey and Homkajohn (2004), Marston and Polei (2004), Xiao et al. (2004), Khadaroo (2005), Kelton and Yang (2008), Mohamed et al. (2009), Salehi et al. (2010), and Aly et al. (2010) have shown that an increasing number of companies are using the Internet to disclose financial information. For example, Marston and Polei (2004) performed a comparative analysis on the results they gathered on 100 German public traded companies listed on the Frankfurt Stock Exchange in 2000 and 2003. The findings showed a major increase in disclosing investor-related information on firms' websites. For instance, the availability of former years' annual reports, statements of changes in equity, and segmental reporting by region increased from 34%, 62%, and 60%, to 93%, 89%, and 80% respectively. Xiao et al. (2004) examined the 300 largest Chinese companies (in terms of total assets) that list in A shares on either the Shanghai or Shenzhen Stock Exchange. Of the 300 sample firms, 203

companies had an active website, and 144, or 71% of the corporations, disclosed financial information on their website. Their findings indicated that Internet reporting in China is still in its early stages where corporations are more interested in disclosing regulated information online, and less likely to provide additional website features on their websites. However, Xiao et al.'s study shows that companies in developing countries such as China have also started to use the Internet to disclose corporate financial information. In another study, Kelton and Yang (2008) also found an increase in use of the Internet to publish corporate financial information. Their investigation of 284 companies listed on the NASDAQ found that all 284 sample firms had accessible corporate websites; and that, out of these companies, 277 (97.5%) had investor-related information such as financial statements and annual reports available.

Such studies illustrate a growing trend for companies to use the Internet to disclose financial information. However, over the years, with advancement in information technologies, corporations have expanded their IFR practice to include nonfinancial information, user support features, and web technologies to enhance the information content and usability of their websites (Lybaert, 2002; Davey & Homkajohn, 2004; Pervan, 2006; Chan & Wickramasinghe, 2006; Abdelsalam & El-Masery, 2008; Hanafi et al., 2009).

Internet reporting has moved well beyond financial reports and includes a wide range of other information that relates to the achievements, performance, and progress of the organisation, covering areas such as corporate social responsibility reports, and health and safety reports. This study contends that companies are no longer adopting IFR but, rather, are implementing a reporting method called Corporate Internet Reporting (CIR). The next section introduces and discusses the idea of CIR.

3.2.3 Corporate Internet Reporting

Corporate Internet Reporting is a form of voluntary reporting that provides additional information (both financial and nonfinancial) to stakeholders, and also encourages the use of user support features and web technologies to enhance the usability of a company's website (Xiao et al., 2004; Kelton & Yang, 2008). The

presentation and content dimensions of IFR have been extended and further divided to include broader information and technological elements.

The content dimension can be separated into financial and nonfinancial data. Financial data may include digitised annual reports, financial statements, and stock quotes; and nonfinancial information may encompass corporate social responsibility reports, company background, company charter, corporate social responsibility reports, and health and safety reports (Hanafi et al., 2009).

The presentation dimension has been separated into three categories: web technology, user support features, and timeliness (Lybaert, 2002; Davey & Homkajohn, 2004). Web technology features may include multimedia technologies (audio and video clips), and on the spot software download, e.g., PDF software and media player software, available for downloading on the current webpage (Davey & Homkajohn, 2004). User support features refer to website features that companies provide to assist users in using the website. User support features include a number of interrelating factors such as ease of finding the homepage of the company, the availability of a website's sitemap, and the number of clicks needed to go to certain information items (Lybaert, 2002). User support features also may include functions such as internal search engines and Frequently Asked Questions (FAQs) (Davey & Homkajohn, 2004). The timeliness category relates to whether information is disclosed by companies before it loses its capacity to influence decision making. It also relates to making information available in a way that enables faster acquisition of such information (Ashbaugh et al., 1999; FASB, 2000; Hanafi et al., 2009). The timeliness category can include information such as press releases, stock quotes, vision/forward looking statements, and charts forecasting future profits (Davey & Homkajohn, 2004; Abdelsalam & El-Masery, 2008; Ezat & El-Masry, 2008).

Studies show CIR has rapidly become a common reporting practice, and currently there is an increasing propensity for companies to utilise CIR to disclose information online to stakeholders (Xiao et al., 2004; Kelton & Yang, 2008; Mohamed et al., 2009; Hanafi et al., 2009; Arussi et al., 2009; Salehi, 2010; Aly et al., 2010). Several factors have caused this growing trend in CIR adoption. The

next section aims to examine some of the drivers that are motivating companies to adopt CIR.

3.3 DRIVERS FOR ADOPTING CORPORATE INTERNET REPORTING

There are several explanations for the growing trend of companies to adopt CIR. The key drivers appear to be: information asymmetry, corporate legitimacy, and institutional isomorphism. Each of these will be briefly discussed⁹.

3.3.1 Information Asymmetry

Information asymmetry, also known as the information gap, is a concept that indicates certain information is known to one party but not necessarily to another (Penno, 1984). This idea has been widely referred to in various theories that explain the information inequality between companies and different stakeholder groups, and the reasons for this asymmetry to happen. For instance, agency theory and signalling theory recognise the communication gap between managers/companies and shareholders or potential investors. By definition, agency theory suggests that agents (managers) tend to have more information than principals (shareholders), so if agents withhold information from principals, an information gap will exist. Signalling theory proposes that potential investors usually have limited access to organisational information; so with minimum information disclosure from firms, the information gap between the two parties will eventually grow (Ross, 1977; Morris, 1987; Healy & Palepu, 2001). This occurrence poses several problems for organisations.

The first problem is the increase in agency costs. Due to information asymmetry, shareholders will not have enough information to observe the behaviour of managers accurately (Bhattacharjee, 1998). Shareholders will need to use monitoring or bonding activities to ensure the behaviour of their agents is aligned with shareholders' interests. These bonding and monitoring activities can create extra costs (agency cost) for organisations (Jensen & Meckling, 1976); and, the higher the level of information asymmetry, the higher the costs associated with bonding and monitoring. The second problem is that a company cannot

⁹ Chapter 4 provides greater detail of how information asymmetry, corporate legitimacy, and institutional isomorphism each relate to CIR practice.

distinguish itself from other low performance firms in the market. Signalling theory suggests that if the level of information asymmetry is high, potential investors may not distinguish between the high performing and low performing companies (Ross, 1977; Morris, 1987). The inability for potential investors to differentiate between different grades of companies may result in over-investment in low performance firms, and under-investment in higher performance corporations. This pattern of investing will also lead to a decrease in the capital raised or in an increase in the cost of capital for high performance corporations. Therefore, to mitigate these problems, it is important for companies to reduce information asymmetry.

A way to alleviate information asymmetry is additional information disclosure. For instance, agency theory suggests that managers may increase disclosure to persuade shareholders that managers' actions are aligned with the shareholders' interest (Watson, Shrivs, & Marston, 2002; Aly et al., 2010). Signalling theory recommends that firms may provide additional information on their economic reality to alter investor expectations and reduce information asymmetry (Álvarez, Sánchez, & Dominguez, 2008). Many scholars such as Kelton and Yang (2008), and Arussi et al. (2009) have recommended the use of CIR to disclose additional information in order to alleviate information asymmetry. CIR offers a way to provide additional information disclosure with wider accessibility (Khadaroo, 2005; Kelton & Yang, 2008), and it allows companies to publish richer and more comprehensive data on their website (Comier, Ledoux, Magnan, & Aerts, 2010; Dhaliwal, Li, Tsang, & Yang, 2011). With CIR's immediate and wider reach, Gowthorpe (2004), Debreceeny et al. (2002), Xiao et al. (2004), Kelton and Yang (2008), and Arussi et al. (2009) suggest that this reporting method is seen as an effective and popular tool that can help companies to mitigate information asymmetry.

3.3.2 Corporate Legitimacy

The second driver, corporate legitimacy, is derived from legitimacy theory which suggests that businesses operate in society through a social contract where they agree to perform various behaviours that are expected of them by society in return for their survival (Guthrie & Parker, 1989). Therefore, firms need to legitimise

their status in order to continue to operate in the society (Newson & Deegan, 2002; Mobus, 2005; Hooks & Van Staden, 2007). In order to gain or maintain legitimacy, companies need to communicate continuously with their stakeholders. This communication allows stakeholders to understand that firms are operating in a fashion that aligns with the societal expectations; and also shows that they will voluntarily disclose information to the public (Guthrie, Petty, & Ricceri, 2006). This view implies that firms need to employ a reporting medium that allows them to communicate with their stakeholders.

Currently an increasing number of companies have employed CIR as a reporting medium to publish information to their stakeholders for legitimising their status. There are two possible reasons for this trend. First, an increasing number of stakeholders have become reliant on using the Internet to search for information (Aly et al., 2010), and, as a result, these stakeholders may expect to find corporate information on the Internet. Companies have to modify their reporting behaviour to align with stakeholders' expectations if they wish to gain legitimate status in society (Guthrie & Parker, 1989; Guthrie et al., 2006). Thus, in order to meet the expectations of stakeholders, as studies such as Xiao et al. (2004), Mohamed et al. (2009), Salehi et al. (2010), and Aly et al. (2010) showed, many companies have started to disclose additional information on the Internet. Second, disclosing additional information online may project an image of company transparency. Transparency is important for companies if they wish to maintain their legitimate position in society. The financial scandals of recent years have led to a demand for increased transparency in corporate reporting (Medel, Garcia, Enriquez, & Anido, 2011; Sánchez et al., 2011). Kulzick (2004), and McGee and Tarangelo (2009) indicated that transparency can be demonstrated through the timeliness, completeness, and consistency of the information provided. As previously mentioned, CIR allows companies to disclose comprehensive information in real time (Khadaroo, 2005; Kelton & Yang, 2008; Arussi et al., 2009); therefore, CIR enables companies to fulfil the factors required to be seen as more transparent by society.

3.3.3 Institutional Isomorphism

The concept of institutional isomorphism suggests that an organisation tends to adopt the institutional practice of other organisations, and thus becomes more similar in structure and behaviour to them (DiMaggio & Powell, 1983; Dillard, Rigsby, & Goodman, 2004). It also suggests that companies tend to mimic each other's business practices in order to survive, or to improve their performance, or to respond to the institutional pressure from the business environment (DiMaggio & Powell, 1983). This tendency has accounted for much of the trend in adopting CIR. The explanations are provided below.

In the late 1990s many leading multinational corporations such as companies in the Fortune 150 and Fortune 50 lists were becoming more aware of the benefits that the Internet can offer and began to employ the Internet to communicate with their stakeholders (Petravick & Gillett, 1996; Gray & Debreceeny, 1997). It is likely that when other firms, either same size competitors or smaller firms in the same industry or different industries, noticed the leading companies' implementation of Internet reporting, they would have followed and mimicked this reporting practice. Websites from companies such as Microsoft, Apple, BP, and Shell demonstrate this point. These companies all have similar design for their websites and include website features such as sitemaps, FAQs, and an internal search engine. They also provided similar information such as financial statements, forward looking statements, corporate social responsibility reports, and stock quotes on their website; and categorise these types of information under similar categories such as "Investor Relation" or "Investors". This example demonstrates that companies do mimic each other's reporting practice such as CIR and become similar in their reporting behaviour and style.

In summary, an increasing number of companies are implementing CIR to reduce information asymmetry, to gain corporate legitimacy, and to imitate the reporting behaviour of their competitors or of more successful companies. CIR may be seen as a tool that can help companies to communicate with their stakeholders. Next, various prior studies regarding the research methods and the determinant factors of CIR practice are reviewed in the following section.

3.4 PRIOR RESEARCH OF CIR

In this section, the prior CIR studies are reviewed from three perspectives: research instruments in CIR research, the types of CIR research, and limitations in previous Chinese CIR studies.

3.4.1 Research Instruments in CIR Research

Many studies have demonstrated that the extent or quality of CIR practice is often measured through the use of disclosure indices. A disclosure index can be defined as a quantitative-based instrument designed to measure a series of items; it also gives a score indicative of the level of disclosure in the specific context for which the index was devised (Coy et al., 1993; Coy, 1995; Hooks, Coy, & Davey, 2002). A disclosure index begins with a list of items which could or should appear in the content of the observed documents such as annual reports, or in this case, corporate websites. A scoring method is then added, resulting in a detailed measurement system which in its entirety forms a disclosure index (Hooks, 2000). Disclosure indices have always been a popular method in the area of accounting research (e.g., annual report disclosures: Hooks et al., 2002; Coy & Dixon, 2004; Aljifri, 2008; intellectual capital: Williams, 2001; Bukh, Nielsen, Gormsen, & Mouritsen, 2005; Yi, Davey, & Eggleton, 2011; corporate social responsibility: Ghazali, 2007; Said, Zainuddin, & Haron, 2009; Morhardt, 2009). Similarly, disclosure indices are often adopted in CIR studies to measure the level of Internet reporting practices in various contexts. The indices in those studies can be separated into two types: unweighted and weighted. In the following sections, each type of index is discussed in relation to the CIR research.

Unweighted Disclosure Index

Researchers who adopt an unweighted disclosure index are not required to assign any weighting to each item or category, as it assumes each item is equally important (Meek, Roberts, & Gray, 1992; Hossain, Perera, & Rahman, 1995). This type of index is often used to measure the extent of disclosure, and extent is referred to as the number of items disclosed (Hooks, 2000). This type of index is popular among CIR studies (e.g., Larran & Giner, 2002; Xiao et al., 2004; Abdul Hamid & Md Salleh, 2005; Momany & Al-Shorman, 2006; Álvarez et al., 2008; Al-Htaybat, 2011). There are four possible explanations for such a preference.

First, authors such as Ahmed and Courtis (1999) argued that an unweighted index is the norm of all indices, and it is believed to have the capability of reducing the level of subjectivity in research. Second, previous research, such as Firth (1980) and Adhikari and Tondkar (1992), indicated that the use of both weighted and unweighted scores brings little or no difference to the findings. Therefore, they believe that the use of an unweighted index is already sufficient. Third, supporters of unweighted indices assert that the focus of the research on corporate reporting is directed at all users of disclosed corporate information rather than at any specific user group; thus, an unweighted disclosure index is an appropriate method to fulfil this purpose (Cooke, 1989; Ferguson, Lam, & Lee, 2002; Akhtaruddin, 2005; Wang, O, & Claiborn, 2008). Fourth, the simplicity of constructing one is another incentive that can motivate some researchers to adopt an unweighted index.

As many CIR studies have demonstrated, unweighted disclosure indices are normally in a binary form (dichotomous) rather than in a sophisticated, qualitative form. A dichotomous form of an unweighted index measures purely the extent of items' disclosure levels, and a scoring method of 0 and 1 is usually used to denote the absence or presence of each item. Many studies have adopted and demonstrated the application of such indices in CIR research (e.g., Bonsón & Escobar, 2002; Debreceny et al., 2002; Celik, Ecer, & Karabacak 2006; Momany & Al-Shorman, 2006; Álvarez et al., 2008; Al-Htaybat, 2011; Dâmaso & Lourenço, 2011). This type of disclosure index is also popular in Chinese CIR studies where only unweighted disclosure indices were adopted. For instance, Xiao et al. (2004) employed an unweighted dichotomous disclosure index to examine the disclosure of mandatory and voluntary information items, as well as the presentation of those items in the 300 largest A shares companies listed on the Shanghai and Shenzhen Stock Exchanges. This index consists of 82 items that are separated into two categories: content and presentation. Content included mandatory reporting items (e.g., financial statements, quarterly reports, auditor's report, and top 10 shareholders in the current year), as well as voluntary reporting items (e.g., historical share prices, sales of key products, current share prices, and earnings or sales forecast). Presentation items are related to sound files, video files, chat room, graphic images, and help information. A binary scoring system of 0

and 1 was used to denote the absence and presence of index items. In another Chinese CIR study, Lin et al. (2005) developed a similar index to examine the determinant factors of online investor relations information quality. Their investor relations index contains 48 items which are separated into information content and web investor relations features. These items include historical annual reports, dividends paid, company background, video/audio files, graphic images, and hyperlinks in the digitised annual report. A binary scoring method is also used in this index.

As the discussion above indicates, unweighted indices seem to be a common approach in CIR research. However, there is a key deficiency that may limit the usefulness of such a method. An unweighted index cannot differentiate between the importance of information items; it treats every item as having the same significance, and the same score will be assigned to items of varying importance (Coy & Dixon, 2004). In light of this weakness, various researchers (e.g., Maston & Polei, 2004; Davey & Homkajohn, 2004; Hanafi et al., 2009; Agyei-Mensah, 2011) suggested that an alternative measuring instrument is needed, and that a weighted index may be a better choice for assessing the level of CIR practice.

Weighted Disclosure Index

A weighted disclosure index requires weightings to be allocated to indicate the degree of importance for each of the items and/or each of the item categories (Coy & Dixon, 2004; Hanafi et al., 2009). The supporters of weighted indices argued that it is problematic to treat all the items with the same importance regardless of whether the absence or presence of these items is crucial to the overall quality of information disclosed (See Beattie & Pratt, 2003; Hanafi et al., 2009.). Since the importance of each item can be different, weights should be assigned to acknowledge the discrepancy in the level of significance between each individual item and item category (Singhvi & Desai, 1971; Hanafi et al., 2009). The studies above support the argument that weightings can be seen as a vital element in a disclosure index as it may enhance the effectiveness and depth of corporate information measurement. However, scholars such as Curtis (1996) and Ahmed and Curtis (1999) believe that the issue of subjectivity in weighted indices is still a major problem, and unweighted indices can be, or in some senses should be,

used to reduce the subjectivity in determining weightings. However, Marston and Shrive (1993) and Coy and Dixon (2004) counter argued that subjectivity can be neither completely removed, nor is it sensible to expect that it can be, and by having all items in the index as being of equal weight, even when there are obvious differences in the importance of information items, is itself a subjective decision. Thus, it is impossible to reduce the level of subjectivity even with the use of unweighted indices. Based on these views, studies such as Marston and Polei (2004), Hanafi et al. (2009), and Agyei-Mensah (2011) recommended and preferred the use of weighted dichotomous disclosure indices in a CIR research study.

This current study agrees with Marston and Polei (2004), Hanafi et al. (2009), and Agyei-Mensah (2011) and believes that a weighted index should be adopted in CIR research for two main reasons. First, if every item is to be treated with the same significance, the results then cannot properly reflect the extent of CIR practice by a corporation or corporations. For instance, as both full and summary versions of an annual report are available on a company's website, both items will receive the same score regardless of the unequal amount of content included in each report. In another example, even when company A discloses a full digitised annual report and company B provides only a summary version of a digitised annual report, since there is no differentiation on the importance of the two items, both companies will still obtain the same score. These two examples indicate that weightings should be incorporated in indices to acknowledge the diverse importance of each item and/or category. Second, this current study agrees with Marston and Shrive (1991) and Coy and Dixon (2004) in that subjectivity cannot be fully removed in an index because, as some researchers may argue, a researcher cannot be separated from the researched; in other words, the research itself is bound with value and subjectivity (Ponterotto, 2005; Collis & Hussey, 2009). In this sense, to decide which type of index to use is thus already a subjective decision. In light of this argument, adopting an unweighted index does not reduce the level of (or any) subjectivity in a piece of research. On this basis, this study contends that a weighted disclosure index should be used to identify the relative importance of each index item and category.

As both unweighted and weighted types of indices are often in a dichotomous form, they cannot be used to measure the quality of disclosure items. As this study aims to assess both the extent and quality of CIR practice in the Chinese context, a qualitative form of index is needed to achieve this goal. In the following section, the qualitative form of disclosure index is discussed.

Assessing Quality of CIR Practices – Qualitative Disclosure Index

As previously indicated, the majority of researchers tend to employ a dichotomous form of disclosure index, either weighted or unweighted, to examine the level of CIR. However, this form of index can measure only the presence or absence of selected items; it cannot differentiate the “quality” of information disclosed (or in the sense of CIR, the quality of website features provided as well) between organisations (Coy & Dixon, 2004). In order to measure “quality”, various researchers advocated, and demonstrated, that a disclosure index must include a set of qualitative criteria to allow for in-depth examination of each corporation’s disclosed items (Coy et al., 1993; Hooks et al., 2002; Yi et al., 2011). This type of index is known as a qualitative disclosure index.

The term “quality”, in the sense of accounting disclosure, can be taken to be the comprehensiveness and completeness of corporate disclosures (Singhvi & Desai, 1971; Imhoff, 1992; Wallace, Naser, & Mora, 1994; Hooks, 2000). Many studies in voluntary reporting, intellectual capital reporting, and annual reporting have widely adopted this quality concept and incorporated it in their disclosure indices in order to assess the quality level of corporate disclosures (See Dixon, Coy & Tower, 1992; Eng & Teo, 2000; Coy et al., 1993; Coy & Dixon, 2004; Hooks et al., 2002; Yi et al., 2011.). In CIR research, “quality” means more than just comprehensiveness and completeness of corporate disclosures; it also refers to the timeliness of information as well as the accessibility and usability of the website features (Ahmad & Kamarudin, 2003; Abdelsalam & El-Masry, 2008; Hanafi et al., 2009; Aly et al. 2010). Although many CIR researchers have widely discussed the meaning of quality in their studies, only a few writers have demonstrated the use of qualitative criteria in their index to assess the level of corporations’ CIR practice (e.g., Davey & Homkajohn, 2004, and Aziz, Ariffin, & Mohamed, 2011).

For instance, Davey and Homkajohn (2004) designed a disclosure index with the total of its 33 items classified into four categories: content (e.g., financial statements and social responsibility reporting), timeliness (e.g., press release and stock quotes), technology (e.g., download options and analysis tool), and user support (e.g., sitemap and site search) to examine corporate websites of the 40 top Thai listed companies. As their index was not a purely qualitative index, qualitative criteria were attached to some items only, such as press releases, stock quotes, and number of clicks required to access financial information. To score the quality of an item, they adopted a four-point scale (0-3), and the scores were allocated on the basis of the timeliness and accessibility of information provided on corporate websites. The qualitative score from each item was then multiplied with its weighting to form a final score for the item. Davey and Homkajohn (2004) believe that by doing so, the quality of information provided between companies, especially the timeliness of information such as press releases and stock quotes, can then be properly measured.

In another study, Aziz et al. (2011) developed a weighted disclosure index, based on Pirchegger and Wagenhofer (1999) and Davey and Homkajohn (2004), in which they examined the online corporate reporting of 175 Malaysian companies. Their index items are classified into four categories: content, timeliness, technology, and user support. The proportion of weightings for each category is 20%, except for the content which is 40%. The index items include financial statements, document formats, press releases, vision statement, stock quote, sitemaps, site search, and downloadable options. Aziz et al. (2011) employed a four-point qualitative scoring scale (0-3) that was similar to Davey and Homkajohn's (2004) index to measure the disclosure timeliness on items such as press releases and stock quotes. As their index was also not a completely pure qualitative index, qualitative criteria were applied to several index items only.

As for the Chinese context, only a dichotomous form of indices was used. There are two possible explanations. First, the procedures to develop qualitative criteria for each item can be quite sophisticated and time-consuming. The development process can involve several steps such as reviewing previous studies and other related sources (e.g., reporting regulations, corporate documents, and company

annual reports), interviewing stakeholders, and analysing the information and features of other corporate websites (Yi et al., 2011; Hooks et al., 2002). Thus, this development process can be seen as an enormous additional task for researchers to bear. Second, researchers in Chinese studies tend to develop their indices based on the work found in the prior literature. As the majority of the previous studies adopted the dichotomous form of indices only, it is not surprising that a similar path was followed.

However, it is acknowledged that without the qualitative element in the index, the quality of CIR practice between firms cannot be properly differentiated. Take, for example, the following instance where both company A and B published financial highlights on their websites; however, only company A disclosed a detailed analysis with full explanations on each of the financial figures, while company B provided a page of brief analysis with minimum narration. In a dichotomous index, since both companies have presented the item on their website, the same score will be assigned to each company irrespective of the comprehensiveness of information disclosed by both firms. In light of this example, in order to properly differentiate the extent and quality of CIR practices by Chinese listed companies, this study contends that a weighted qualitative disclosure index is the appropriate instrument to use.

In the next section, prior CIR studies of CIR practices in various contexts are reviewed.

3.4.2 Prior Studies of CIR Practice – Descriptive and Explanatory

Prior studies of CIR practice can be separated into two research focuses: descriptive and explanatory. Much of this literature, especially the early CIR studies, often placed more focus on descriptive research (e.g., Flynn & Gowthorpe, 1997; Deller et al., 1999; Craven & Marston, 1999; Gowthorpe & Amat, 1999; Hedlin, 1999; Ettredge, Richardson, & Scholz, 2001), whereas later articles tended to place more emphasis on explanatory research (e.g., Marston & Polei, 2004; Xiao et al., 2004; Momany & Al-Shorman, 2006; Homayoun & Rahman, 2010; Agyei-Mensah, 2011). In the following paragraphs, the relevant literature is reviewed.

Descriptive-focused Studies

Descriptive studies focus on assessing the number of companies utilising the Internet as a medium to disclose information, as well as the extent to which the corporate website is used to disclose information items (e.g., number or percentage of disclosures in an item). It was found that early studies often rely on this type of research to analyse the status and extent of online reporting by corporations in various contexts. For instance, Gowthorpe and Amat (1999) reported that of the 379 companies that list on the Madrid Stock Exchange, only 70 companies provided a corporate website. Of these 70 companies' websites, nine were under construction, and only 34 companies disclosed some (15 firms) or substantial (19 firms) information. However, of those 34 companies, 12 provided up-to-date quarterly information, 11 disclosed annual accounts via PDF files, and only eight included both types of information on their corporate website.

In another report, Craven and Marston (1999) studied the 206 largest listed companies on the London Stock Exchange. They reported that 153 companies made their website available to the public, and of these 153 firms, 109 of them disclosed financial information online. Amongst those 109 corporations, only 67 and 42 firms provided detailed annual reports and parts of their annual reports respectively. As for the other 44 corporate websites, they were utilised for promoting the companies' products or services only, and no online financial information could be found. Hedlin (1999), on the other hand, investigated the extent of investor relations information on corporate websites of 60 companies that list on the Stockholm Stock Exchange. It was found that most of the information presented on Swedish companies' websites was recycled from the paper-based version of annual reports, and these companies failed to take advantage of the unique features of the Internet technology. In a more recent study, Ezat (2008) performed a descriptive analysis on online information disclosures of 432 firms that list on the Egyptian Stock Exchange. The results indicated that almost half of the Egyptian listed companies have a website (52.08%), and 35.6%, 98.7%, 91.1%, and 48% of those 52.08% companies disclose financial, social, corporate governance, and timely information online respectively.

Apart from the single country studies above, several researchers also conducted comparative studies to examine the extent of CIR in multiple countries. For example, Flynn and Gowthorpe (1997) investigated 100 companies from the Fortune Global 500 that included countries such as Japan, the US, Germany, France, the Netherlands, Switzerland, Italy, the UK, and South Korea. They found that of these 100 companies, 89 had websites, and 60, 25, 30, and 39 respectively had included annual financial information, quarterly financial information, auditor reports, and notes to the accounts on their websites. The study also revealed that German companies tended to have the least online business reporting. Deller et al. (1999), on the other hand, examined the online reporting of corporations in the stock markets' 100 index from the US, the UK, and Germany (e.g., S&P 100, FTSE 100, DAX 100). They found 95%, 85%, and 76% of the sampled US, UK, and German companies respectively made their corporate websites available. Of the companies with a website, 91%, 72%, and 71% of US, UK, and German companies respectively, included an investor relations information page. This study also reported that US companies tend to offer more annual reporting information on their website than firms from the UK and Germany. For instance, more than 90% of the sample US corporations disclosed financial statements, statements notes, and financial data in time series on their website. As for UK firms, although more than 70% provided balance sheet, profit and loss, and interim report data on the web, fewer than 65% of them disclosed notes, cash flow statements, and financial data time series on the Internet. In terms of German companies, 73% made interim reports available online, and fewer than 65% of the sample firms disclosed other investor relations items (e.g., financial statements and notes) on their corporate websites. Based on their findings, the conclusions of Deller et al. (1999) were that US corporations (91%) tended to utilise the Internet more for investor relations activities than UK (72%) and German (71%) firms do, and the results suggested that US corporations seemed to adopt the Internet to a larger extent with respect to corporate reporting.

In another study, Ettredge et al. (2001) included a bigger sample in their study in which 490 US companies were investigated; 259 were Association for Investment Management and Research firms (AIMR) and 231 were from technology industries. Their findings indicate that 402 of these companies (82%) have a

website, with industries such as airlines, electrical equipment, healthcare, and natural gas having the highest rate of website representation (100%), whereas the environmental controls business sector has the lowest (50%). In terms of information disclosure, 75% of AIMR companies and 47% of technology firms included their annual report and excerpts on their website, and 82% AIMR firms and 77% technology companies provided financial news online. Ettredge et al. (2001) also indicated that larger, and high technology, companies are more likely to provide extra information than are other firms. Lastly, Khadaroo (2005) examined 100 companies listed on the Bursa Malaysia Stock Exchange, and 45 companies listed on the Singapore Stock Exchange. Results showed that Singaporean companies topped most of the attributes in the index, as they have better web-based reporting practice compared to Malaysian companies. The examination also showed firms from Singapore had better presentation of information as well as investor relations information, and they tended to use sophisticated programming language to build their corporate websites.

As regards China, no descriptive-focused studies were found in the Chinese context. Although there have been a few studies related to the topic of CIR, they provided only a review of prior Western literature, and no additional research was done. Nevertheless, five explanatory studies were found to provide an analysis on determinant characteristics of CIR practice in China, and they are reviewed in a later section.

As the above review indicates, early CIR studies were mostly descriptive and focused on investigating the presence and the absence of corporate websites and several financial information items. In recent years, an increasing number of studies have extended the descriptive research to become more explanatory in focus in order to determine or explain the relationship between the adoption and extent of CIR and various qualitative determinant characteristics. In light of this, the following section reviews various key explanatory-focused studies.

Explanatory-focused Studies – Qualitative Determinant Characteristics

Explanatory-focused studies are associated with the examination of qualitative determinant characteristics of CIR practice. The qualitative determinant characteristics are known as influential factors that can affect the adoption and

extent of CIR practice (Aly et al., 2010; Boubaker, Lakhil, & Nekhili, 2012). The research and literature regarding the association between various determinants and CIR practices have been increasing in recent years. Many CIR studies in different contexts have tested and identified several qualitative factors that tend to impact listed corporations' CIR practices.

The studies conducted by Ashbaugh et al. (1999), Craven and Marston (1999), and Ettredge et al. (2002) were some of the earliest studies to examine the relationship between various determinant factors and the adoption and extent of CIR practices by corporations. In particular, Ashbaugh et al. (1999) examined 290 AIMR companies in the US. They adopted total asset value and return on asset (ROA) as the measurement of firm size and profitability respectively. The results indicated that larger size or higher profitability firms are more likely to have a website available to the public and to engage in online reporting practice. Craven and Marston (1999) investigated the 206 largest listed companies on the London Stock Exchange, and they measured firm size along four different variables: turnover, number of employees, total assets value, and market value of equity. The results showed positive associations between all the size variables and the existence of a website. A positive correlation was also found between the size variables and the extent of online financial disclosure. In another study, Ettredge et al. (2002) examined 220 firms in 16 industries. This study was focused on examining the association between voluntary and mandatory online reporting and influential factors such as size and performance. The measurement for firm size and performance was based on the natural logarithm of the firms' market value of equity and the annual stock return respectively. The study found that, of the two factors, only firm size is significantly correlated to voluntary and mandatory online reporting.

A number of subsequent studies expanded on the research of Ashbaugh et al. (1999), Craven and Marston (1999) and Ettredge et al. (2002) to investigate the determinate factors of CIR practice in various national contexts. Examples include Lybaert (2002, the Netherlands), Marston (2003, Japan), Marston and Polei (2004, Germany), Xiao et al. (2004, China), Momany and Al-Shorman (2006, Jordan), Abdelsalam, Bryant, and Street (2007, UK), Abdelsalam and El-Masry (2008,

Ireland), Trabelsi, Labelle, and Dumontier (2008, Canada), Kelton and Yang (2008, the US), Desoky and Mousa (2009, Bahrain), Homayoun and Rahman (2010, Malaysia), Agyei-Mensah (2011, Ghana), Boubaker et al. (2012, France), Uyar (2012, Turkey) etc. More specifically, Marston and Polei (2004) examined the CIR practices of 50 companies in the top and bottom quartiles of the DAX 100 on the Frankfurt Stock Exchange in two different time periods: 2000 and 2003. They also tested the determinants of size and profitability [similar to Ashbaugh et al., 1999; Craven & Marston, 1999; and Ettredge et al., 2002], and further included other factors such as ownership structure, and foreign listing status. The results indicated that firm size was positively associated with CIR in both time periods, whereas foreign listings and ownership structure were positively related to online reporting only in the time period of 2003 and 2000 respectively. In addition, no relationship was found between profitability and online reporting.

Abdelsalam et al. (2007) investigated the relationship between the CIR practices (e.g., information content, web features' usability, and information credibility) of 110 companies listed on the London Stock Exchange, and various determinants such as major shareholdings (5% or more holdings of company stocks), director holdings, independent directors, CEO duality, analyst following, and industry were tested. The findings showed that firm size was positively associated with information credibility (e.g., timeliness of the information, audit opinion, and audit report), and director independence was positively related to information content. The study also revealed a significant negative association between CEO duality and information credibility, and between director holdings and online reporting. In addition, Abdelsalam et al. (2007) reported that two determinants – manufacturing industry and number of analysts following – could have a positive impact on the CIR practices of the sampled firms. In another study, Kelton and Yang (2008) investigated 284 US companies listed on the NASDAQ to determine the factors that can influence the adoption of online reporting practice. The study found that factors such as firm size, managerial ownership, director independence, number of financial experts on audit committees, and number of audit committee meetings were positively associated with online disclosure. Block ownership, on the other hand, was found to associate negatively with Internet reporting. This finding indicates that when the percentage of block ownership is higher, the need

for more monitoring, as well as additional transparent disclosure, tends to be reduced as the block-holders have the privilege of receiving private information (Kelton & Yang, 2008).

In more recent studies such as Homayoun and Rahman (2010), Boubaker et al. (2012), and Uyar (2012) more influential factors were included when researching CIR. For instance, Homayoun and Rahman (2010) included board size and liquidity, Agyei-Mensah (2011) incorporated leverage and liquidity, and Boubaker et al. (2012) included ownership dispersion as part of the influential factors examined. Homayoun and Rahman (2010) indicated that board size and profitability are positively associated with CIR practices of 100 companies listed on the Bursa Malaysia Stock Exchange. However, no association was found in factors such as liquidity, firm size, director independence, and industry. Agyei-Mensah (2011) examined 35 companies listed on the Ghana Stock Exchange and revealed that leverage and profitability were positively related to the extent of CIR. However, no relationship was reported for auditor size and other factors such as firm size and liquidity. Boubaker et al. (2012) investigated 529 French firms in the World Scope Database and found that size, ownership dispersion, Big 4 auditors, and industry (IT companies) could have a positive effect on the extent of web-based corporate reporting. As to determinants such as firm performance, foreign listings, and leverage, no significant relationship was found.

Apart from the single country studies above, several researchers have conducted multiple countries research to identify CIR determinants in different national context, for example, Pirchegger and Wagenhofer (1999, Austria and Germany), Debreceeny et al. (2002, 22 countries), Allam and Lymer (2003, UK, US, Canada, Australia, and Hong Kong), Bollen, Hassink, and Bozic (2006, Australia, Belgium, France, the Netherlands, South Africa, and the UK), Bonsón and Escobar (2006, 12 Eastern European countries and Turkey), Pervan (2006, Croatia and Slovenia), and HENCHIRI (2011, Morocco and Tunisia). In particular, Pirchegger and Wagenhofer (1999) was one of the few early studies to examine the CIR determinants in a multi-country research context. They investigated 26 and 20 of the largest Austrian companies in 1997 and 1998 respectively that were listed on the Vienna Stock Exchange, and the largest 30 German companies that listed on

the German Stock Exchange. The study reported that firm size and percentage of free float shares were positively related to the online reporting of Austrian companies in both years; whereas no relationship was found to associate with the CIR of German companies. In another study, Allam and Lymer (2003) examined 50 of the largest companies across five areas: the UK, the US, Canada, Australia, and Hong Kong. In this study, only one determinant, size, was tested. The result indicated that only Australian companies are positively associated with size, and no association was found for firms in the other four areas. In a more recent study, Henchiri (2011) assessed the 41 companies listed on the Casablanca Stock Exchange and 50 companies listed on the Tunis Stock Exchange. The findings showed that CIR practices by both Moroccan and Tunisian companies are positively correlated with profitability and foreign ownership, and negatively associated with firm performance. In addition, no relationship was found between firm size and the extent of corporate online disclosure in these two countries.

It is noted that most prior CIR explanatory studies focus on developed countries such as the US, the UK, Germany, France, and Spain, as well as some developing nations such as Thailand, Malaysia, Turkey, and Egypt. As for China, a country with one of the largest markets and economies in the world, there have been only five studies investigating the determinant factors of Chinese CIR practice: Xiao et al. (2004), Lin et al. (2005), He and Zhang (2007), Zhu and Liu (2008), and Han and Liu (2009).

Xiao et al. (2004) explored the extent of CIR practice by the largest 300 A shares companies listed on either the Shanghai or the Shenzhen Stock Exchange. In their study, apart from investigating determinants such as firm size, director independence, Big 5 auditors, foreign listings, leverage, and information technology (IT) industry, they also included the examination of China-specific influential factors (e.g., state ownership and institutional, also known as legal person, ownership) in the research. The results demonstrated that size, leverage, legal person ownership, director independence, foreign ownership, Big 5 auditors, and IT industry were all positively associated with Chinese CIR practice (information content and/or presentation format). On the other hand, state ownership was found to have a negative relationship with online reporting. Xiao

et al. (2004) believed that state shareholders tended to have access to private information; therefore, it was expected that they would not encourage public disclosure.

Lin et al. (2005) also conducted similar research to that of Xiao et al. (2004) by examining 353 A shares companies that list on the Shenzhen Stock Exchange. The result demonstrated that firm size, ownership dispersion (or in the Chinese term, public ownership) and institutional ownership were positively associated with Chinese CIR practice. In another study, He and Zhang (2007) investigated 774 A shares companies listed on the Shanghai Stock Exchange. Similar to Xiao et al. (2004), they also found that firm size, independent directors, and IT industry were positively associated with the adoption and comprehensiveness of CIR practice. On the other hand, managerial ownership and agricultural and forestry and fishing industries were negatively related to online reporting. Lastly, Zhu and Liu (2008) and Han and Liu (2009) also found similar results in their investigation of 109 A shares companies from the Shanghai or Shenzhen Stock Exchange and 292 listed companies from the Shenzhen Stock Exchange respectively. Firm size was once again found to have a positive effect on Chinese CIR practice. However, inconsistent with He and Zhang (2007), Han and Liu (2009) reported a positive association for managerial ownership.

It is acknowledged that these five studies have provided some insights with respect to CIR practice in the Chinese context. However, several limitations should not be ignored. These limitations are discussed in the following section.

3.4.3 Limitations of Prior CIR Studies in China

Several limitations were identified through the review of the five Chinese CIR studies. First, their sample included only single-listed A share firms but no dual-listed companies were selected. As the Chinese stock market is unique in that it offers two types of shares – Mainland China (A and B shares) and one type in Hong Kong (H shares) – Chinese firms are allowed to be either single-listed or dual-listed (e.g., A+B or A+H shares). This study contends that in order to investigate CIR practice in the Chinese context, dual-listed companies should also be included in a research sample. Second, as discussed previously, Chinese studies adopted only an unweighted dichotomous disclosure index as their

research instrument. An issue with this instrument is that it can measure only the extent but not the quality of reporting. In order to provide an in-depth analysis on Chinese CIR practices, the current study believes that a more sophisticated instrument, such as a weighted qualitative disclosure index, should be employed. Third, since no Chinese CIR study was found after 2009, the datasets in these studies were relatively old and might not, therefore, reflect the current status of Chinese CIR practice.

Fourth, none of the Chinese CIR studies has incorporated the stakeholder perspective in their research. These studies developed their disclosure indices based on prior literature, but other procedures, such as drawing on a panel of experts or conducting questionnaire surveys, were not employed to obtain more comprehensive details regarding the needs and wants of stakeholders. This current study believes that in order to evaluate the potential difference between stakeholders' demands and expectations and the actual CIR practices of corporations, it is important for researchers to obtain stakeholders' opinions about the information they desire. For this reason, this study contends that the participation of stakeholders is a vital component in CIR research. Fifth, the lack of Chinese CIR studies and the issues in Chinese CIR practice¹⁰ (e.g., lack of timeliness and low quality of disclosures) indicate the need for more research.

Given these weaknesses, a more comprehensive research study into Chinese CIR is called for. The current research was conducted to fill this gap while drawing on the previous studies, in particular those discussed above, to investigate the level of CIR practices. Through the combined use of a weighted qualitative disclosure index and the stakeholders' perspective, this current study was able to develop and apply a CIR practice model to three groups of the largest 25 Chinese listed companies (A shares, A+B shares, or A+H shares), as well as to explore the factors impacting the level of CIR, and, further, to make recommendations for Chinese CIR practice.

Table 3.1 below provides a summary of prior CIR studies in regard to the country, purposes, sample, research instrument, and findings of their research.

¹⁰ Please refer to Chapter 2 for details.

Table 3.1 Summary of Prior CIR Studies

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Flynn & Gowthorpe (1997)	Nine Countries	Investigation of the Content of Corporate Websites	Top 100 companies in the Fortune Global 500	A List of Disclosure Items	No Items were Displayed	Of the 100 companies, 60, 25, 30, and 39 included annual financial information, quarterly financial information, auditor reports, and notes to the accounts, respectively. German companies tended to have the least online business reporting.
Ashbaugh, Johnstone, & Warfield (1999)	U.S.	Determinants of Existence of Website and Internet Corporate Reporting	290 Association for Investment Management and Research Companies	An evaluation of information content and presentation on firms' websites	No Items were Displayed	Size (+) Profitability (+)
Craven & Marston (1999)	U.K.	Determinant of Internet Financial Reporting and Existence of Companies' Website	206 Largest Listed Companies on the London Stock Exchange	Unweighted Dichotomous Index	Five criteria	The result showed that 153 companies have websites or a homepage on the Internet, and 109 provided online financial information on their website, and 67 and 42 firms disclosed detailed annual reports and parts of their annual reports respectively. Furthermore, 44 companies provided a corporate website but with no disclosure of online financial information. Size (+)
Pirchegger & Wagenhofer (1999)	Austria and Germany	Determinants of Internet Financial Information Quality	<i>Austria</i> 1997 – 26 Companies and 1998 – 20 Companies <i>Germany</i> 1998 – 30 Companies	Weighted Dichotomous Index	38 Items	Size (+) – Only to Austria Percentage of Free Float Shares (+) – Only to Austria

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Gowthorpe & Amat (1999)	Spain	The Existence of Corporate Website and Extent of Information Provided on Websites	379 Companies listed on Madrid Stock Exchange	Unweighted Dichotomous Index	Seven Items	Electricity and Gas Industry (+) Banking Industry (+) – but only for existence of website
Hedlin (1999)	Sweden	Extent of Investor Relations Information on Corporate Website	60 Companies Listed on Stockholm Stock Exchange	Unweighted Dichotomous Index	Eight Items	Most information presented on the Swedish companies' websites is recycled from paper-based versions of their annual report. The results indicated that companies did not take advantage of the unique features of Internet technology. Size (+) – Only for A list companies
Deller, Stubenrath, & Weber (1999)	U.S., U.K., and Germany	A International Comparison of Investor Relations Activities	Companies from S&P, FTSE and DAX Stock Market 100 Index	A List of Disclosure Items	19 Items	95%, 85%, and 76% of the sample U.S., U.K., and German companies respectively have a corporate website available. Amongst these companies, 91% of U.S. companies have an investor relations information page on their website. For firms in the U.K. and Germany, 72% and 71% respectively have provided online investor information on the web. Online reporting practice is more common in the USA. Although the Internet can provide a wide range of possibilities for communication with investors, it is not widely used in all three countries.

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Ettredge, Richardson, & Scholz (2001)	U.S.	Determinants of Online Information Disclosure for Investors	490 Companies	Financial Disclosure Checklist	17 Items	402 companies (82%) have a website, and airlines, electrical equipment, health care, and natural gas are the industries to have the highest website representation rate (100%), and environmental controls is the lowest (50%). 62% of the firms included annual report and excerpts on their website and 80% of the companies provided financial news.
Ettredge, Richardson, & Scholz (2002)	U.S.	Determinants of Information Disclosure for Investors at Corporate Website	220 AIMR Companies	Required and Voluntary Dichotomous Disclosure Index	16 Items	<u>Required & Voluntary</u> Size (+) <u>Voluntary</u> Demand for External Capital (+) Traditional Disclosure Reputation (+)
Bonsón & Escobar (2002)	15 European Countries	Determinants on Voluntary Disclosure on the Internet	300 Largest Companies in European Union.	Unweighted Dichotomous Transparency Index	23 Items	Industry – Mining and Oil & Gas (+) Country of Origin – North and Central Europe (+) Size (+)
Debreceeny, Gray, & Rahman (2002)	22 Countries	Firm Characteristics of Internet Financial Reporting	660 Companies. 30 Companies From 22 Countries	IFR-Content Scheme with Four Levels of Scores (0-3) and IFR-Presentation Scheme with 3 Levels of Scores (0-2)	No Items were Displayed	<u>Presentation & Content:</u> Size (+) U.S. Listed Companies (+) <u>Presentation:</u> Level of Technology Employed (+) Environment Disclose (+) Foreign Listings (-)
Larran & Giner (2002)	Spain	Determinants of the Use and Scope of Corporate Internet Reporting	107 Companies Listed on Madrid Stock Exchange	Unweighted Dichotomous Index	48 Items	Size (+) Foreign Ownership (+) – Scope of Information

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings
						<i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Allam & Lymer (2003)	Five Countries	Extent of Internet Financial Reporting	250 Companies. 50 Largest From 5 Countries	An Index of Attributes Different weights were assigned to three of the attributes: Format, Corporate Citizenship, and Auditor's Report	36 Items	Size (+) – Australia
Marston (2003)	Japan	Determinants of Internet Financial Reporting	99 Companies from the Times 1,000 1998	Unweighted Dichotomous Disclosure Index	16 Items	Size (+) Industry (+) – Manufacturing (Only for Existence of English Website)
Davey & Homkajohn (2004)	Thailand	Extent and Quality of Internet Financial Reporting	Top 40 Companies Listed on Thailand Stock Exchange	Weighted Qualitative Disclosure Index	33 Items	Max score being 100, IFR scores of Thai companies were between 10 and 69. 41% of companies scored between 40 and 49.
Marston & Polei (2004)	Germany	Determinant Characteristics of Corporate Internet Reporting in year 2000 & 2003	50 Companies. Top and Bottom Quartile of DAX 100	Weighted Dichotomous Disclosure Index	71 Items	Size (+) 2000 & 2003 Foreign Listing (+) 2003 Number of Free Float Shares (+) 2000
Lodhia, Allam, & Lymer (2004)	Australia	Descriptive Study on Corporate Internet Reporting	50 Largest Companies in Australia	Weighted Dichotomous Disclosure Index	36 Items	Australian companies did not utilise the full potential of Internet technology to present financial information in different ways from what was disclosed in paper-based reporting.

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Xiao, Yang, & Chow (2004)	China	Determinants of Voluntary Internet-based Disclosures	300 Largest A-shares Companies Listed on Shanghai and Shenzhen Stock Exchanges	Unweighted Dichotomous Disclosure Index	82 Items	Size (+) Director Independence (+) Foreign Ownership (+) Big 5 Auditor (+) Industry (+) – Information Technology Legal Person Ownership (+) Leverage (+) State Share Ownership (-)
Abdul Hamid & Md Salleh (2005)	Malaysia	Determinants of the Investor Relations Information	100 Malaysian Index-Linked Counters Listed on Bursa Malaysia Stock Exchange	Unweighted Dichotomous Disclosure Index	14 Items	Size (+) Industry (+) - Construction
Khadaroo (2005)	Malaysia and Singapore	Description Study of Web-based Reporting	100 Companies Listed on Bursa Malaysia Stock Exchange, and 45 Companies Listed on Singapore Stock Exchange	Unweighted Dichotomous Disclosure Index	41 Items	Results showed that Singaporean companies have better web-based reporting practice compared to Malaysian companies. Companies from Singapore topped most of the attributes in the Index. The examination showed that Singaporean companies have better presentation of information, investor relations information, and they tend to use sophisticated programming language to build corporate websites.
Lin, Xin, Yang, & Chen (2005)	China	Determinants of Online Investor Relations Information Disclosure Quality	353 A-Shares Companies Listed on Shenzhen Stock Exchange	Unweighted Dichotomous Investor Relations Index	48 Items	Size (+) Public Ownership (+) Institutional Ownership (+)
Momany & Al-Shorman (2006)	Jordan	Determinants of Information Provided on the Internet	60 Companies Listed on the Amman Stock Exchange	Unweighted Dichotomous Index	No Items were Displayed	Size (+)

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Bollen, Hassink, & Bozic (2006)	Six Countries	Determinants of Internet Investor Relations Activities	270 Companies from Six Countries	Weighted Dichotomous and Qualitative Index	31 Items	Size (+) Foreign Listings (+) Foreign Revenues (+) Proportion of Shares Available to Individual Investors (+) Industry (-) – Technology Growth Rate (-) Disclosure Environment (+)
Pervan (2006)	Croatian & Slovenia	Determinants of Internet Financial Reporting	85 Listed Companies – 55 from Croatia and 30 from Slovenia	Unweighted Dichotomous Index	30 Items	<u>Croatian:</u> Size (+) Profitability (+) Number of Shareholders (+) Majority Foreign Ownership (+) Industry – Tourism (-), Marine Transport (-) <u>Slovene:</u> Official Listing (+) Proportion of Market Capitalisation (+) Industry – Transport (-)
Abdelsalam, Bryant, & Street (2007)	U.K	Determinants of CIR Comprehensiveness	110 Companies listed on London Stock Exchange	Dichotomous Measurement for Content Category Multiple Scoring Systems for Usability Category	143 Items	Director Holding (-) Number of Analyst Following (+) Director Independence (+) – Information Content Manufacturing Industry (+) Size (+) - <i>CIR Credibility</i> CEO Duality – <i>Information Credibility</i>
He & Zhang (2007)	China	Determinants of Internet Financial Reporting	774 A-Shares Companies Listed on Shanghai Stock Exchange	One Criterion – Availability of Online Financial Information	One Items	Independent Directors (+) Managerial Ownership (-) Industry - Technology (+); Industry - Agricultural, Forestry and Fishing (-) Size (+)

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Al-Shammari (2007)	Kuwait	Determinants of Internet Financial Reporting	143 Companies Listed on Kuwait Stock Exchange	Unweighted Website Information Analysis Index	No Items were Displayed	Industry (+) – Insurance Companies Size (+) Big Four Audit Firms (+) Lower Level of Liquidity (+) Higher Level of Leverage (+) Profitability (+) Company Age (+) International Activities (+)
Ezat (2008)	Egypt	An Analysis of Online Information Disclosures	Total Egyptian Companies (432) Listed on Egyptian Stock Exchange	Online Information Disclosure Checklist	127 Items	The results indicated that 52% of the Egyptian listed companies have a website. Among these firms, 35.6%, 98.7%, 91.1%, and 48% respectively disclose online financial, social, corporate governance, and timely information.
Abdelsalam, & El-Masry (2008)	Ireland	Determinants of CIR Timeliness	44 Companies listed on Irish Stock Exchange	Unweighted Dichotomous Timeliness index	13 criteria	Board Independence (+) CEO Ownership (+) Ratio of Independent Directors (+) – <i>Online Quarterly Report</i> Size (+)
Alvarez, Sanchez, & Dominguez (2008)	Spain	Industry Concentration and Other Explanatory Factors of Voluntary and Compulsory Disclosure Online	117 Companies from Madrid Stock Market	Unweighted Dichotomous Disclosure Index (With max score of 2 in some items)	44 Items	Size (+) – Voluntary Industry – Energy Sector (+) – Voluntary Industry Concentration (+) – Voluntary
Trabelsi, Labelle, & Dumontier (2008)	Canada	Factors of Additional Internet Financial Information Disclosures	108 Companies on the Toronto Stock Exchange	Unweighted Qualitative Disclosure Index	79 Items	Share Turnover (+) Research and Development Expenditure (+) Profitability (-) Size (+)
Zhu & Liu (2008)	China	Determinants of Internet Financial Reporting	109 A-Shares Companies Listed on Shanghai and Shenzhen Stock Exchanges	One Criterion – Availability of Online Financial Information	One Item	Size (+)

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Kelton & Yang (2008)	U.S.	Determinant of Internet Financial Reporting	284 Listed Companies from NASDAQ	Unweighted Dichotomous Index	36 Items	Company Size (+) Number of Audit Committee Meeting (+) Big-4 Auditors (+) Block Ownership (-) Director Independence (+) Financial Expert on Audit Committee (+)
Almilia (2009)	Indonesia	Determinants of Internet Financial Reporting	45 Companies from Indonesia LQ-45 Stock Index	Unweighted Dichotomous Disclosure Index	34 Items	Company Size (+) Profitability (+)
Alarussi, Selamat, & Hanefah (2009)	Malaysia	Determinants of Financial and Environmental Disclosure on the Internet	189 Companies Listed on Bursa Malaysia's main and second boards	Unweighted Dichotomous Internet Disclosure Index	60 Items	<u>Financial Disclosure:</u> Ethnicity of CEO (+) Level of Technology (+) Duo Roles in CEO and Chair of the Board (+) Size (+) <u>Environmental Disclosure:</u> Ethnicity of CEO (+) Level of Technology (+) Size (+)
Desoky & Mousa (2009)	Bahrain	Determinants of Voluntary Internet Information Disclosure	40 Companies Listed on Bahrain Stock Exchange	Unweighted Dichotomous Investor Relations Index	31 Items	Size (+) Board Size (+) Board Composition (+) Firm Type (-) Firm Performance (-)
Aly, Simon, & Hussainey (2010)	Egypt	Determinants of Corporate Internet Reporting	100 Most Active-traded Companies from the Egyptian Stock Exchange	Unweighted Dichotomous Disclosure Index	90 Items	Profitability (+) Foreign Listings (+) Industry – Communication & Financial Services (+)
Homayoun & Rahman (2010)	Malaysia	Determinants of Web-based Corporate Reporting	100 Companies Listed on the Bursa Malaysia Stock Exchange	Unweighted Dichotomous Disclosure Index	87 Items	Profitability (+) Board Size (+) Liquidity (-)

(Continued)

Author	Country	Purpose	Sample	Research Instrument	No. Disclosure Items	Findings <i>Positive Relationship (+)</i> <i>Negative Relationship(-)</i>
Agyei-Mensah (2011)	Ghana	Determinants of Corporate Internet Financial Reporting	35 Companies Listed on the Ghana Stock Exchange	Weighted Dichotomous Internet Financial Reporting Disclosure Index	15 Items	Profitability (+) Leverage (+)
Aziz, Ariffin, & Mohamed (2011)	Malaysia	Determinants of the Level of IFR Quality in Malaysia	175 Companies Listed on the Main Board of Bursa Malaysia	Weighted Dichotomous Index	No Items were Displayed	Size (+) % of Free Float Shares (+)
Dâmaso & Lourenço (2011)	U.K	Factors of Internet Financial Reporting	316 Listed Companies in FTSE-350 from London Stock Exchange	Unweighted Dichotomous Disclosure Index	12 Items	Industry – Air Impact Environmental industries (+), Land Impact Environmental Industries (+) Size (+) Leverage (-) Ownership Concentration (-) Big 4 Auditing Firms (+)
Henchiri (2011)	Morocco and Tunis	Determinants of Voluntary Web-based Disclosures	41 Companies Listed on Casablanca Stock Exchange 50 Companies Listed on Tunis Stock Exchange	Unweighted Dichotomous Disclosure Index	123 Items	Firm Performance (-) Profitability (+) Foreign Ownership (+)
Sánchez, Dominguez, & Álvarez (2011)	Spain	Determinants of Voluntary Online Disclosure on Strategic Information	177 Companies Listed on Madrid Stock Exchange	Unweighted Dichotomous Disclosure Index	8 Items	Leverage (+) Industry (-) – Transportation
Boubaker, Lakhal, & Nekhili (2012)	France	Determinants of Web-based Reporting in France	529 French Firms in the World Scope Database	Unweighted Dichotomous Index	101 Items	Size (+) Ownership Dispersion (+) Big 4 Auditors (+) Industry (+) – IT Equity Offering (+)
Uyar (2012)	Turkey	Determinants of Corporate Internet Reporting	43 Companies Listed on Istanbul Stock Exchange	Unweighted Dichotomous Disclosure Index	61 Items	Size (+) Profitability (-)

3.5 CHAPTER SUMMARY

This chapter provides a comprehensive literature review for CIR. The practice of CIR was derived from the deficiencies of traditional reporting and the emergence of Internet technologies. Traditionally, paper-based reporting has been the main communication channel between companies and their stakeholders. However, this method has many deficiencies such as being untimely and not sufficiently comprehensive. With the invention of Internet technology, companies have the opportunity to utilise an alternative reporting medium. Since the late 1990s, many studies have shown an increase in the number of companies using the Internet to disclose financial information on their website. With the availability of advanced technologies, corporations have also begun to disclose more than just financial information on their websites. This study contends that IFR is no longer a sufficient term to describe the current Internet reporting practice; thus the term CIR should be adopted. CIR includes both financial and nonfinancial information, and offers other website features for enhancing user interactivity. Currently, as studies have shown, an increasing number of corporations are implementing CIR, and there are several drivers to explain this trend. Certainly the deficiencies of traditional paper-based reporting, as well as the availability of Internet technology, are two main reasons for adopting CIR. However, other key drivers are information asymmetry, corporate legitimacy, and institutional isomorphism.

Due to the growing trend of CIR practice, the number of studies in respect to CIR research instruments and CIR practices is increasing commensurate with this trend. Many studies have adopted and supported the use of unweighted dichotomous disclosure indices to assess the extent of disclosure items. However, due to the shortcomings of an unweighted index, various writers have asserted that a weighted dichotomous index is more appropriate for CIR research, as it can differentiate the relative importance of the disclosure items. In order to assess the quality of CIR, another form of index – weighted qualitative disclosure index – was reviewed. As this form of weighted disclosure index can properly differentiate the quality of disclosed information between organisations, the current study contends that a weighted qualitative disclosure index should be used for this research.

Many prior studies have also researched the extent of CIR and identified various determinants of CIR practice. However, most of them emphasised practices in developed countries such as the US, the UK, and Germany as well as some developing countries like Thailand, Malaysia, and Egypt. In the context of China, although five studies have investigated the determinants of CIR practice, their depth and breadth are limited. To address the identified limitations of the prior Chinese CIR literature, the current study adopts a more comprehensive sample (single- and dual-listed firms) to examine both the extent and quality of CIR practices by Chinese firms from a stakeholder perspective, as well as to explore the associations between a variety of determinant factors and CIR.

In the next chapter, the theoretical framework applied in this research is presented.

CHAPTER FOUR

THEORETICAL BACKGROUND OF THE RESEARCH

4.1 INTRODUCTION

In this chapter, the theoretical framework of Corporate Internet Reporting (CIR) that guides this study is developed. A theoretical framework can be defined as a set of interrelated constructs, concepts, definitions, or propositions that present a systematic view of phenomena which could be used to guide a particular research project (Creswell, 2003; Gaffikin, 2008; Collis & Hussey, 2009). As the definition implies, a framework can be an integration or combination of several theories that provides an understanding of a certain phenomenon. Many previous CIR studies have followed this notion and combined several theories in their research. For instance, Xiao et al. (2004) adopted agency + signalling + institutional theories; Marston and Polei (2004), Boubaker et al. (2012), and Aly et al. (2010) employed agency + signalling theories; and Liu and Anbumozhi (2009) applied stakeholder + legitimacy theories in their research. On this basis, the author contends that the theoretical framework for this current study should also consist of multiple theories. In this chapter, five often used theories in CIR studies, namely agency theory, stakeholder theory, legitimacy theory, signalling theory, and institutional theory are employed to construct the CIR theoretical framework for this study. The chapter is organised as follows:

- 4.2 Theoretical Background of CIR Practice
- 4.3 Interrelations between the Theories
- 4.4 CIR Theoretical Framework
- 4.5 Chapter Summary

4.2 THEORETICAL BACKGROUND OF CIR PRACTICE

This section reviews and discusses five commonly adopted theories in CIR studies, starting with agency theory. Agency theory is one of the traditional and key theories in many areas of accounting (e.g., corporate reporting, auditing, and Internet reporting), and the agency relationship model has also been widely adopted by several CIR studies to explain CIR practices of corporations (e.g., Xiao et al., 2004; Rowbottom, Allam, & Lymer, 2005, Kelton & Yang, 2008). However, as this research focuses on the CIR perspectives of shareholders and other stakeholders, other commonly adopted theories in prior studies, such as stakeholder, legitimacy, signalling and institutional theory, are also reviewed to ensure the theoretical framework constructed is consistent with the purpose of this study. The rest of the section presents the theories in this order: agency theory, stakeholder theory, legitimacy theory, signalling theory, and institutional theory.

4.2.1 Agency Theory

Overview of Agency Theory

Agency theory originated from the work of Coase (1937), and was strengthened by Jensen and Meckling (1976) and Watts and Zimmerman (1978). The fundamental concept of agency theory is the relationship model of agent and principal (also known as the agency relationship). Here agent refers to a person or an entity which acts on behalf of another person or entity, while the term principal indicates the party who provides funds, offers incentives, and authorises the use of organisational resources (Lambert, 2001; Gaffikin, 2008).

According to agency theory, agency relationship is a contractual relationship between two (or more) parties in which the principal (shareholders) delegates the tasks and decision making authority to agents (managers), and managers are tasked to perform on behalf of the principal (Ross, 1973; Jensen & Meckling, 1976; Eisenhardt, 1989). The agent is expected to align its interest with and maximise the return of the principal; however, as individuals are driven by the desire to maximise their own wealth, managers are deemed to be opportunistic and may seek personal gain at the expense of shareholders' interest (Jensen & Meckling, 1976; Fama & Jensen, 1983).

Under this assumption, the interests of agents and principals are often not aligned, as both parties desire to maximise their return by all possible means. This misalignment tends to create conflicts between the two parties, and information asymmetry often plays a major part in facilitating these conflicts.

Information asymmetry is assumed to appear in most business settings where agents normally have an information advantage (or inside information) over principals, as they are more directly involved in the operation of an organisation (Kelton & Yang, 2008). Given this situation, the agent may ignore the interest of the principal and withhold information to maximise its own personal wealth (e.g., overstating profit figures to obtain higher bonuses; using confidential information for inside trading; and, tunnelling – transfer of assets and profits for the benefit of agents). In order to align the utility of the agent with the utility of the principal, scholars such as Jensen and Meckling (1976), Eisenhardt (1989), and Kelton and Yang (2008) suggested various monitoring and bonding activities such as audit checks, external directors, promotional criteria, and incentive packages that can be employed to restrict or bond agents. The use of these mechanisms, however, can create a number of agency costs for an entity (or principals).

These agency costs can be categorised into three types: monitoring cost, bonding cost, and residual costs (Deegan & Samkin, 2009). Monitoring costs often occur when the principals adopt monitoring activities (e.g., financial audit and internal audit) to ensure that actions of agents align with the principals' interest. Bonding costs are related to mechanisms that agents employ to reduce agency conflicts between themselves and principals. Particular examples of such mechanisms can include timely disclosure of financial statements, compensation packages, and promotional criteria. Despite the use of monitoring and bonding activities, the interests of principals and agents are often not fully aligned which means that other mechanisms will need to be implemented, and these incur another type of agency cost called the residual cost. Although employing monitoring and bonding activities may cause agency costs to rise, these mechanisms are important for reducing information asymmetry between agent and principal.

However, an agent, with the knowledge that principals will seek to restrict and control its behaviour through various bonding and monitoring mechanisms, may have an incentive to try to persuade principals that it is acting optimally (Watson, Shrives, & Marston 2002). With such awareness in mind, an agent would normally employ a mechanism called additional disclosure (or voluntary reporting). It is believed by various scholars (e.g., Watts & Zimmerman, 1978; Firth, 1980; Lev, 1992; Watson et al., 2002) that through additional information disclosure, managers may improve mutual understanding between themselves and shareholders, as well as reduce information asymmetry in the agent-principal relationship, and thereby decrease agency costs. This belief has influenced and is supported by many CIR studies (e.g., Deller et al., 1999; Craven & Marston, 1999, Marston & Polei, 2004; Xiao et al., 2004), and many of these researchers have adopted agency theory as the theoretical backbone of their CIR research. The next section discusses the applications of agency theory and CIR research.

Agency Theory and CIR

Several CIR studies (e.g., Xiao et al., 2004; Marston & Polei, 2004; Rowbottom, Allam, & Lymer, 2005, Kelton & Yang, 2008) have drawn from agency theory and contended that increasing additional disclosure via the Internet could reduce information asymmetry in the agent-principal relationship, thereby avoiding agency conflicts and mitigating related agency costs. More specifically, Deller et al. (1999) assert that an increase in online disclosure of investor relations' information may reduce agency costs because it can better inform shareholders regarding corporate information. Rowbottom et al. (2005) also suggest that greater disclosure (either on paper or online) may decrease the cost of capital, because more disclosure can portray an image of transparency, thus reducing the uncertainty of shareholders. Also, firms, with the use of Internet reporting, tend to place greater emphasis on communication which may provide a common level of disclosure to a wide range of stakeholders (Ashbaugh et al., 1999, Ettredge et al., 2002). As a result, the level of information asymmetry between management and stakeholders can be reduced. In addition, other studies such as Xiao et al. (2004), and Kelton and Yang (2008), and Arussi et al.

(2009) contend that reducing information asymmetry and related agency costs is considered to be one of the key drivers for companies to implement CIR voluntarily.

Limitations of Agency Theory in CIR Research

Although agency theory has been used by many authors to explain and predict corporate CIR practices, on its own, it is not an adequate theoretical basis for the current research. Agency theory provides a foundation for establishing a relationship model between different parties. However, the core of this model focuses merely on maintaining and improving the agent-principal relationship and neglects the need to create and maintain the relationship with other interest-related parties or individuals (also known as stakeholders) that may also be affected by the operation of an entity. As CIR practice is a tool for constructing a communication bridge between firms and the public (e.g., potential investors, environmentalists, government officials, and employees), the agent-principal relationship may seem insufficient and need to be broadened by including other stakeholders in the model. In order to mitigate this limitation, another theoretical concept – stakeholder theory – has been incorporated into the framework of this research.

4.2.2 Stakeholder Theory

The Overview of Stakeholder Theory

The term stakeholder was first developed at Stanford Research Institute (now SRI International) in 1963 (Freeman & Reed, 1983). SRI argued that managers needed to understand the concerns of shareholders, customers, employees, lenders, suppliers, and society in order to have objectives that stakeholders would agree with and support (Freeman & McVea, 2001). Traditionally, it was believed that, as shareholders are the owners of the company, firms have a fiduciary duty to put their needs first and maximise their return (Smith, 2003). Stakeholder theory, however, expands on this notion and argues that organisations should attempt to meet goals of a wide range of stakeholders rather than merely focus on achieving shareholders' interest (Freeman, 1984; Deegan, 2002; Gaffikin, 2008; Yi, Davey, & Eggleton, 2011). In recent years, many scholars such as Guthrie et al. (2006), Tagesson, Blank, Broberg, and Collins (2009), Aly et al. (2010), and Yi et al. (2011) have adopted

stakeholder theory as their theoretical framework to predict and examine various areas of voluntary reporting (e.g., Corporate Social Responsibility, Intellectual Capital, and CIR).

The next section presents the definitions of stakeholders and various stakeholder categorisation models.

Definition of Stakeholders and Stakeholder Categorisation Models

Definition of Stakeholders

There is no unified definition of stakeholders as many writers have attempted to define and provide their views on the meaning of stakeholders. Table 4.1 shows some of the definitions provided by various researchers. As the table shows, the definitions of stakeholders asserted by various writers tend to share similar notions. The meaning of stakeholders thus can be summarised as individual(s) or group(s) who can affect or be influenced by the operations, decisions, achievements, outputs, strategies, and/or objectives of an organisation; at the same time, an organisation has the responsibility to be accountable to those people. This definition of stakeholders (according to the elements presented above), however, is too broad and may create confusion in terms of who a company is responsible to. This problem arises because the suggested meaning of stakeholders can involve any individuals who can affect or be affected by the output of an organisation. This definition can include countless people and it is impossible for a firm to satisfy all the demands of all such stakeholders. Therefore, various categorisation models were developed to distinguish between and prioritise stakeholders into different groups.

Table 4.1 Definitions of Stakeholders

Authors	Definitions of Stakeholder
Freeman (1984)	A stakeholder is any group or individual who can affect or is affected by the achievement of the organisation's objectives.
Alkhafaji (1989)	Stakeholders are groups to whom the corporation is responsible.
Thompson, Wartick, & Smith (1991)	Stakeholders are groups of people in a relationship with an organisation.
Nutt & Backoff (1993)	Stakeholders are all the parties who will be affected by or will affect the organisation's strategy.
Bryson (1995)	A stakeholder is any group or organisation that can put a claim on the organisation's attention, resource, or output, or is affected by that output.
Johnson & Scholes (2002)	Stakeholders are seen as those individuals and groups who depend on the organisation to achieve their own goals and on whom, in some turns, the organisation depends.
Dwivedi & Momaya (2003)	Stakeholders include all individuals and groups who have a "stake" or interest in the success of the company, or people who are affected by, or can affect the organisation.
Jensen (2010)	Stakeholders include all individuals or groups who can substantially affect, or be affected by, the welfare of the firm.

Stakeholder Categorisation Models

Since the needs and demands differ amongst stakeholders, several scholars (e.g., Clarkson, 1995; Friedman & Miles, 2002; Lépineux, 2003) have developed various categorisation models to prioritise an organisation's stakeholders in a more precise way. The table below provides various models of stakeholder classifications.

Table 4.2 Various Models of Stakeholder Classifications

Authors	Stakeholder Classification Model
Clarkson (1995)	<ul style="list-style-type: none"> • Primary Stakeholders <ul style="list-style-type: none"> ○ Shareholders, employees, customers, and suppliers • Secondary Stakeholders <ul style="list-style-type: none"> ○ Environmentalists, general citizens, and media partners
Lépineux (2003)	<ul style="list-style-type: none"> • Shareholders • Internal Stakeholders <ul style="list-style-type: none"> ○ Employees, labour union, and top level management • Operational Partners <ul style="list-style-type: none"> ○ Customers, suppliers, creditors, and subcontractors • Social Community <ul style="list-style-type: none"> ○ Governments, regulators, and civil society
Friedman & Miles (2002)	<ol style="list-style-type: none"> 1. Necessary contract relationship and compatible of interest <ul style="list-style-type: none"> ○ Shareholders and corporations, top management and corporations, and other partners. 2. Necessary contract relationship and incompatible of interest <ul style="list-style-type: none"> ○ Trade union, low level employees, customers, and government agencies 3. Contingent contract relationship and compatible of interest <ul style="list-style-type: none"> ○ The general public and companies connected through common trade associations 4. Contingent contract relationship and incompatible of interest <ul style="list-style-type: none"> ○ Some NGOs and aggrieved or criminal members of the public

In particular, Clarkson (1995) divided stakeholders into two tiers: primary and secondary. The primary stakeholders are those crucial for the continuous operation of an organisation (e.g., shareholders, employees, customers, and suppliers); therefore, their demands are given priority. The secondary stakeholders (e.g., environmentalists, general citizens, and media partners) are not as essential for the survival of an entity, thus less attention is diverted to them to satisfy their disclosure expectations. Lépineux (2003) presented an alternative way to classify stakeholders by categorising them into different groups of actors: shareholders, internal stakeholder, operational partners, and the social community. Shareholders are separated from internal stakeholders because Lépineux (2003) believes that shareholders are not actually associated with an organisation's internal operations. Therefore, internal stakeholders should include only parties such as employees, labour unions, and management. Operational partners are people such as customers and suppliers who help in organisational operation externally, and lastly, social community can include government agencies and general citizens. In this model, shareholders and internal

stakeholders are deemed most important to the corporations, whereas the other groups are not as vital.

Friedman and Miles (2002) provided a more sophisticated model that allows an organisation to prioritise and manage its stakeholders according to contractual relationship and level of interest. Based on this model, group 1 stakeholders may include shareholders, top management, or corporation partners. These stakeholders are expected to have a formal, explicit contractual relationship (a form of verbal or written contract) and share similar interest with an organisation. This group of stakeholders normally has significant power (financial, voting, or intellectual) that could influence the direction and survival of an organisation. In this regard, group 1 stakeholders' interest is often the first priority of an organisation. Group 2 stakeholders may include trade unions, low-level employees, customers, lenders, and suppliers. Although this group of stakeholders also has a necessary contractual relationship with an organisation, they may not necessarily share the same interest. However, since there is a contractual relationship, organisations are still encouraged to deal with the criticisms of group 2 stakeholders despite the incompatible interest. Group 3 includes stakeholders that have no formal contract and direct relationship with an entity; however, these stakeholders may be bound together with organisations by common ideas or compatible interests. Examples include general citizens, academics, and companies connected through trade associations and initiatives. Lastly, group 4 stakeholders comprise parties that have no contractual relationship, implicit or explicit, nor share similar interest with an entity. This group of stakeholders are nongovernmental organisations and aggrieved or criminal members in a society.

On the basis of the models presented and discussed above, stakeholders may include employees, shareholders, trade unions, governments, customers, suppliers, and citizens in a society. As each stakeholder group has different significance to the survival of an organisation, it is impractical for entities to meet the demands of all stakeholders with limited resources on hand. Therefore, it is necessary to prioritise stakeholders based on the business nature or strategies of an organisation. For

instance, the primary stakeholders for oil or mining companies can be government and environmentalists as these firms tend to face environmental pressure from these stakeholder groups. For food and beverages corporations, if their products are contaminated by polluted ingredients, consumers' demands and expectations would be their first priority.

In summary, the definitions of stakeholders provide a brief understanding of to whom an organisation is responsible, and various categorisation models present a way of classifying and prioritising stakeholders in a more precise way. However, the questions of why an organisation should shift from a shareholder to stakeholder perspective and how an organisation should discharge its accountability to stakeholders arise. The next section aims to address these questions by presenting the notion of stakeholder accountability.

Stakeholder Accountability

One of the central features of stakeholder theory is the idea of accountability. Accountability involves explaining or justifying what has been done and what has been planned, and providing an account, not necessarily a financial account, of actions for which one (s) is held responsible to the party (ies) that the actions have been performed for or have had an influence on (Jackson, 1982; Gray et al., 1996; Mulgan, 1997; Cooper & Owen, 2007). Benson (1982), Jones (1992), Mulgan (2000), Licht (2002), and Dobbs and van Staden (2012) further stated that if a party (ies) is entitled to an account, it is a duty and a responsibility of the other party (ies) to give that account. The assumption that a company's accountability is to be responsible for the outcomes of its decisions and actions is based on this notion. However, to which party (ies) a corporation owes accountability is a question that needs to be answered.

Owners/Shareholders vs. Stakeholders

Traditionally, under the influence of the agent-principal contractual relationship model, since the principal (owner/shareholders) is the sole provider of the resources, the agent (management) has the duty to act on behalf of the principal, and thus the management is only responsible for discharging the accountability to the owner/shareholders of an entity (Lee, Staunton, & Eddie, 1999; van Ees, Gabrielsson,

& Huse, 2009). Under this notion, the agent can be seen as an accountant, the one who gives an account, and the principal is the sole accountee, the one to whom the account is given. However, several scholars such as Chen (1975), Freeman and Reed (1983), Unerman and Bennett (2004), Cooper and Owen (2007), and Parmar, Freeman, Harrison, Wicks, Purnell, and de Colle (2010) have argued that accountability responsibility should not be limited to owner/shareholders, but that it should be extended to all parties that can affect or be affected by the actions of an organisation. Chen (1975) also stated that, since all property is owned by the whole of society, enterprises have the responsibility to account to other stakeholder groups, not just the owner/shareholders. Thus, under the stakeholder perspective, management should discharge accountability to the owners/shareholders as well as to a wide range of stakeholders.

Accountable to all Stakeholders or Prioritise Them

There are two branches of stakeholder theory: the ethical (normative) branch and the managerial (positive) branch, and each asserts different views regarding how to discharge accountability to various stakeholder groups (Donaldson & Preston, 1995; Phillips, Freeman, & Wicks, 2003; Deegan, 2005). The ethical branch purports that organisations ought to pay attention to and engage in activities for the benefits of a wide range of stakeholders (Hasnas, 1998; Freeman & Phillips, 2002; Phillips et al., 2003; Yi et al., 2011). It also suggests that every stakeholder has the value to possess the right to be treated equally by an organisation, and it is a responsibility of an organisation to be accountable to all stakeholders, regardless of whether doing so leads to improved financial performance or not (Donaldson & Preston, 1995; Hasnas, 1998; Jones & Wicks, 1999; Deegan, 2005). Essentially this notion means that shareholders should not have the right to gain any information that has not been provided to stakeholders. It is the responsibility of an entity to notify all stakeholders about how its decisions and actions may affect them. Thus, an organisation should supply information (e.g., financial data, corporate responsibility reports, and environmental reports) to all of its stakeholders, regardless of whether the information will be utilised by them or not (Yi et al., 2011).

The managerial branch, on the other hand, emphasises the need to manage and meet the demand of particular stakeholder groups, especially those stakeholders that have the ability to control the vital resources required for organisational operations (Gray, Owen, & Adams, 1996; Nasi, Nasi, Phillips, & Zyglidopoulos, 1997; Deegan, 2002). Stakeholders who possess resources (e.g., finance, labour, or technologies) that could influence the decision or operation of corporate management are considered to be significant or powerful. Priorities should be given to these stakeholders because they have the power to dictate the survivability of an organisation. Thus, it is advocated that the more significant the stakeholder is to the success of an entity, the more the effort that should be made to address the demand of that stakeholder (Ullmann, 1985). This distinction seems to imply that the assertion of the managerial branch is different from the ethical branch, as it encourages the prioritisation of stakeholders rather than meeting the demand of all the stakeholders.

The managerial branch of stakeholder theory seems to provide a more practical view in terms of discharging accountability than does the ethical branch. With limited resources on hand and differential needs from various stakeholder groups, it would be impossible to treat all the stakeholders equally. Given this circumstance, organisations should selectively create and maintain the relationship with different stakeholder groups. Generally, a successful organisation is the one that can meet the demands and expectations of the various significant stakeholders that it depends upon (Ullmann, 1985; Deegan, 2005). Therefore, prioritisation is needed to discharge organisations' accountability effectively and to establish a healthy relationship with their stakeholders.

Stakeholder Theory and CIR

Stakeholder theory asserts that organisations are part of the social system in which they operate; thus organisations have the responsibility to be accountable to various stakeholder groups. In order to maintain a strong relationship with stakeholders and discharge accountability, information disclosure is considered to be an important means of doing so for organisations (Gray et al., 1996).

Traditionally, the most commonly used tool for discharging such accountability responsibility has been the release of paper-based annual reports (Boyne & Law, 1991; Hooks et al., 2001; Tooley & Hooks, 2010). However, as there is an increasing information demand from a wide range of stakeholders, it has become difficult for organisations to maintain this reporting medium as an efficient communication bridge with their stakeholders (Debrecey et al., 2002). Consequently, various writers (e.g., Unerman & Bennett, 2004; Kelton & Yang, 2008; Mohamed & Oyelere, 2008; Arussi et al., 2009; Mohamed et al., 2009) believe that the Internet may assist in facilitating a greater degree of information disclosure and discourse with stakeholders to discharge corporate economic, environmental, and social responsibilities. Many researchers (e.g., Debrecey et al., 2002; Hanafi et al., 2009; Aly et al., 2010; Skouloudis, Evangelinos, & Kourmoussis, 2010) also support this view and have adopted the stakeholder concept to explain the CIR practice of an organisation. However, the empirical evidence from many of those studies showed that organisations still had not sufficiently achieved or exceeded the information demands of stakeholders.

Limitations of Stakeholder Theory in CIR Research

Similar to agency theory, stakeholder theory also suffers from several limitations. First, although it emphasises disclosing additional information to stakeholders, it does not indicate what and how much information an organisation should disclose voluntarily. Second, the theory emphasises how an entity “should be” accountable to the stakeholders, but it does not explain why an organisation would want to be responsible to stakeholders (e.g., incentives, motivations, or consequences). Third, this theory focuses heavily on organisations’ accountability to their stakeholders (one-way delivery accountability), but does not promote two-way communication, as it fails to recognise the extent of stakeholders’ engagement in the operation of the organisation. As Gray et al. (1996) and Ullman (1985) stated, if an organisation’s management neglect the demands and feedback of its stakeholders, the effectiveness of discharging its accountability could be reduced. For these reasons, another theory will be reviewed in order to form the theoretical framework for this current study. The next section discusses legitimacy theory and its relation to CIR research.

4.2.3 Legitimacy Theory

Overview and Concepts of Legitimacy Theory

Legitimacy theory asserts that an organisation will continually ensure its operations are within the bounds and norms of its respective society, in order to be considered as “legitimate” by stakeholders in that society (Deegan, 2002; Guthrie et al., 2006; Gaffikin, 2008). To be deemed legitimate by the society in which an organisation operates, an entity’s activities must be aligned with the socially constructed system of norms, values, and beliefs of that society; otherwise, its survivability may be threatened.

According to Deegan (2002), legitimacy theory originates from political economy theory and overlaps with various theories such as social contract and resource dependency theory. Political economy theory asserts that politics, society, and economics are inseparable, and that economic issues cannot be investigated meaningfully if there is an absence of consideration about the political, social, and institutional framework in which the economic activities take place (Deegan, 2005). This view indicates that an organisation itself is only part of a broader social system, and that it has no inherent right to resources, or even to exist, in a society. Political economy theory (as well as legitimacy theory) also accepts the pluralistic view of the world, meaning that different classes of stakeholders are assumed to be equal, and they have the power to influence various decisions made by corporations, governments, and other entities (Gray et al., 1996; Deegan, 2000). In reality, however, as different stakeholder groups may possess unequal power or ability, Deegan (2006) suggests that an entity is expected to have a series of “social contracts” with different groups of stakeholders, and the significance of the contract may depend on the power of each stakeholder group. In this sense, legitimacy theory also overlaps with the concept of social contract.

The concept of the social contract asserts that organisations have no inherent right to draw resources from communities, and that, in order to survive, an organisation must ensure that the benefits it provides can exceed the costs to society (Mathews, 1993). Under this concept, entities should conduct their activities within the expectations and

norms of the society, and only by doing so will the society consider that they are legitimate and grant the state of legitimacy to the entities (Mathews, 1993; Deegan, 2002; Deegan, Rankin, & Tobin, 2002). However, if the operations of an entity fail to meet the societal expectations, the social costs may exceed the benefits, and a legitimacy gap will arise. Society may then perceive that the contract has been breached and revoke the operations as well as the existence of the entity (Lindblom, 1994; Deegan, 2002). The status of “legitimacy” can then be seen as a resource on which an organisation is dependent for its existence, and an entity will pursue strategies to maintain and create such status (Dowling & Pfeffer, 1975; Woodward, Edward, & Birkin, 2001; Deegan, 2002). This assertion implies that legitimacy theory also overlaps with resource dependency theory.

Resource dependency theory advocates that constraints placed on an organisation by the community could be removed if an entity is able to gather and maintain the necessary social support and resources (Pfeffer & Salancik, 1978). Therefore, whenever managers consider the supply of a particular resource is essential to organisational survival, they will follow strategies to ensure the continued supply of that resource (Deegan, 2002). Legitimacy theory drew upon this idea and suggests that an organisation will continue to form positive relationships with its significant stakeholders (similar to the notion of the managerial branch in stakeholder theory) in order to create and maintain legitimacy status (a necessary resource) to ensure its survival in a society. The following table summarises the characteristics of the three concepts in legitimacy theory.

Table 4.3 Concepts in Legitimacy Theory

Concept	Characteristics
Political Economy Theory	<ul style="list-style-type: none"> • Takes a pluralistic view of the world. • Considers an organisation is one of the elements in a society. • Focuses on society as a whole. • Maintains an organisation has no inherent right to survive or even exist.
Social Concept	<ul style="list-style-type: none"> • People have the right to revoke the existence of the organisation. • To allow the existence of corporations, society would expect the benefits to exceed the costs to society. • An entity does not deserve to exist if it disregards the interest of the society. • Companies do not have an inherent right to the resources of society.
Resource Dependence Theory	<ul style="list-style-type: none"> • Most organisations depend on the resources traded for survival. • Whenever the supply of a particular resource is essential to organisational survival, strategies will follow to ensure the continued supply of the resource.

It is clear from Table 4.3 that an organisation is part of a broader social system, and it has no inherent right to resources, or to even exist in a society. In order to earn the right of survival, a social contract between the organisation and the society in which it operates must not be breached. Under this contract, the operations of an entity should comply with societal expectations and norms, and only by doing so will the status of legitimacy be granted to it by the society. Since legitimacy status is key for an entity's survival, managers in the organisation will ensure the status is achieved through the use of strategies.

Organisational Legitimacy and Disclosures

According to Lindblom (1994), "legitimate" or "legitimacy" can be defined as a condition or status that exists when an organisation's value system is consistent with the value system of the society in which the entity operates. If a disparity, either actual or potential, is evident between the two systems, the entity's status of legitimacy will be under threat, which will, in turn, threaten its survival in that society. However, it is often difficult to attain consistency between society's norms or expectations and an entity's actual actions, and this inconsistency tends to create a legitimacy gap between these two parties. There are two common causes of the

legitimacy gap (Sethi, 1978). First is a change(s) in a society's expectations. While the way the organisation has been operating may previously have been accepted, the same manner may not be seen as legitimate when there is a change in the expectations of a society. Second is the exposure of previously unknown or hidden negative information. This may damage the legitimacy status of an organisation and widen the legitimacy gap.

This gap may be harmful to an organisation's legitimate status, image, and reputation. A number of strategies were advocated by various studies (Dowling & Pfeffer, 1975; Lindblom, 1994; Woodward et. al., 2001) to address this issue. First, an entity can educate and inform the public (or related stakeholders) about the changes in its actual behaviour to show the consistency between the expectations of the public and the company's action. Second, an entity can attempt to change the perceptions of the public without changing the firm's actual behaviour. Third, an organisation can manipulate society's perception by deflecting attention from an issue of concern (negative news or crisis situation) to another issue (preferably favourable) through an appeal to emotive symbols (e.g., show how it has achieved a society's norms and expectations in other activities). Fourth, an entity can attempt to alter society's expectations of an organisation's behaviour (e.g., show how some expectations are unrealistic and cannot be attained).

These strategies can help an organisation to obtain, maintain, or regain its legitimate position, and reduce the legitimacy gap to ensure its right to exist in the society. Several researchers such as Dowling and Pfeffer (1975), Lindblom (1994), and Branco and Rodrigues (2006) recommended that public reporting, either on paper (e.g., paper-based annual reports) or via the Internet (e.g., digitised annual reports and corporate Internet environmental and social responsibility reporting), is an effective way to implement these strategies. They believed that, through information disclosure, an organisation can inform the public regarding its changing behaviour or alter the expectations of a society.

Legitimacy Theory and CIR

Public disclosure (e.g., accounting reports) is a form of communication that projects an image of social legitimacy to the public. Legitimacy is, therefore, assumed to be influenced by disclosures of information and not simply by changes in corporate actions (Dowling & Pfeffer, 1975; Lindblom, 1994; Newson & Deegan, 2002). This viewpoint then implies that the effectiveness of public disclosure is a key to the success of legitimating the status of organisations.

From the perspective of legitimacy theory, an organisation should voluntarily adopt CIR practice, for several reasons. First, since the efficacy of public disclosure is crucial for legitimising the status of the corporate, an efficient medium must be adopted. With benefits such as lower costs, timely and wider reach, it is suggested that CIR should be used (Branco & Rodrigues, 2006; Mohamed & Oyelere, 2008; Dâmaso & Lourenço, 2011). Second, as the Internet is now one of the most effective communication mediums in the world, it can be assumed that there are an increasing number of stakeholders who will expect to obtain corporate information via the Internet. Therefore, firms should voluntarily use the Internet to provide information to meet the expectation of society (and thus to gain and maintain the legitimacy status). Third, certain types of organisations, especially environmentally sensitive companies, tend to be heavily scrutinised by the stakeholders in society (Dâmaso & Lourenço, 2011). Through normal disclosure mechanisms, it is difficult for those companies to gain legitimacy status from a society. In order to indicate that they are fulfilling societal expectations (or their social contract), or to redirect the attention of the public away from the negative influence of their actions, it is recommended that those firms voluntarily adopt CIR to communicate with a wide range of stakeholders in a society (Patten & Crampton, 2004; Zhang, Gao, & Zhang, 2007; Chatterjee & Mir, 2008; Herzig & Godemann, 2010; Cho & Roberts, 2010).

Limitations of Legitimacy Theory in CIR Research

As shown in the above discussion, legitimacy theory suggests that organisations can survive in a society only if their operation is congruent with the expectations and norms of that society. Although this theory provides some useful insights in regard to

the relationship between organisations and societies, several limitations are also acknowledged. First, there is a lack of knowledge about whether particular stakeholder groups in a society are more influenced than others (Deegan, 2002). Second, there is still the question of whether organisations will become aware of the society's concerns, or even the idea of the social contract concept. For some organisations, legitimacy has little or no effect on their survival in the society in which they operate. Third, although legitimacy theory suggests the use of public disclosure, it does not explain how disclosures could act as a means of persuading the society to grant legitimacy status to an organisation.

Given the above limitations, a further theory, signalling theory, was also incorporated in the CIR theoretical framework.

4.2.4 Signalling Theory

Overview of Signalling Theory

Signalling theory was first introduced by Akerlof (1970) to study the context of job and product markets. Spence (1973) elaborated on this concept and developed it into an equilibrium theory to explain the information asymmetry in the labour market. This theory was then adopted by Ross (1977) where he utilised it to predict and examine the disclosure of voluntary information in organisations. Signalling theory was also widely adopted by many studies (e.g., Morris, 1987; Levy & Lazarovich-Porat, 1995; Campbell, Shrivess, & Bohmbach-Saager, 2001; Watson et al., 2002) in research areas such as finance and corporate reporting.

Signalling theory asserts that information asymmetry (a concept also found in agency theory) will always exist in the market because the level of information possessed by each party is different. Such asymmetry, however, can be reduced by one party who holds more information sharing his/her additional information with others who do not possess it (i.e., signalling it to them) (Morris, 1987; Sánchez et al., 2011). When applying this theory in a market setting between sellers and buyers, the theory assumes that sellers generally possess more information about their products than buyers do. Under the influence of asymmetric information, buyers have only some general ideas about sellers' products, and as a result, buyers may value all products at

the same price, based on their general perceptions (Morris, 1978). As a consequence, sellers of higher quality products may incur an opportunity loss, whereas sellers of lower quality products may benefit from an opportunity gain. Faced with this situation, sellers may choose to communicate with buyers by highlighting the superior quality of their products, and, as a result, increase their price. This communication is known as signalling. Morris (1978) suggested that signalling is only effective when it cannot be easily mimicked by low quality sellers; otherwise, distortions and confusions can occur and high quality sellers may face economic and reputational loss. Similarly, the signalling concept can be applied in a normal business setting.

Generally, management possesses more information than investors do, which leads to asymmetric information in a capital market. Investors, on the other hand, usually lack the knowledge to differentiate the quality of firms, and as a result, this asymmetry increases the opportunity loss for companies with superior quality and enhances the opportunity gain for firms with lower quality. Faced with this situation, companies with greater quality may have an incentive to signal their superiority to the market, and thus attract more investors (Watson et al., 2002; Sánchez et al., 2011). However, signalling can also generate costs for the signaller, and, according to Morris (1987), signalling costs are usually inversely related to quality. In other words, the higher the quality of the product, the lower the signalling costs, or vice versa. The signallers are likely to send out signals to the market if the benefits of doing so outweigh the costs.

Signalling Theory and CIR

Signalling theory has been widely used in CIR studies to explain the adoption of Internet reporting in listed corporations. According to this theory, a superior quality company has the incentive to signal investors to differentiate itself from low quality firms in order to attract investment (Bohmbach-Saager et al., 2001; Marston, 2003; Marston & Polei, 2004).

According to Depoers (2000), and Whiting and Miller (2008), there are many ways a company could signal capital markets, and voluntary reporting (e.g., CIR and corporate social responsibility reporting) is considered to be one of the most popular

and effective methods. Of the many voluntary reporting tools, CIR is an effective means for signalling because of its ability to reach a wide range of potential investors, and other stakeholders. By adopting CIR to signal the market, profitable firms can screen themselves out from those that are less successful and gain several benefits in the process (Craven & Marston, 1999; Marston & Polei, 2004; Aly et al., 2010). These benefits may include: enhancing the corporate reputation; reducing the costs of capital; enhancing the relevance of companies' financial information; maintaining good stakeholder relationship; and, gaining legitimacy status (Marston & Polei, 2004; Chan & Wickramasinghe, 2006; Aly et al., 2010). In addition, other authors such as Oyelere et al. (2003), Álvarez et al. (2008), Desoky (2009), and Al-Htaybat (2011) also suggest that signalling superior quality to notify the market can be a strong incentive for companies to adopt CIR practice.

Limitations of Signalling Theory in CIR Research

Signalling theory also has several limitations. First, it does not specify how a corporation can signal its quality to the public nor does it recommend any precise signalling methods. This omission may result in inappropriate signalling which can result in an adverse effect. Second, the theory suggests that signalling is effective only when it cannot be easily mimicked by other corporations. However, entities are expected to learn a more effective way to disclose to the public from better reporters (in order to legitimise their status through better reporting). As such, if the society expects organisations to publish information online, it is likely that the majority of them are likely to adopt such a reporting practice.

Given these limitations, another theory was reviewed in order to form the theoretical framework for this research. The next section discusses institutional theory and its relation to CIR research.

4.2.5 Institutional Theory

Overview of Institutional Theory

Institutional theory suggests institutions operate in an environment that includes other institutions, and that every institution is influenced by the broader environment (e.g., institutional peer pressure) (DiMaggio & Powell, 1991). In order to survive,

organisations need to do more than succeed economically; they need to establish legitimacy within the world of institutions (Levi, 1990). Over time organisations tend to become homogenous in structures and processes; this phenomenon is called isomorphism (Hall & Taylor, 1996).

The concept of institutional isomorphism suggests that an organisation tends to adopt the institutional practice of other organisations, and becomes more similar in structure and behaviour (DiMaggio & Powell, 1983; Deegan, 2002; Dillard et al, 2004). This phenomenon indicates that firms tend to imitate each other's business practices (or reporting habit) in order to survive or to respond to the institutional pressure from the business context or society (DiMaggio & Powell, 1983). There are three types of institutional isomorphism: namely, coercive isomorphism, mimetic isomorphism, and normative isomorphism.

Coercive isomorphism is a form of external pressure that is forced on an organisation by another organisation upon which it is dependent or by expectations of the society within which it operates (DiMaggio & Powell, 1983; Carpenter & Feroz, 1992; Xiao et al., 2004; Dillard et al., 2004; Victoria, Madalina, Nicoleta, & Carmen, 2009). For example, when a regulation is set by the government to force companies to produce more information in their annual report, this action will pressure the firms to change their reporting habit to obey the rule. Another example can be that, if the majority of citizens in the society demand more environmentally and socially related information, this demand will also pressure corporations to meet the demand of the citizens.

Mimetic isomorphism is a process that takes place when an organisation attempts to emulate a more successful organisation. This process is often the result of uncertainty and lack of guidance in an organisation's own business context (DiMaggio & Powell, 1983; Victoria et al., 2009). Given the uncertain business environment, smaller enterprises or even competitors tend to imitate the operations or disclosure styles of larger and more successful firms in the same or similar industry in order to enhance their own performance and reputation. This point can be illustrated through an example. For instance, the websites of companies such as Microsoft, Apple, BP, and Shell all have similar designs and features such as sitemaps, FAQs, and an internal

search engine. Although the content of the published online information such as financial statements and forward looking statements on those companies' websites was different, the location, format, and presentation of the information are very similar. This example shows that, in a business context, companies are likely to mimic each other and gradually become similar either in operation or information disclosure.

Normative isomorphism is the third type of institutional isomorphism. Normative isomorphism originates from professional pressure such as accounting bodies or the government which create standards and homogenous organisational practices to be followed (DiMaggio & Powell, 1983; Xiao et al., 2004; Dillard et al, 2004; Lewin, Biemans, & Ulaga, 2010). DiMaggio and Powell (1983) pointed out two features of professionalism which are important sources of normative isomorphism. The first is the formal education produced by university specialists, and the second is the growth and expansion of professional networks. Victoria et al. (2009) also stated that universities and professional institutions are important centres for the adoption of innovation for institutional change. An example can be accounting regulations set by the professional bodies or business structures (e.g., a sole trader, partnership, or company structure) regulated by the government.

It has also been suggested that institutional isomorphism is another concept that can be used to explain the adoption of CIR practice. Authors such as Xiao et al. (2004), Victoria et al. (2009), Nurunnabi and Hossain (2012), and Bozcuk (2012) all incorporated the notion of this theory into the study of CIR practice in various contexts. The next section discusses the link between institutional theory and CIR.

Institutional Theory and CIR

The concept of institutional isomorphism has been widely adopted by various studies to describe the adoption of Internet reporting in listed companies. For instance, Xiao et al. (2004) stated that, although the early adoption of CIR practice can be predicted by organisational characteristics suggested by economic based theories such as agency and signalling theory, the later adoption tends to be driven by legitimacy concerns created by institutionalisation. This observation indicates that large size or

higher share diffusion firms tend to be the first to adopt CIR practice. However, as other smaller companies witness the enhancements created by adopting Internet reporting, they also start to adopt online reporting practice. Furthermore, as stakeholders realise the convenience and the usefulness of the Internet, they may demand that corporations disclose more information online. In order to meet the demand of stakeholders (or regain legitimacy status), more firms would then adopt such reporting practice. Victoria et al. (2009) also supported this view and stated that not only society (stakeholders) can force organisations to adopt CIR, but that the government and other regulatory bodies can also enforce the use of such reporting practice. They further indicated that universities and professional bodies may also influence the implementation of online reporting, as these institutions are important centres for the adoption of innovation (normative isomorphism). Other authors such as Nurunnabi and Hossain (2012), and Bozcuk (2012) also incorporated this theory in their research and suggested that institutional isomorphism is one of the key concepts that can explain the adoption of CIR practice.

Limitations of Institutional Theory in CIR Research

Institutional theory provides some useful insights in regard to the adoption of CIR practice. However, it has two limitations. First, although the theory continues to emphasise the institutional changes of an organisation, it fails to provide a complete picture of what goes on inside an organisation that can cause the change, or explain why organisations would react to the environment around them (Ryan, 2010). Second, institutional theory advocates that an organisation would change to meet the expectations of the external environment, but it does not provide a deeper analysis on the changes within an organisation (Powell, 1991; Ryan, 2010).

4.2.6 Summary

The following table summarises the key concepts, assumptions, and CIR practices of the five theories discussed.

Table 4.4 Summary Table of the Four Theories

Theories	Key Concepts	Assumptions	CIR Practice
Agency Theory	<ul style="list-style-type: none"> Information Asymmetry Agency Costs Relationship Model of Managers and Owners 	<ul style="list-style-type: none"> Agency relationship exists between principal and agent. Managers will seek opportunity to serve self-interest. Owners have doubt in the behaviour of managers. Agency costs occurred due to the difference of interests between agent and principal. 	<ul style="list-style-type: none"> CIR recognises the relationship between principal and agent. Voluntary reporting may reduce the information asymmetry between managers and owners. CIR, as a method of voluntary reporting, may help in minimising agency costs.
Stakeholder Theory	<ul style="list-style-type: none"> The Concept of Stakeholders Stakeholder Classifications Accountability Organisation-Stakeholder Relationship 	<ul style="list-style-type: none"> A stakeholder is any group or individual who can influence or is influenced by the organisation's objectives and outputs. Stakeholders could include: lenders, customers, employees, governments, environmentalists...etc. Assumes the accountability relationship between stakeholders and organisations. Management has the duty to give an account for various stakeholder groups such as employees, suppliers, customers, regulators, and general citizens; thereby owner/shareholders are no longer the sole accountee. 	<ul style="list-style-type: none"> The most common method for discharging accountability is paper-based annual reports. Due to the increasing stakeholders' information demand, paper-based reporting is no longer a sufficient method. The interactivity and wider reach offered by CIR may provide a greater degree of information disclosure for stakeholders. Organisations can adopt CIR to better discharge corporate economic, environmental, and social responsibilities.

(Continued)

Theories	Key Concepts	Assumptions	CIR Practice
Legitimacy Theory	<ul style="list-style-type: none"> • Its insights overlap with: <ol style="list-style-type: none"> 1. Political Economic Theory 2. The Social Contract Concept 3. Resource Dependency Theory 	<ul style="list-style-type: none"> • Organisation has no inherent right to resources, or to exist. • The social contract exists between corporations and members of society. • Assumes the legitimacy relationship between organisations and society • Organisation must legitimise itself in order to prove the society on its worthiness of its existence. • Legitimacy is considered to be a resource on which an organisation dependent for survival. 	<ul style="list-style-type: none"> • Organisation with only minimum reporting may not be able to show its legitimate status to society. • Voluntary reporting may improve the communication and reduce the legitimacy gap (information gap) between organisation and society. • CIR encompasses real time disclosure which can help organisation continuously update positive information to the public. This may help organisations to portray a better image to the society, and gain legitimacy status.
Signalling Theory	<ul style="list-style-type: none"> • Information Asymmetry • Information Signalling 	<ul style="list-style-type: none"> • Signalling is a general phenomenon applicable in any area with information asymmetry • Asymmetry can be reduced if a party with more information signals to others with less information • Signalling may help to distinguish oneself from the others. 	<ul style="list-style-type: none"> • Voluntary reporting may enhance the efficiency of signalling. • A party with more information (organisations) voluntarily discloses to others (stakeholders) who has less detailed information may reduce the asymmetric information gap (or legitimacy gap). • Additional disclosure can signal ones superior quality, hence, lower the cost of capital and increase in capital infusions.

(Continued)

Theories	Key Concepts	Assumptions	CIR Practice
Intuitional Theory	<ul style="list-style-type: none"> • Institutional Isomorphism: <ol style="list-style-type: none"> 1. Coercive 2. Mimetic 3. Normative 	<ul style="list-style-type: none"> • In the institution environment, the objective for organisation is to survive • The need for establish legitimacy within the world of institutions • Organisations will change the structure or strategies to be acceptable by external expectations 	<ul style="list-style-type: none"> • Organisations tend to adopt CIR because others do so. • Society may expect an entity to publish information online because the majority of the organisations are doing it. • If an entity ignores the society's expectations on CIR, it will be perceived as "bad" by the society.

Although each of the five theories can be applied to explain organisations' CIR practice, none alone is adequate to form the theoretical framework for this current study. In the next section, the five theories are combined to construct a relatively comprehensive theoretical framework for CIR practice.

4.3 CIR THEORETICAL FRAMEWORK

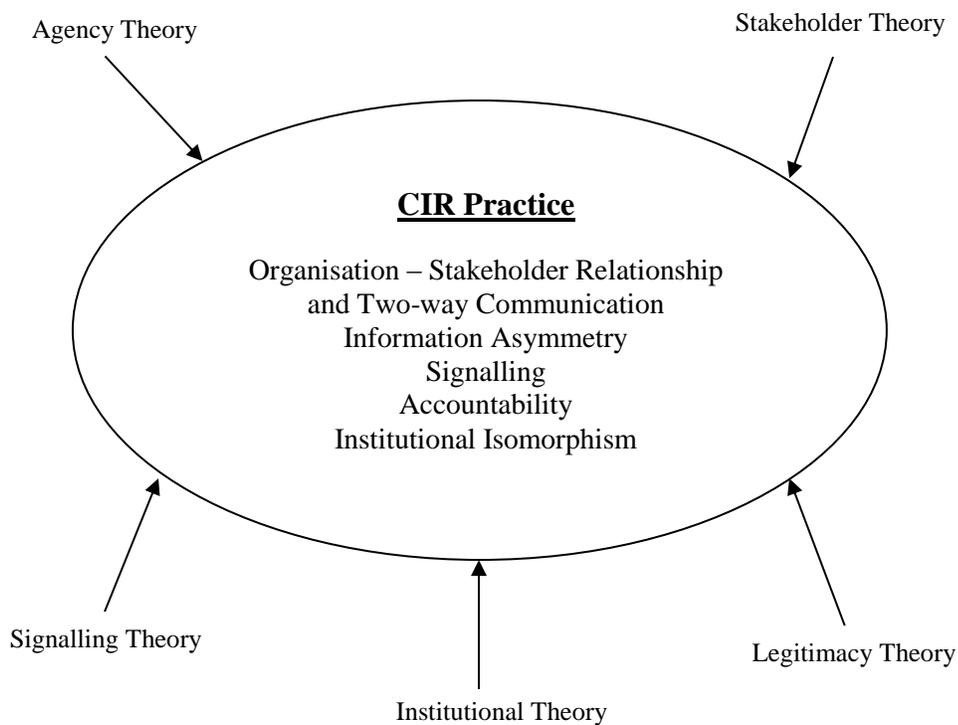
This section explains the CIR theoretical framework constructed on the basis of agency, signalling, stakeholder, legitimacy, and institutional theories. A reason for the development of this theoretical framework is that, as stated by Deegan (2002), the theories can provide slightly different and useful insights about a research topic, and it is possible to use more than one theory to provide an explanation of a particular phenomenon. The author believes an interrelated theoretical view can serve as a theoretical background for this current study. The next section describes the combination and interrelation of the five theories.

4.3.1 Combination and Interrelation of the Five Theories

The idea of constructing a theoretical framework based on the combination and interrelation of the aforementioned five theories in CIR research is not new. For instance, several studies (e.g., Marston, 2003; Marston & Polei, 2004; Patten & Crampton, 2003; Serrano-Cinca, Fuertes-Callén, & Gutiérrez-Nieto, 2007; Liu & Eddie, 2007; Álvarez et al., 2008; Joshi & Gao, 2009; Aly et al., 2010; Sánchez et al., 2011) have adopted more than one theory (e.g., agency theory + signalling theory, or agency theory + signalling theory + legitimacy theory, or legitimacy theory +

stakeholder theory) as their basis for determining the adoption, quality, and extent of companies' CIR practice. It can be assumed, therefore, that multiple theories can be used to form a CIR theoretical framework for this current study. In the case of the five theories, there are several aspects that can be combined to explain CIR practice. They are: organisation-stakeholder (shareholder) relationships; information asymmetry; signalling; accountability; and, institutional isomorphism. These points are shown on the following figure.

Figure 4.1 Combinations and Interrelations of the Five Theories in CIR Practice



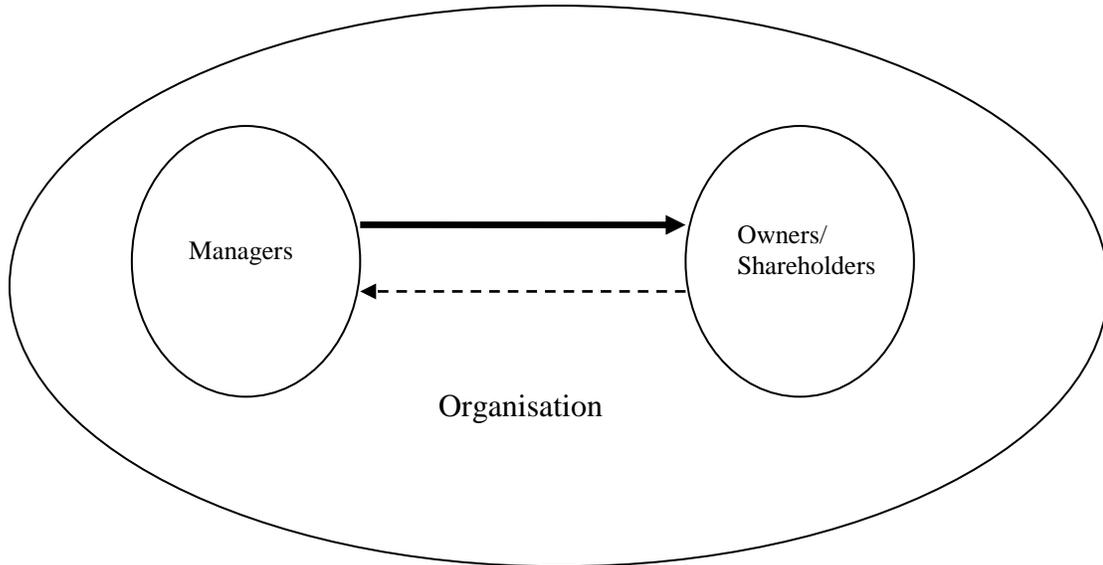
Each of these points will be discussed in the following sections.

Organisation-Stakeholder (Shareholder) Relation and Two-way Communication

Organisation-stakeholder or shareholder relation is an underlying assumption advocated in both agency and stakeholder theories. Agency theory recognises and advocates the relationship model between managers (agents) and shareholders (principals), and such a relationship is the result of the separation of ownership and

managerial rights in an entity. The figure below presents the relationship between managers and shareholders within an organisation.

Figure 4.2 Relationships between Managers and Shareholders

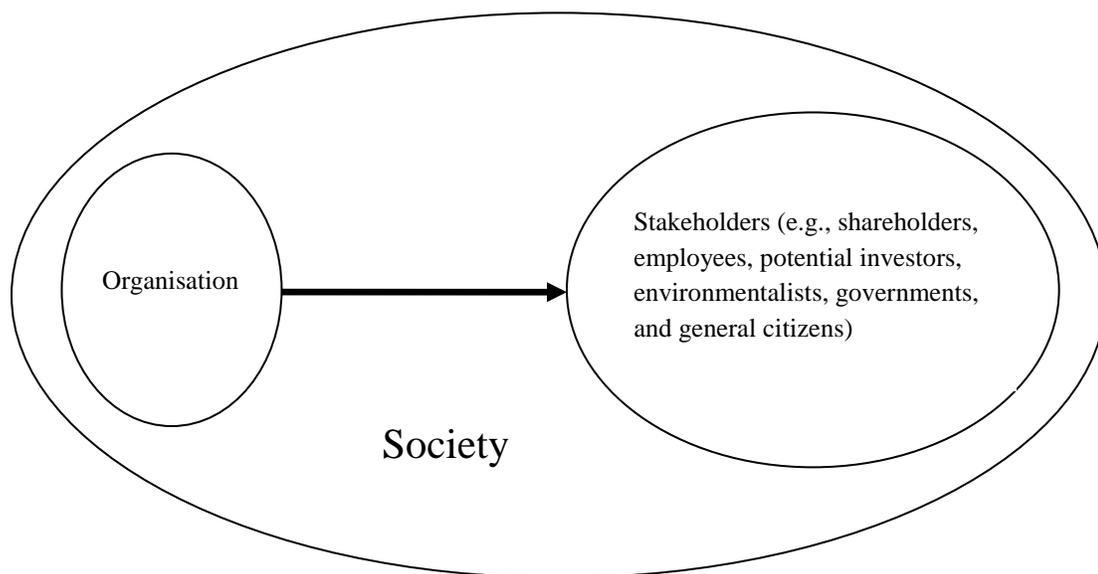


Agency theory assumes that managers have the responsibility to ensure the interest of shareholders is not harmed. However, since individuals have desires to maximise their own wealth, managers may be opportunistic and seek personal gain at the expense of the owner's interest. Therefore, *managers* are encouraged to disclose additional information to *shareholders* to signify that the management's actions are congruent with the shareholders' interest to improve the *relationship* between both parties, hence, reducing agency costs. Although agency theory provides a clear and essential view that a relationship model can be established between the two parties (managers and owner/shareholders), this model is quite narrow as it focuses only on maintaining the internal principal-agent relationship as well as promoting largely one-way communication from managers to shareholders (as indicated by the thick link from managers to owner/shareholder). It disregards the potential external relationship between the organisation and other interest-related parties and individuals, and it also neglects the importance of establishing a well-developed feedback channel for its shareholders (as indicated by the thinner broken line). As a consequence of these limitations, this traditional relationship model is not sufficient for this current study

because CIR practice is built on communication with both shareholders and a wide range of stakeholders. To overcome this issue, this model must be expanded.

When combining stakeholder theory with this relationship model, the relationship expands to include other stakeholders. This expanded relationship model is shown on the figure below.

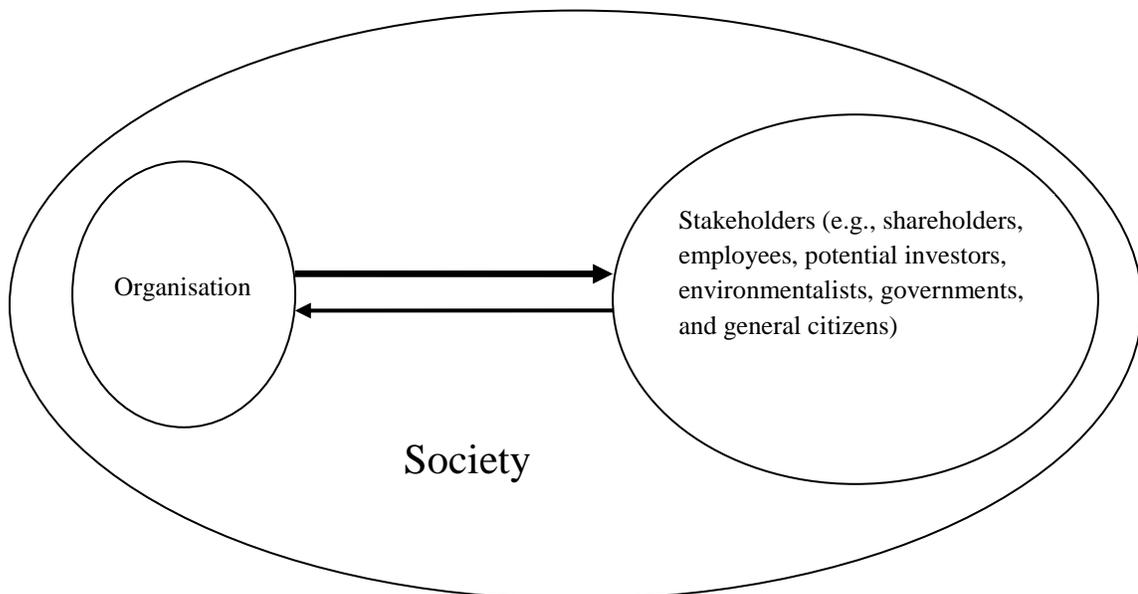
Figure 4.3 Relationships between Organisations and Stakeholders



The above figure shows that under the stakeholder perspective, an organisation is part of a broader societal system, and it should discharge its accountability not merely to shareholders, but also to other stakeholders in the society. According to this view, an organisation-stakeholders relationship model can be formed. This model indicates the importance for *organisations* to disclose information to *stakeholders* in a society to improve the *relationship* between both parties. Thus, we can assume that an organisation's CIR practice should not only include information for shareholders (e.g., financial data and annual reports), but should also incorporate other information for a wide range of stakeholders (e.g., a social responsibility report, environmental report, and health and safety report). To further enhance this newly formed model, the notion of two-way communication must also be added. According to legitimacy theory, to earn the right to survive, organisations must meet the expectations or demands of

stakeholders (or society). In order to do so, organisations must understand what the society wants which, in turn, indicates that firms need to be both the deliverers and the recipients of the information. Therefore, two-way communication must be established to allow feedback from, or the demands of, stakeholders to be heard by organisations. On the basis of this perspective, a more complete combined relationship model can be established. The complete model is shown below.

Figure 4.4 Relationships between Organisations and Stakeholders with Two-way Communication



A two-way communication relationship is also more suitable to explain the design of CIR practice because many corporate websites have interaction features that allow web users to post queries instantly if they have any issues that need to be resolved. This interactivity means organisations can learn about the problems of their stakeholders immediately and deal with them promptly. As the above discussion shows, it can be argued that by combining the relationship model in agency theory, with the stakeholder perspective in stakeholder theory, and the two-way communication concept in legitimacy theory, we can better explain the adoption, extent, and quality of CIR.

Information Asymmetry

The concept of information asymmetry is incorporated directly in agency theory and signalling theory and it can also be linked to legitimacy theory. Agency theory assumes that managers may withhold information from shareholders to seek personal gain, and this behaviour tends to cause the existence of information asymmetry between managers and shareholders. Signalling theory also asserts the existence of information asymmetry, and it assumes each party in the market (e.g., capital market) may possess different levels of information. Thus, in signalling theory asymmetrical information is expected to exist between organisations and potential investors. Similarly, when organisations withhold information from stakeholders in society, this omission creates an information gap. Although the information asymmetry concept does not explicitly include in legitimacy theory, the author believes that the use of legitimacy strategies (e.g., CIR) to inform stakeholders about organisations' operations can be seen as an action to mitigate the information gap between organisations and society (and hence reduce the legitimacy gap). If companies withhold information from the public and disregard the importance of disclosure, doing so may widen the information gap. Corporations cannot then legitimise their status, and, as a consequence, their existence can be disapproved of by stakeholders in a society. When combining the three theories together, it can be assumed that information asymmetry exists between organisations and stakeholders (or society as a whole) because one party (the organisation) tends to have more information than others (stakeholders). In order to decrease the asymmetry, more disclosures must be made by the party that possesses more information; if not, the information gap is likely to increase.

Signalling Concept

The signalling concept asserts that there is a need for an entity to signal its superior quality to differentiate itself from low quality organisations in order to attract potential investors. Although this concept is not incorporated in agency and legitimacy theory, the author argues that the idea of using public disclosure to reduce information asymmetry or the legitimacy gap is also a form of signalling. For instance, agency theory advocates that, in order to reduce information asymmetry, managers must disclose additional information to notify shareholders that the

management's actions are congruent with shareholders' interests. By doing so, managers are sending a positive signal to shareholders so they can attract more funds from investors or better remuneration packages for the management team. Similarly, legitimacy theory suggests the use of public disclosures (either on paper or via the Internet) to communicate with the society (stakeholders) to reduce the legitimacy gap. Public disclosure, from the perspective of legitimacy theory, is a strategy that allows organisations to notify (or positively signal) the public regarding the consistencies of their actions and society's expectations and norms. This current study contends that the signalling concept, together with the notion of agency and legitimacy theory, can also be applied to CIR practice. Firms that adopt CIR practice to provide information to the public can be seen as sending signals (mostly positive) to a wide range of stakeholders, and, in return, firms may be able to attract potential investors, to reduce the cost of capital, and, most importantly, to gain or regain legitimacy status in the society.

Accountability – Organisation to Stakeholders (Society)

Accountability is a concept that is incorporated in agency, stakeholder, and legitimacy theory. Traditionally, agency theory asserts that agents have the responsibility to provide information to principals in respect of the use of owners' resources (Lee et al., 1999; van Ees et al., 2009). Managers thus are only required to discharge the accountability to the owner/shareholders of an organisation. However, both stakeholder theory and legitimacy theory argue that, since shareholders and stakeholders are all within the larger societal system, shareholders should not have any privilege to be treated beyond their place in this system. Thus, organisations' accountability responsibility should be extended to other interest-related parties or individuals (stakeholders). When applying this notion to CIR, it indicates that CIR practice should be adopted to discharge the accountability to shareholders as well as to a wide range of stakeholder groups. Information comprising in an organisation's CIR must focus not only on achieving the information demand of owners, but also on meeting the expectations of stakeholders (or society as a whole). If companies fail to do so, as legitimacy theory suggests, their right of existence can be disapproved by stakeholders in the society.

Institutional Isomorphism

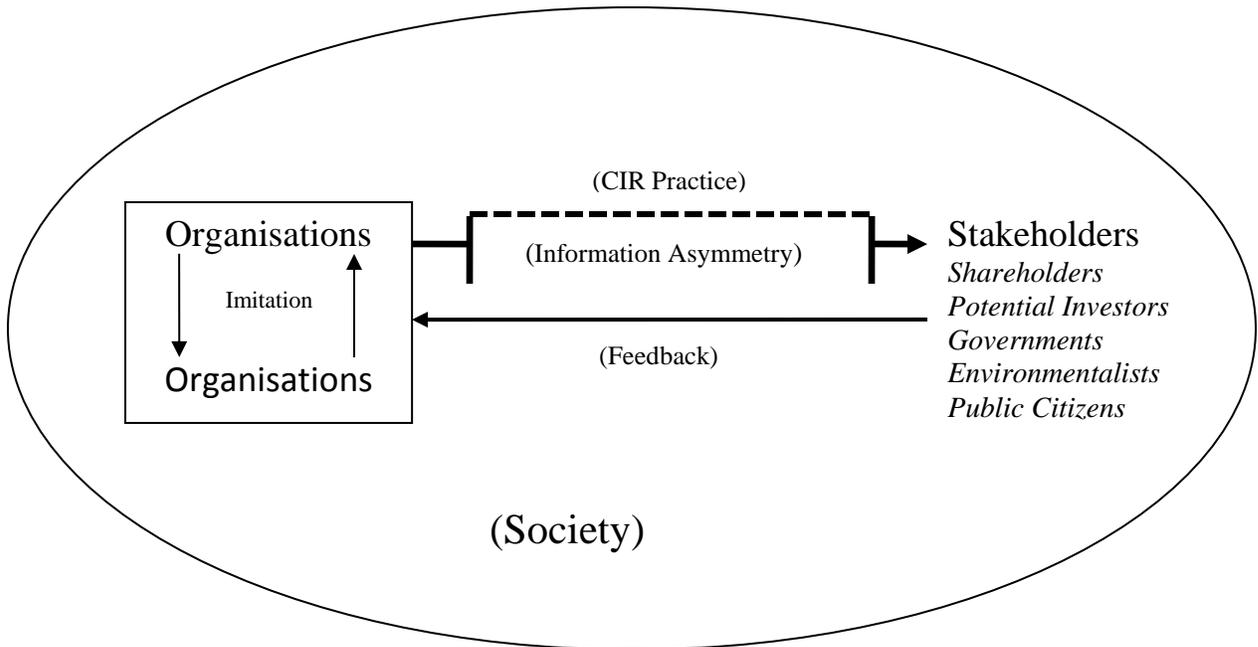
Institutional isomorphism is also included as part of the CIR theoretical framework because it can complement the aforementioned four theories in regard to the adoption, quality, and extent of CIR practice. The four theories previously mentioned focus on the communication or relationship between an organisation and stakeholders (or shareholders or society as a whole). However, they neglect the relationship between organisations themselves and their ability to change (or imitate others) to fit better in the business environment. Institutional theory, on the other hand, suggests that every institution is influenced by the broader environment. In order to survive, organisations tend to establish legitimacy within the world of institutions by adopting the institutional practice of other organisations (normally those that are larger in size and more successful), and, as a result, they become more similar in structure and behaviour (a process also known as institutional isomorphism). This theory suggests that firms are likely to imitate each other (e.g., in their reporting styles) in order to survive and to respond to the institutional pressure from the business context or society (DiMaggio & Powell, 1983; Deegan, 2002; Dillard et al., 2004). Based on this perspective, it can be assumed that the CIR practice between corporations will be similar in terms of design, the information included, as well as the technology and user support features incorporated.

After combining the key concepts of the five theories, the theoretical framework of CIR practice can be formed. The framework is presented and discussed in the following section.

4.3.2 Theoretical Framework of CIR Practice

The concepts underpinning the five theories can be incorporated into an explanatory framework of CIR practice, based upon the discussion in the previous section. This framework is shown in the figure below.

Figure 4.5 Explanatory Framework of CIR Practice



As Figure 4.5 shows, this framework:

1. acknowledges that organisations and stakeholders are part of a broad societal system, and
2. recognises the relationship between an organisation and various stakeholders in the society, and
3. promotes two-way communication by not only disclosing the information to the public, but also allowing stakeholders to provide feedback so their needs and wants can be heard, and as a result,
4. reduces information asymmetry (indicated by the gap) between the management of an organisation and various stakeholders in the society using CIR practice (as indicated by the broken line) by sending
5. positive signals to the stakeholders to gain and maintain legitimacy status for the survival in the society (as indicated by the black arrow from organisation to stakeholders), and at the same time
6. discharge accountability to various stakeholders. Finally, the framework also

7. recognises the possibility of similar CIR practice between organisations as they have the ability to imitate each other (as indicated by the black arrows inside the organisations box).

As the above seven points have indicated, CIR can be seen as a tool that can serve as a communication bridge between an organisation and stakeholders. In the current study, the selection of the sample and construction of the research instrument were partly based on this framework. The author also applies the framework in the Chinese environment to interpret CIR practices by Chinese firms. These practices are detailed in Chapters 5, 6, and 7.

4.4 THE CIR THEORETICAL FRAMEWORK AND CHINA

As the creation of the CIR theoretical framework was based on five theories in relation to Western society, there were doubts as to whether this framework could be applied in the Chinese context. However, three key reasons indicate that this framework is applicable to the Chinese environment.

First, since the era of Chinese economic reform was ushered in (details can be found in Chapter 2), many Chinese businesses have transformed themselves from purely state-owned enterprises into shareholding structure corporations. As Chinese corporations have similar business structures to Western companies, it is also possible that Western theories can be applied to the Chinese business context to predict potential problems and identify potential solutions. Second, due to the increasing information demand of Chinese stakeholders, this framework will become more relevant in the Chinese context. Traditionally, Chinese corporations are required to focus only on providing information to meet the minimum reporting requirements. However, as environmental and social problems such as pollution and food safety have erupted in China, Chinese firms have begun to be heavily criticised by the public through all media channels (e.g., newspapers, television, and the Internet) for overusing natural resources and devastating the ecological system for profit. Although the Chinese Government has implemented several regulations to enforce the disclosure of annual sustainability reports, various stakeholder groups still request

greater information disclosure. Given this circumstance, the traditional means of reporting may not satisfy the information demand from the public, and an alternative reporting framework is needed. As the CIR theoretical framework constructed in this study encourages a focus on the organisation-stakeholders relationship and asserts the discharge of accountability to a wide range of stakeholders, this framework can be seen as the alternative reporting framework that is needed in the Chinese context.

Third, the theories incorporated in this framework have already been employed in a number of Chinese voluntary reporting studies (e.g., Xiao et al., 2004; Wang et al., 2008; Liu & Anbumozhi, 2009; Yi et al., 2011). For instance, Xiao et al. (2004) adopted agency, signalling, and institutional theories to develop their hypotheses to test the determinants of CIR in China (e.g., size, industry, and ownership). As already noted, they found relations (shaped by the four theories) between the determinants and Chinese corporations' CIR practice. Yi et al. (2011), on the other hand, developed an integrated theoretical framework based on theories such as agency, signalling, stakeholders, and legitimacy for examining the Intellectual Capital (IC) in China. Using their framework, they indicated that the concepts of information asymmetry, signalling, accountability, and legitimacy, and the relationship model of organisation-stakeholder are all applicable to the Chinese environment. Other authors such as Wang et al. (2008) and Liu and Anbumozhi (2009) also designed their research around the concepts in agency theory or stakeholder theory. On the basis of these previous studies, the author contends that the CIR theoretical framework is appropriate for this current study in the Chinese business context.

4.5 CHAPTER SUMMARY

This chapter presented a CIR theoretical framework constructed especially for this current research. The framework was constructed by drawing upon and combining a series of theoretical concepts which were previously put forward in a range of other studies; they are: agency theory, stakeholder theory, legitimacy theory, signalling theory, and institutional theory. Agency theory is a traditional and key theory in the area of corporate reporting. It recognises the relationship between agents and principals and asserts that information asymmetry exists between these two parties, as

an organisation's management has an information advantage over its shareholders. In order to reduce this asymmetry, additional disclosure is needed. Stakeholder theory, thus, extends the relationship model of agency theory to include a wider group of stakeholders. When the relationship model in agency theory is combined with the perspective of stakeholders, the extended relationship model of organisation-stakeholders can be formed. This new model also indicates that organisations should discharge their accountability not only to shareholders but also to various stakeholder groups.

Legitimacy theory takes account of the perspectives of stakeholders by advocating that organisations should be responsible not only to society (stakeholders), but should also ensure that they are perceived to be legitimate by complying with societal expectations and norms. This theory also asserts that the key to meeting the demands of society is to promote two-way communication. To achieve this end, organisations must not only be a deliverer but also a recipient of information. Another theory, signalling theory, advocates that organisations should emphasise their quality (or send a positive signal) to the public in order to reduce information asymmetry. When combined with the concept of legitimacy, signalling can also be seen as a way to gain legitimacy status in the society. Lastly, institutional theory purports that organisations tend to change their structure or operations (e.g., reporting habits) in order to survive in the business environment. Over time organisations tend to imitate each other and become homogenous in their structures and processes. From this perspective, it has been argued that a reporting style, such as CIR, may become similar across organisations.

Since these theories are interrelated, and support each other in explaining and predicting organisations' CIR practices, they have been combined to develop a CIR theoretical framework for this study. The resultant framework includes seven key ideas that could be used to explain the adoption, quality, and extent of CIR practice. As this theoretical framework has been constructed from a range of Western-based theories of the organisation, some may doubt its applicability to the Chinese context.

However, three key reasons were offered to show that this framework is indeed an appropriate theoretical instrument for the current study.

In the next chapter, the research methodology and methods underpinning and guiding this research are presented.

CHAPTER FIVE

RESEARCH METHODOLOGY AND METHODS

5.1 INTRODUCTION

Research methodology can be defined as the philosophical evaluation of investigative techniques within a discipline, as well as the principles that support any disciplines' view to accept or reject knowledge (Gaffikin, 2008). Research methods can refer to the research process, or a series of investigative techniques, or the way the data is collected, analysed, and interpreted (Creswell, 2003; Gaffikin, 2008). These two key elements need to be clearly identified in a study as the methodology provides the guiding strategy of the research, and the methods are tied in with the design of the research. In this chapter, the research methodology and methods adopted for this study are presented. The structure of the chapter is organised as follows.

- 5.2 The Background of the Author
- 5.3 Research Methodology
- 5.4 Research Methods
- 5.5 Chapter Summary

5.2 THE BACKGROUND OF THE AUTHOR

Cultural background can be seen as one element that may, at some level, influence the thoughts, choices, and decision making of a person (Steward, 1985; Mann et al., 1998; Anderson, 2003). According to this perspective, the cultural background of a researcher may also dictate or influence his or her choice of methodology and methods for a study. Therefore, the current study contends that it is important to first introduce the background of its author before giving details of the selection of the methodology and methods for this research.

The author, who is Taiwanese, was brought up in and heavily influenced by a rich Chinese traditional culture and within a cultural heritage shaped by Confucianism, Taoism, and Buddhism-Zen philosophies. The author believes that, although Confucianism, Taoism, and Buddhism are ostensibly three different belief systems,

study of these philosophies reveals that they are, essentially, similar, as each shares the same ultimate goal of finding, and a central concept of the inner self; it is merely their pathways to understanding that differ. This philosophical position encapsulates several notions that have heavily influenced the author. First, it recognises the existence of this world (or reality), and the belief that reality and knowledge, as we know them, can be observed and captured through many, varied means. Second, our inner self gives us the ability and freedom to use our consciousness (or human mind) as a tool to store (or remember) past experiences, as well as to create and interpret any phenomenon in this world (Fu, 2001; Ming Cheng Temple, 2003; Lai et al., 2004). Since we also have the ability to create, the phenomena in this world can also be seen as the product of our consciousness. Third, the pathways to obtain the ultimate goal are many. Depending on our current situation (or the observed phenomenon), we may choose the way that best suits us to reach the goal (Ming Cheng Temple, 2003).

Based on these three notions, the author believes that a study can also be imbued with the researchers' own values, thoughts, and experiences, and that every decision in designing a study or selecting a methodology and methods is tightly linked to the human consciousness. It is very likely that everything that goes through a human mind will eventually be "perceptionised" in some way. As theories, research methods and research instruments are all developed by people in such a way that we cannot distinguish between the created and the creator; both elements merge together to produce the final product (See Bhaskar, 1979; Chua, 1986.). Therefore, the author argues that research itself is value bound, and cannot be separated from the bias of researchers.

Furthermore, the author also believes that researchers should have the freedom to choose any research method because, as the third point mentioned above indicates, there are many ways to reach our goals (research outcomes); consequently, we should choose the way (methods) that best suits us, depending on our current situation (researched phenomenon), to reach our goals (the best desired outcomes). In other words, if the use of both qualitative and quantitative methods in a research project can

best produce the desired results, the author believes that this combination is an appropriate and legitimate approach. To summarise, the following table presents the author's view of each philosophical assumption, based on the points discussed above.

Table 5.1 Author's View on Philosophical Assumptions

Philosophical Assumptions	Author's View on each Philosophical Assumption
<i>Ontology</i>	The world (or reality) exists externally.
<i>Epistemology</i>	Depends on the researched phenomenon, both the objective and the subjective point of view are accepted.
<i>Axiology</i>	Since everything is created by the human mind (consciousness), no research study can be free from the researcher's values and biases.
<i>Methods</i>	Whatever is most suitable for the researched phenomenon is the appropriate choice. It can be solely quantitative or solely qualitative (mono-methods); or a combination of qualitative + quantitative, or quantitative + qualitative (mixed methods).

The selection of the research methodology for this study is partly based on the assumptions laid out in the above table. The next section presents the methodological frameworks in the area of accounting, and the methodology for this research.

5.3 RESEARCH METHODOLOGY

Research methodology is the philosophical evaluation of investigative techniques or the system of methods and rules which is chosen by disciplines based on their belief in a particular research paradigm (House, 1994; Hart, 1998; Gaffikin, 2008). A research paradigm can then be defined as a set of interrelated assumptions about the philosophical view of the world, the nature of knowledge, and belief systems that can guide researchers on how research should be conducted (Filstead, 1979; Guba & Lincoln, 1994; Tashakkori & Teddlie, 1998; Ponterotto, 2005; Collis & Hussey, 2009). Traditionally there are two main paradigms in accounting research: the positivist paradigm and the constructivist paradigm.

5.3.1 Main Paradigms in Accounting Research

Each of these paradigms in accounting research has its own underlying philosophical assumptions, and each is quite different. These assumptions are presented in the following table.

Table 5.2 Assumptions of the Two Main Paradigms

Philosophical Assumptions	Positivism	Constructivism
<i>Ontology</i>	<ul style="list-style-type: none"> • Objective, single reality/naïve realism. 	<ul style="list-style-type: none"> • Subjective, multiple reality/relativism.
<i>Epistemology</i>	<ul style="list-style-type: none"> • Objective view. • The researcher and researched are independent. 	<ul style="list-style-type: none"> • Subjective view. • The researcher and researched are inseparable.
<i>Axiology</i>	<ul style="list-style-type: none"> • Research is value free, free of bias. 	<ul style="list-style-type: none"> • Research is value bound; research is subject to the bias of researchers.
<i>Causal Linkage</i>	<ul style="list-style-type: none"> • There are real causes that are temporally precedent to, or simultaneous with, effects. 	<ul style="list-style-type: none"> • Causes and effects cannot be distinguished.
<i>Inductive/Deductive Logic and Research Process</i>	<ul style="list-style-type: none"> • General to the particular. • Emphasis on priori hypothesis (or theory). • Deductive logic of study. • Research is context free. • Theories are used to explain and predict the researched phenomenon. • Results are accurate and reliable through arithmetic validity and reliability tests. 	<ul style="list-style-type: none"> • The particular to general. • Emphasis on grounded theory. • Inductive logic of study. • Research is context bound. • Theories are developed from interpretive understanding. • Results are accurate and reliable through verification.
<i>Methods</i>	<ul style="list-style-type: none"> • Quantitative based. • Methods can include: experimental studies, cross-sectional studies, longitudinal studies and surveys. 	<ul style="list-style-type: none"> • Qualitative based. • Methods can include: case studies, participative enquiry (interviews), action research, grounded theory, ethnography, narrative research, hermeneutics and the feminist perspective.

Source: Adapted from Tashakkori and Teddlie (1998, p. 7, 10 & 23) and Collis and Hussey (2009, p. 58)

As the above table shows, the positivist paradigm assumes that there is an external reality independent from the human mind (naïve realism), and based on this assumption, positivists believe that researchers are independent from the researched, and that the research itself is free from bias (Cherryholmes, 1992; Tashakkori & Teddlie, 1998; Cacioppo, Semin, & Berntson, 2004; Collis & Hussey, 2009). This

paradigm also places heavy emphasis on quantitative analysis and deductive reasoning. Deductive reasoning indicates that a positivist research study usually starts with the use of a theory or a model to develop hypotheses regarding the researched phenomena. Those hypotheses are then tested through various statistical measures to determine whether, based on the collected empirical evidence, they should be accepted or rejected (Tashakkori & Teddlie, 1998; McGrath & Johnson, 2003; Ponterotto, 2005). Deductive logic methods can include experimental studies, longitudinal studies, and surveys.

The constructivist paradigm, on the other hand, is supported by the belief that reality is socially constructed, and that the world is relative and multiple. Here, the researcher cannot separate from the researched, and the research itself is thus value bound (Schwandt, 1994; Creswell, 2003; Hansen, 2004; Ponterotto, 2005; Collis & Hussey, 2009). In contrast to the positivist paradigm, the constructivist paradigm emphasises inductive reasoning which involves interactive researcher and participant dialogue. This approach attempts to find the hidden meaning within certain contextually specific situations (e.g., people's thoughts, reactions, and feelings) through deep reflection with the participants, and the result is normally presented in a descriptive form that is rich and complex (Cavana, Delahaye, & Sekaran, 2001; Ponterotto, 2005). The inductive logic methods normally consist of case studies, participative enquiry (interviews), and action research.

Based on the descriptions above, a large difference can be identified between the two paradigms. Although it has led to debates between the supporters (or purists) of each paradigm, this difference also provides an opportunity for the birth of another methodological concept, pragmatism (also known as the mixed methods methodology and pragmatist paradigm).

5.3.2 Mixed Methods Methodology

On the basis of the discussion above, the underlying assumptions and the research methods of the two paradigms can be seen as opposite and incompatible with each other. As the contrast between the two paradigms is so great, it has separated researchers into two camps, with scholars in each camp rigorously defending their

own methodological stance while rejecting the opposition's thoughts, beliefs, and paradigms. This division led to a period of heated qualitative-quantitative debate, also known as the "paradigm wars". As the debates continued, several social researchers (e.g., Brewer & Hunter, 1989; Datta, 1994; House, 1994) introduced the concept of pragmatism and argued that qualitative and quantitative methods can be compatible, and it is possible to employ multiple methods in a single research project.

The concept of pragmatism recognises the external reality, and it accepts both objective and subjective views depending on the researched phenomenon (Tashakkori & Teddlie, 1998). Similar to the constructionist paradigm, pragmatism also believes that values play a large role in interpreting results; thus a research study cannot be value free (or free from bias). Based on these assumptions, this methodology asserts that researchers should have the liberty to choose those methods, techniques, and procedures from various paradigms (quantitative or qualitative) that best address their research needs and purposes (Tashakkori & Teddlie, 1998; Creswell, 2003; Collis & Hussey, 2009). Pragmatism researchers, therefore, focus on "what works" rather than focusing on reality and the nature of knowledge. They often mix both qualitative and quantitative approaches in a single study to provide the best understanding of a research problem, as well as to best produce the desirable outcomes (Tashakkori & Teddlie, 1998; Creswell, 2003; Creswell & Tashakkori, 2007; Grafton, Lillis, & Mahama, 2011). Thus, the research processes in the mixed methods methodology tend to involve the collection and interpretation of both quantitative and qualitative data.

In accordance with Tashakkori and Teddlie (1998) and Creswell (2003), three general research processes (or strategies) are associated with mixed methods methodology. They are sequential, concurrent, and transformative procedures. Sequential procedures allow an investigator to elaborate or expand on the findings of one method with another method. These procedures can begin with an exploratory qualitative method (e.g., interviews or case studies) followed by a quantitative method (e.g., hypotheses testing) to generalise results to a population, or vice versa. Concurrent procedures, on the other hand, emphasise the convergence of both quantitative and

qualitative data, and the data sources are combined across methods to minimise or cancel the biases in each of those respective methods. In order to provide a comprehensive analysis of the research problem, the data are usually collected at the same time, and they are interpreted by using various triangulation techniques. Transformative procedures advocate the use of theory as a guiding framework (or theoretical lens) in a research design, to gather and interpret both qualitative and quantitative data. This method also allows the researcher to select either a sequential or a concurrent approach for data collection. To summarise, the table below presents the underlying assumptions of the pragmatism paradigm.

Table 5.3 Philosophical Assumptions of the Pragmatism Paradigm

<i>Philosophical Assumptions</i>	Pragmatism
<i>Ontology</i>	<ul style="list-style-type: none"> • Accepts external reality. • Chooses explanations that best produce desired outcomes.
<i>Epistemology</i>	<ul style="list-style-type: none"> • Allows for both objective and subjective point of view
<i>Axiology</i>	<ul style="list-style-type: none"> • Values play a large role in interpreting results.
<i>Causal Linkage</i>	<ul style="list-style-type: none"> • There may be causal relationships, but we will never be able to pin them down.
<i>Inductive/Deductive Logic and Research Process</i>	<ul style="list-style-type: none"> • Deductive + inductive • Depending on the researched phenomenon, the research processes (strategies) can be: <ul style="list-style-type: none"> ○ Sequential ○ Concurrent ○ Transformative
<i>Methods</i>	<ul style="list-style-type: none"> • Quantitative + Qualitative

Source: Adapted from Tashakkori & Teddlie (1998, p. 7, 10 & 23) and Creswell (2003, p. 4)

Based on the points in the above table and Table 5.2, comparisons were made against the author's philosophical assumptions to decide the methodology for this research. The next section details this process and also presents the benefits and application of the chosen methodology in this research.

5.3.3 Methodology in this Research

The Selection of the Methodology for this Research

As cultural background is one of the elements that may influence the decision making of a person (Mann et al., 1998; Anderson, 2003), in order to select the methodology for this research, comparisons are made between the underlying philosophical assumptions of the author and the three available methodologies. These are presented in Table 5.4.

As the table shows, the underlying assumptions of pragmatism have the closest fit with the philosophical views of the author, on several counts. First, both the author and the pragmatism paradigm recognise external reality and accept both subjective and objective views. Although positivism also recognises the external reality, it accepts only the objective view and disregards the notion of subjectivity in its philosophical assumption. Thus it conflicts with the author's philosophical beliefs and thus the positivist paradigm is rejected for this study. Second, the author and the pragmatism paradigm both recognise that values can play an important role in research, and a research study cannot be separated from the researchers' values and biases. Third, pragmatism's acceptance of "what works", or the freedom to choose any method or methods in a research study, coincides with the author's belief that an individual should have the liberty to choose whatever means best suits his or her current status to reach his or her goal. In addition, although the constructivist paradigm also recognises that research is value bound and attached with the researcher's bias, its preference for a single method (monomethods) runs counter to the beliefs of the author. Therefore, this paradigm was not adopted for this research. Through a process of comparisons of their underlying assumptions, the pragmatism paradigm (or mixed methods methodology) was selected for this study over any other paradigm.

Table 5.4 Comparison of Underlying Assumptions between the Paradigms and Author's View

Philosophical Assumptions	Positivism	Constructivism	Pragmatism	Author's View
<i>Ontology</i>	<ul style="list-style-type: none"> • Objective, single reality/naïve realism 	<ul style="list-style-type: none"> • Subjective, multiple reality/relativism 	<ul style="list-style-type: none"> • Accepts external reality. • Chooses explanations that best produce desired outcomes 	<ul style="list-style-type: none"> • The world (or reality) exists externally.
<i>Epistemology</i>	<ul style="list-style-type: none"> • Objective view • The researcher and researched are independent 	<ul style="list-style-type: none"> • Subjective view • The researcher and researched are inseparable 	<ul style="list-style-type: none"> • Both objective and subjective point of view 	<ul style="list-style-type: none"> • Depends on the researched phenomenon; both the objective and subjective point of view are accepted.
<i>Axiology</i>	<ul style="list-style-type: none"> • Research is value free, free of bias 	<ul style="list-style-type: none"> • Research is value bound; research is attached with the bias of researchers. 	<ul style="list-style-type: none"> • Values play a large role in interpreting results. 	<ul style="list-style-type: none"> • Since everything is created through human minds (consciousness), research cannot be free from researchers' values and biases.
<i>Methods</i>	<ul style="list-style-type: none"> • Quantitative-based 	<ul style="list-style-type: none"> • Qualitative-based 	<ul style="list-style-type: none"> • Quantitative + Qualitative 	<ul style="list-style-type: none"> • Whatever is best suitable for the researched phenomenon • It can employ mono-methods or mixed methods.

Support for Mixed Methods Methodology

The above comparisons notwithstanding, the use of mixed methods methodology has garnered support from other sources. First, various writers advocate that a mixed methods methodology may offset the weakness of one paradigm with the counter-

balancing strengths of the other (Tashakkori & Teddlie, 1998; Creswell, 2003; Collis & Hussey, 2009). This view indicates that mixed methods can add insights and understanding that might be overlooked when a monomethods approach is used (Johnson & Onwuegbuzie, 2004). For instance, although words, pictures, and narratives can add meaning to numbers, at the same time, numbers can also add precision to words, pictures, and narratives. Second, the mixed methods approach allows researchers to extend findings beyond those that were observable when employing merely a monomethods approach (Grafton et al., 2011), because the convergence and collaboration of findings could provide stronger evidence for a conclusion, and identify empirical contradictions that might otherwise be missed (Denzin, 1978). Third, mixed methods research combining both qualitative and quantitative methods can produce the more complete knowledge required to inform theory and practice, and may lead to a deeper understanding in regard to the research problem (Johnson & Onwuegbuzie, 2004; Grafton et al., 2011). Fourth, there are an increasing number of researchers applying and advocating the mixed approach in accounting research (e.g., Hooks et al., 2002; Graham, Harvey, & Rajgopal, 2005; Mondell, 2010; Yi et al., 2011). They have shown the application of mixed methods methodology in their accounting research design, and have demonstrated the convergence and collaboration of both quantitative and qualitative methods in practice. In addition, scholars such as Yi et al. (2011) indicated and demonstrated that this methodology is also suitable for application to the Chinese context.

Given the congruence of the underlying assumptions between the author and the pragmatism paradigm, and the support for adopting such a methodology, the mixed methods methodology is deemed to be appropriate for the investigation of the research problem in this study.

5.3.4 Application of Mixed Methods Methodology in this Research

In order to produce a comprehensive research design, a mixed methods methodology was adopted to meet the three primary research objectives of this study. The first objective is to develop a qualitative disclosure index, from the perspective of Chinese stakeholders; the second objective is to investigate both the extent and quality of CIR

practice in China; and, the third objective is to explore the determinants of CIR practice in the Chinese context. Both qualitative and quantitative methods are required to collect the necessary data to meet these objectives. Thus, a sequential research process under the mixed methods methodology was employed. A sequential research process allows an investigator to expand on the findings of one method with another method. This process can start with an exploratory qualitative method and be followed by a quantitative approach to generalise results to a population, or vice versa (Tashakkori & Teddlie, 1998; Creswell, 2003).

To meet the first objective, a CIR qualitative disclosure index based on the expectations of Chinese stakeholders was constructed. The purpose of this instrument is to examine and analyse the websites of the three groups of Chinese listed companies. Each group includes the largest 25 companies that are listed in either A shares, A+B shares, or A+H shares on the Shanghai, Shenzhen, and Hong Kong Stock Exchanges. During this stage, both qualitative and quantitative approaches were applied. The research started with a consultation process (qualitative method) with the selected panel of experts to validate the draft list of CIR items and categories. This stage was followed up with a questionnaire survey (quantitative method) in order to obtain the weighting for each CIR item based upon the opinions of the 46 Chinese survey participants. Post questionnaire interviews (qualitative method) were then conducted to obtain their opinions regarding the reasons behind the selection of the weightings, as well as their expectations for disclosure items. To achieve the second objective, the constructed qualitative disclosure index was used to examine and analyse the sample companies' websites to determine the extent and quality of CIR practices in Chinese listed corporations. As to the third objective, a quantitative approach was employed. The results collected from the first and second objective were subjected to several statistical techniques, such as the Spearman correlation test and Kruskal-Wallis test, to explore the factors that may determine CIR practice in the Chinese context.

On the basis of the research objectives outlined above, the author contends that the choice of a mixed methods methodology is the one that is best suited to the current

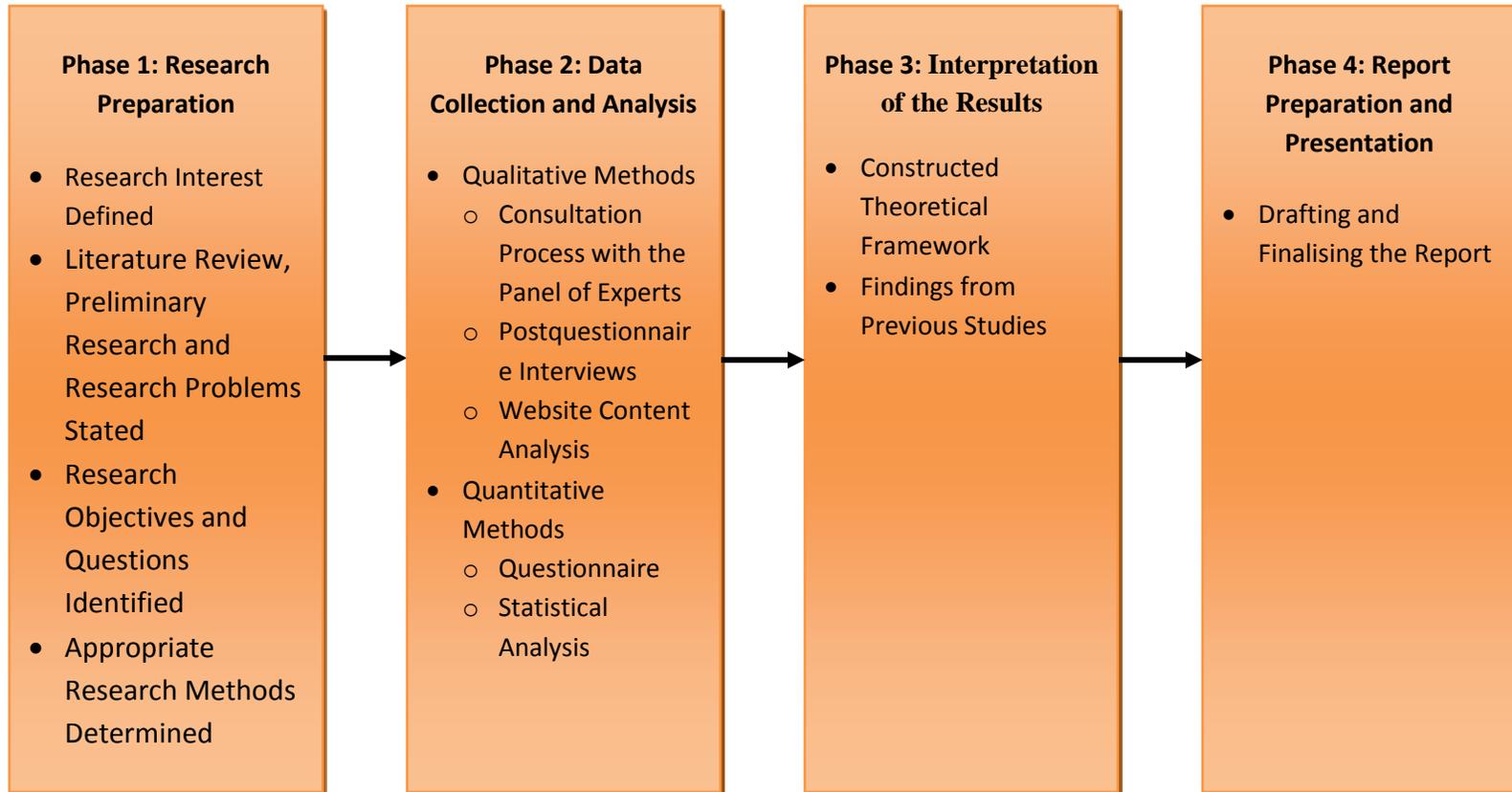
study. The design of this research is quite comprehensive and so it requires the use of both qualitative and quantitative methods to examine the extent and quality of Chinese CIR practice, and to explore the factors that may impact CIR in the Chinese context. Moreover, the use of a mixed method methodology can provide in-depth research findings and understanding of CIR practice in the Chinese context. Such a research outcome can add significantly to our knowledge and the extant literature in the area, while also making a potential contribution to improve Chinese CIR practices.

As Chua (1986) points out, methodological assumptions can specify the research methods that are appropriate for collecting valid and necessary evidence. As the selected methodology has now been presented, the next section describes the research methods used in this study.

5.4 RESEARCH METHODS

According to Hooks (2000) and Yi (2012), a research process usually consists of four phases such as research preparation, data collection and analysis, interpretation of the results, and report preparation and presentation. This process is illustrated in Figure 5.1. Each of the four phases is presented in order.

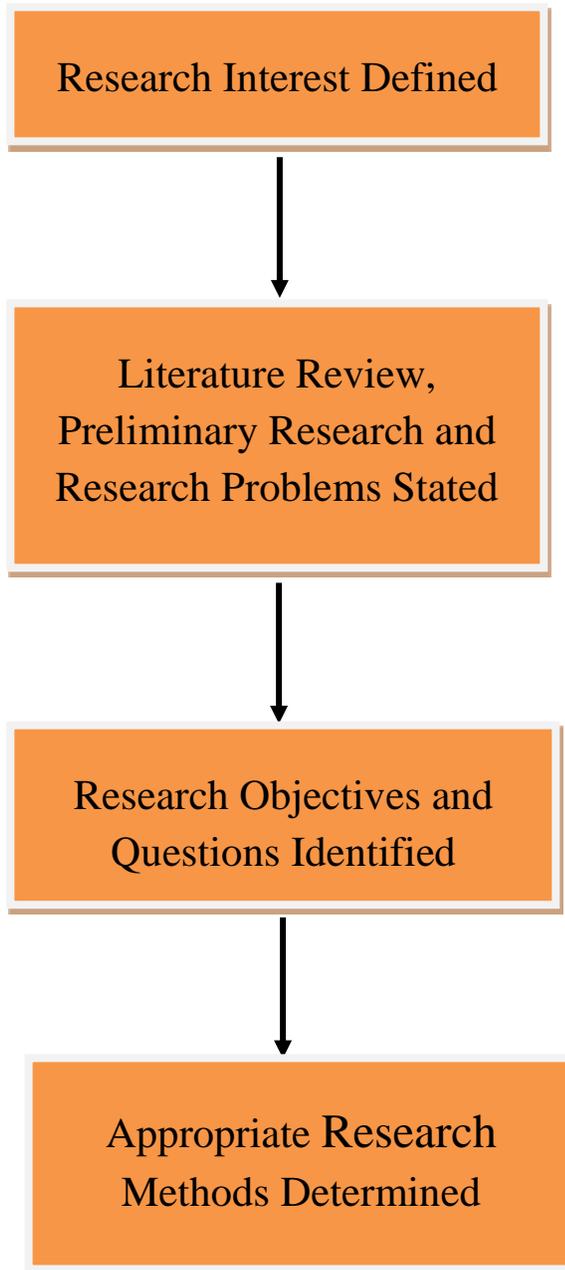
Figure 5.1 Research Process



5.4.1 Phase 1: Research Preparation

The preparation of this research includes the following procedures: defining research interest; reviewing literature, and identifying research problem; identifying research objectives and questions; and, determining appropriate research methods. These steps are presented in Figure 5.2 and described as follows.

Figure 5.2 Research Preparation Procedures



Research Interest Defined

The author developed a strong interest in Corporate Internet Reporting after completing the research for his master's dissertation. Here he learned that CIR is now regarded as one of the most effective reporting tools for corporations to build a communication bridge between themselves and a wide range of stakeholder groups. In recent years, an increasing number of companies have utilised CIR as part of their reporting mechanism to disclose information to various stakeholders, as well as to attract potential investors. However, China, one of the world's largest developing countries and economic sectors in the world, is still lagging behind in the uptake of this technology. For this reason, the researcher deemed that investigation of the status of CIR practices in the Chinese context would be an interesting topic to research.

Literature Review, Preliminary Research, and Research Problems

A comprehensive literature review and preliminary research were also conducted to obtain an insight into CIR practice in China. It was found that most prior studies emphasised CIR practice in developed countries such as the US, the UK, and Germany, and only in recent years had the focus been shifted to some developing countries such as Malaysia, Turkey, Egypt, and Thailand. As for Chinese CIR studies, only a few can be found: Xiao et al. (2004), Lin et al. (2005), He and Zhang (2007), Zhu and Liu (2008), and Han and Liu (2009). These five studies adopted only a single research method – content analysis – and drew on an instrument (dichotomous disclosure index) that was constructed on the basis of indices used in previous studies. Amongst these studies, Xiao et al. (2004) was the only one to provide a theoretical background in their CIR research.

Furthermore, the preliminary research revealed that the amount and timeliness of the disclosed corporate information, and the number of website features offered, differed across Chinese listed companies. Several firms provided timely and large amounts of information (both financial and nonfinancial information) on their websites, while various companies aimed for minimum disclosures only (e.g., information was out of date, and only annual reports were uploaded on the websites). On the basis of the literature reviewed and the preliminary research conducted, the researcher believes

that with the lack of Chinese CIR studies means, it is not possible to reflect a complete picture of CIR nor to address the issues of CIR practice by Chinese firms adequately. It is contended that more comprehensive research is required to obtain an in-depth understanding regarding CIR in the Chinese context.

Research Objectives and Questions

A comprehensive review of the literature led to the development of three primary research objectives:

- To develop a qualitative disclosure index, from the perspective of Chinese stakeholders;
- To assess the extent and quality of CIR practice by Chinese listed corporations that are listed in either A shares, A+B shares, or A+H shares;
- To explore the factors which may determine the extent and quality of CIR practice by Chinese listed companies.

Based on the research problem and the objectives stated above, the following research questions were developed to direct the research design, data collection process, and data analysis:

1. How can the extent and quality of CIR practice by Chinese firms be measured¹¹? (Related to the primary research objective 1)
2. What information do stakeholders want or expect to see in a company's CIR practice? (Related to the primary research objective 1)
3. Are some information items more important than others? (Related to the primary research objective 1)
4. Is there an information asymmetry between the actual CIR practice of Chinese corporations and the expectations of Chinese stakeholders in terms of the items' extent and quality? (Related to the primary research objective 2)
5. Are the CIR expectations of stakeholders being met? (Related to the primary research objective 2)

¹¹ The extent and quality of CIR practice can be measured by applying disclosure index to a company's website. Please refer to Chapter 3 for detail information about disclosure indices.

6. Are there any differences in CIR practices amongst Chinese firms in various industrial sectors? (Related to the primary research objective 2 & 3)
7. Are there any differences in CIR practice between companies with varied listing status in China? (Related to the primary research objective 2 & 3)
8. What are the factors that may influence the CIR practices of Chinese firms? (Related to the primary research objective 3)

Appropriate Research Methods Determined

The research preparation process allowed the research methods to be determined. The details of the methods are described in the following section.

5.4.2 Phase 2: Data Collection and Analysis

Following the preparation processes, the design of the second phase, data collection and analysis, was broken down into three stages. An overview of the design for this research is outlined in Figure 5.3.

Figure 5.3 Summary of Data Collection and Analysis Stages

Stage 1: Development of Disclosure Index

Stage 1 relates to the construction of a CIR qualitative disclosure index. This index was then applied to examine the websites of Chinese listed corporations. The details of the construction of the disclosure index can be found in Chapter 6. This section presents only a summary of the construction process.

The development of the disclosure index involved three steps, and both qualitative and quantitative methods were used. First, a draft list of potential CIR index items was identified and grouped in four categories based on prior studies and the theoretical framework constructed. This theoretical framework was developed from a combination of the five most commonly used theories in prior CIR studies: agency theory, stakeholder theory, legitimacy theory, signalling theory, and institutional theory (Please refer to Chapter 4 for details.). To validate the potential index items for their applicability in the Chinese context, a two-round consultation process with a panel comprising 25 Chinese experts was carried out. They gave several suggestions and comments, and the list of potential items was modified according to experts' opinions. The final list of 84 index items was established.

Second, the weighting process was conducted to obtain the opinions from 46 Chinese stakeholders regarding their views on the importance of the CIR items. A questionnaire was used in this process, and a five-point rating scale (1-5) with a Not Available (N/A) option was adopted to allow the stakeholders to rate the importance of each item. The participants' ratings for each item were summed and divided by 46 (the total number of participants) to obtain a mean score which represents the weighting for each item.

The final step for the construction of the index involved the development of qualitative criteria to assess the quality of CIR practice. The criteria were developed through the review of previous literature, corporate websites, as well as other related sources such as Chinese accounting regulations. In order to add an additional "meaningful layer" to the research, 40 of the 46 questionnaire participants agreed to take part in the post questionnaire interviews. The interviews were carried out to elucidate the reasons behind the selection of the importance weightings, as well as to attain CIR quality expectations on various

disclosure items. In accordance with the previous studies employing disclosure indices, a five-point scale (1-5) with an option of Not Applicable (N/A) was developed. It is acknowledged that often the hyperlinks on a corporate website may not work properly, and that, as a result, some documents or information may not be accessible for examination. Therefore, a N/A option is used to allow for this problem.

Once the index was developed, it was ready for stage 2 – website content analysis. The procedures for stage 2 are described below.

Stage 2: Website Content Analysis

This stage involved three procedures: pilot tests, sample selection, and evaluation and scoring of the sampled companies' websites. The purpose of the pilot tests was to assess the reliability and validity of the disclosure index. The index was tested on six companies that are listed in A shares, A+B shares, or A+H shares from the Shanghai, Shenzhen, and Hong Kong Stock Exchanges. In this process, two assessors were involved and the results were compared to establish the appropriateness and robustness of the index. Several amendments were made after the first pilot test round, but no major changes were required to the disclosure index. The second pilot test was carried out to test the index once again. The results of the second pilot test indicated no major improvements were needed, and thus the index was finalised and ready for use.

The second procedure involves sample selection. In the current study, three groups of the top 25 Chinese companies – based on market capitalisation¹² – and that are listed in either A shares, A+B shares, or A+H shares were selected as the sample. These companies were selected for several reasons. First, these are the largest companies in China, and it is expected that large corporations should disclose more information online than smaller firms due to their resource advantage and high visibility to the public. Second, most of the sample companies form the elite of the Chinese economy, as many of them are the leaders and the highest performers in their industries. Third, as the constructed theoretical framework indicates, this research recognises the effect of institutional isomorphism, as firms have the ability to imitate each other in order to survive

¹² At the beginning of June 2012

and to respond to the institutional pressure in the business context or from society. This tendency indicates that smaller companies tend to mimic the practice or disclosure styles of larger and more successful firms in their industries to enhance their own performance and reputation. As most of the sample companies are their industries' elite, their CIR practice may be a role model to other, smaller firms. This proposition also suggests that the CIR status of the sampled firms can provide a holistic view of the reporting practice in the Chinese context. Fourth, the sample includes both pure A share and dual-listed A+B and A+H share firms, thus representing the unique structure of the Chinese stock market. Fifth, Chinese large corporations tend to have the leading effect in which small and medium firms tend to follow the reporting behaviour or business practice of the leading corporations.

The third step for this stage is to evaluate and score the website content of sampled companies. This process involves a qualitative method known as content analysis. Content analysis is a technique for making valid inferences from data according to their content, and codifying the content of a piece of writing (or online information) into various categories based on selection criteria (Weber, 1990; Cavanagh, 1997; Krippendorff, 2004; Elo & Kyngas, 2008). This method allows a researcher to analyse the meaning of texts through quantifying and examining the information in a systematic and objective way, which enables an examiner to make contextualised inferences in regard to the hidden meanings of the texts (Denscombe, 1998; Ahuvia, 2001; Elo & Kyngas, 2008; Steenkamp & Northcott, 2007). Content analysis of corporate websites has been widely used in the area of accounting for many years, especially in CIR research (e.g., Brennan & Hourigan, 2000; Fisher, Oyelere, & Laswad, 2004; Gowthorp, 2004; Khadaroo, 2005; Aly et al., 2010; Alali & Romero, 2012; Lee & Joseph, 2013). Many of the prior CIR studies have adopted this method in combination with the use of disclosure indices to examine the adoption and extent of CIR in various contexts. Drawing on the previous studies, this research also employs this method to examine the extent and quality of CIR practice in Chinese listed corporations.

The website content was evaluated along four perspectives: user support features, timeliness of the information, corporate website technologies, and website

information content. To enhance the effectiveness of the evaluation process, a detailed Excel sheet for each sampled corporation was constructed. All the items inserted, and calculation formulas were developed and added into the spreadsheet. The examiner was required to assess only the quality of the website content and insert a quality rating (1-5 or N/A) into the Excel sheet; the calculations were done automatically. This extra preparation allowed the process to be conducted consistently, carefully and thoroughly. The evaluation was conscientiously and cautiously carried out for each and every website and for each and every CIR item to ensure credibility and consistency in the process.

Once the examination was completed, stage 3 of the research – data analysis – was then conducted.

Stage 3: Data Analysis

The data collected were quantified and analysed on the basis of the research questions and the research objectives. The analysis of the data includes:

- The extent and quality of CIR practice in terms of items, categories, and the overall CIR practice of the three groups (A, A+B, and A+H shares) (See Chapter 7 section 7.2 for details.)
- The information asymmetry between the actual CIR practices by the sampled firms and the expectations of Chinese stakeholders (See section 7.2.)
- The extent and quality of overall CIR practice by listing status (pure A shares firms and dual-listed A+B and A+H shares companies) (See section 7.3.)
- The extent and quality of overall CIR practice by industry (covering seven industries: manufacturing, mining and quarrying; finance and banking, transportation and storage, real estate and construction, electricity, gas, and water, and others (See section 7.3.)
- The factors that may influence the CIR practice in the Chinese context (See 7.4.).

Once the data were analysed, they were ready for phase 3 of the research process – data interpretation.

5.4.3 Phase 3: Data Interpretation

Through the data analysis the researcher obtained a number of findings regarding the extent and quality of CIR practice in the Chinese context. In order to gain a deeper understanding in regard to CIR reporting in China, the results were interpreted using the comprehensive theoretical framework specifically developed for this study and in line with the findings from previous CIR literature. This framework:

1. acknowledges that organisations and stakeholders are part of a broad societal system, and...
2. recognises the relationship between an organisation and various stakeholders in the society and...
3. promotes two-way communication by not only disclosing the information to the public, but also allowing stakeholders to provide feedback so their needs and wants can be heard, and as a result, ...
4. reduces information asymmetry between the management of an organisation and various stakeholders in the society through CIR practice by sending...
5. positive signals to the stakeholders to gain and maintain legitimacy status for survival in the society, and at the same time, ...
6. discharge accountability to various stakeholders. Finally, the framework also...
7. recognises the possibility of similar CIR practice between organisations as they have the ability to imitate each other.

The results of the factors influencing CIR were also compared with the findings of previous studies in China and other contexts such as the US, the UK, Germany, and Malaysia. This comparison was added in order to gain an insight into the similarities and differences between the findings of this research and other Chinese studies as well as the literature in different contexts regarding the determinant factors of CIR practice.

With this phase, the research of this study was completed. In order to reduce subjectivity and to incorporate validation checks of the data, triangulation techniques were implemented in this study. Triangulation is a strategy that

involves the use of multiple methods in an attempt to confirm or cross-validate data as well as to build a coherent justification for themes in a single study (Creswell, 2003). For the research process discussed above, four types of triangulation suggested by Denzin (1978) were employed in this study:

1. Data triangulation (the use a wide variety of data sources in a study): the use of the consultation process, questionnaire, interviews, and website content analysis indicated that data triangulation was achieved.
2. Investigator triangulation (the involvement of two assessors): two assessors were involved in the examination of the selected companies' websites in the pilot tests.
3. Theory triangulation (the application of multiple theoretical perspectives to interpret the results): five theories were combined to develop a comprehensive theoretical framework to explain the CIR practices of Chinese listed corporations.
4. Methodological triangulation (the adoption of more than one method in the research process to gather data): this study included both quantitative and qualitative methods such as panel of experts, questionnaires, interviews, and website content analysis for data collection. This indicates that the methodological triangulation was accomplished.

It is believed that the use of triangulation in the current study is appropriate in that it helps to reduce bias and to ensure credibility and validity for the results (Hooks, 2000; Yi, 2011).

5.4.4 Phase 4: Report Preparation and Presentation

This last phase was to write up the final report. In order to provide a comprehensive view of this thesis, each of the three previously outlined research phases was prepared and presented in its own independent chapter i.e., Chapters 4, 6, and 7 respectively.

The completion of phase 4 also signified the completion of the whole research as well as the finalisation of the report.

5.5 CHAPTER SUMMARY

In this chapter, the background of the author was first introduced. Then his views on ontology, epistemology, and methods, along with their underlying assumptions, were set out in relation to the philosophical ideologies of Confucianism, Taoism, and Buddhism-Zen which shaped and guide him. The selection of the methodology was also heavily based on the congruence of the assumptions between the paradigms and the author's view. In order to decide upon the most appropriate methodology for this current study, three research paradigms, namely the positivist paradigm, constructivist paradigm, and pragmatist paradigm (or mixed method methodology) were reviewed. As the mixed methods methodology offered the closest fit with the author's views in regard to the underlying philosophical assumptions of ontology, epistemology, axiology and methods, this approach was applied in the research.

Next, the four-phase research process was constructed. The first phase was the research preparation. This phase involved identifying the research problem, the research objectives, and the research questions. The next stage is phase 2, the data collection and analysis. In order to resolve the research problem, to achieve the research objectives, and to answer the research questions, this phase was structured into three stages. First, a CIR disclosure index was constructed. Its construction was based on multiple methods involving a consultation process, questionnaire survey, and interviews. Pilot tests were also carried out to ensure the reliability and robustness of the index. Second, the websites of the sampled companies were evaluated for data collection by applying the specially developed CIR disclosure index. Third, the collected data were then quantified and analysed on the basis of the research questions which had been derived from the research objectives. Once the data were analysed they were ready for phase three of the research process.

In this phase the findings were interpreted in line with both the comprehensive theoretical framework constructed especially for this study and the results from previous CIR literature. At this point the research phase was complete. However, to strengthen the study further, four types of triangulation, namely: data triangulation, investigator triangulation, theory triangulation, and methodological

triangulation were employed to reduce bias and to ensure credibility and validity for the results of this study. The last phase involved writing up the final report; in addition, the completion of this phase, and the finalisation of the written report, signified the completion of the entire research project.

In the next chapter, the development of the CIR qualitative disclosure index is presented.

CHAPTER SIX

DEVELOPMENT OF THE CIR QUALITATIVE DISCLOSURE INDEX

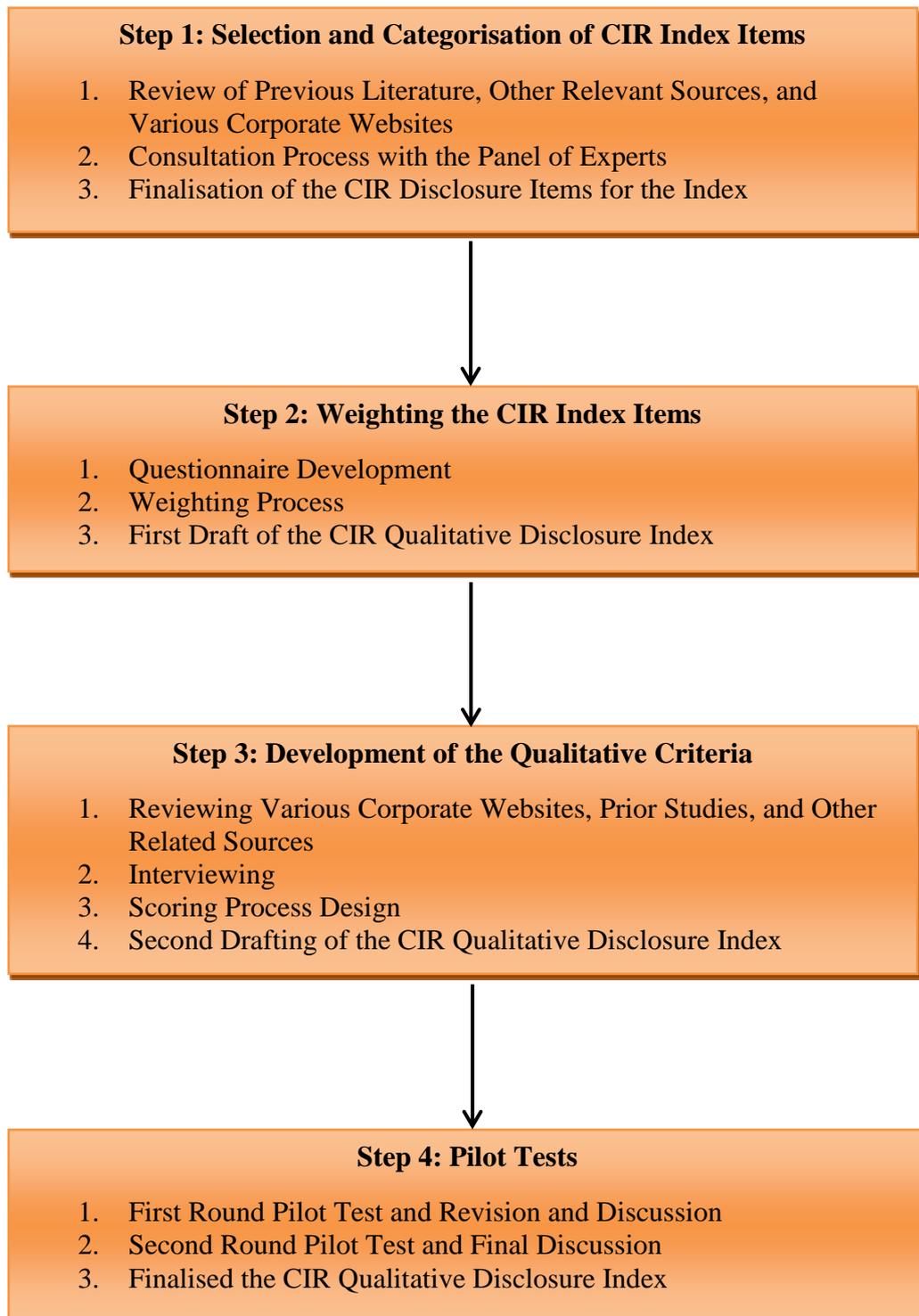
6.1 INTRODUCTION

The disclosure index is an instrument that has been widely adopted for accounting information disclosure studies. Coy et al. (1993), Hooks et al. (2001), and Yi and Davey (2010) stated that a disclosure index is a quantitative-based instrument designed to measure a series of items; it also gives a score indicative of the level of disclosure in the specific context for which the index was devised. In this current study, a disclosure index was developed as an instrument to assess the extent and quality of CIR practice in Chinese listed companies. The development of the index involved four major steps:

1. Selection and categorisation of CIR index items
2. Weighting the CIR index items
3. Development of the qualitative criteria
4. Pilot tests.

Figure 6.1 outlines the procedures involved in each of the steps.

Figure 6.1 Procedures of the Development of the CIR Qualitative Disclosure Index



The remainder of this chapter is organised in accordance with Figure 6.1 and is structured as follows:

- 6.2 Selection and Categorisation of CIR Index Items
- 6.3 Weighting of CIR Items
- 6.4 Development of the Quality Criteria
- 6.5 Pilot Tests
- 6.6 Chapter Summary

6.2 SELECTION AND CATEGORISATION OF CIR INDEX ITEMS

The selection of CIR items consisted of two procedures. The first was the review of previous studies relating to the CIR disclosure practice in different countries to obtain potential disclosure items and categories. The second was the consultation process with the panel of experts to validate the potential CIR items. The first procedure is detailed in the following section.

6.2.1 Potential CIR Items and Categories

In order to obtain potential index items, several articles (including two articles in the context of Mainland China and one study about Hong Kong) were reviewed. Of these articles, Xiao et al. (2004) and Pirchegger and Wagenhofer (1999) are considered to be the key literature. Xiao et al. (2004) provided an insight into the items that should be included for measuring the CIR practice in the Chinese context; they also differentiated between the China Securities Regulatory Committee (CSRC) required items and non-CSRC required items. However, in order to include a wide variety of information in the initial CIR qualitative disclosure index, other studies from both developed (e.g., Marston & Polei, 2004; Kelton & Yang, 2008; Abdelsalam et al., 2007) and developing countries (e.g., Davey & Homkajohn, 2004; Ezat & El-Masry, 2008; Aly et al., 2010) were also reviewed (The number of items included in these studies ranged between 33 and 162.). In addition, many recent studies (e.g., Henchiri, 2011; Boubaker et al., 2012; Uyar, 2012) were also selected to provide an insight into the latest available web technologies and web supporting features items. Other sources such as the websites of the world's 20 largest companies ¹³(See Appendix A.) were also

¹³ Information extracted from Forbes' website in year 2011

visited to obtain knowledge about the online features used and information disclosed on these websites. Chinese accounting standards and CSRC regulations were also reviewed to identify additional items that needed to be incorporated into the disclosure index. Furthermore, the developed theoretical framework also played an integral part in the item selection process. For instance, in order to reduce the information asymmetry between corporations and various stakeholder groups, not only the items that were interested by shareholders and potential investors (e.g., annual and audit reports, financial statements, and forward looking statements) were selected, corporation social responsibility reporting items (e.g., environmental reports and health and safety reports) were also included in the list to take into consider the information desire of other stakeholders such as environmentalists, ethical investors, and general citizens. Also, to promote two-way communication by allowing stakeholders to provide feedback so their needs and wants can be heard, items such as email addresses of the company, and contact to the webmaster were also selected. In all, 72 initial CIR items were identified.

As to item classification, Pirchegger and Wagenhofer (1999) suggested that disclosure items can be separated into four different categories: content, timeliness, technologies, and user support. Although many researchers (e.g., Marston & Polei, 2004; Abdelsalam et al., 2007; Kelton & Yang, 2008) tended to classify the items into just two groups: content (e.g., financial and nonfinancial items) and presentation/usability/format (e.g., web technologies items, advance user support features items, contact information), the item classifications suggested by Pirchegger and Wagenhofer (1999) were deemed to be more suitable for this research for two reasons. First, studies such as Marston and Polei (2004) and Abdelsalam et al. (2007) did not examine the timeliness of the information disclosed; consequently, a timeliness category was not included in their disclosure index. For studies that did incorporate timeliness information as part of their CIR assessment (e.g., Pirchegger & Wagenhofer, 1999; Davey & Homkajohn, 2004; Ezat & El-Masry, 2008), timeliness items were treated as a separate, additional category. As information timeliness was also part of the investigation in this current research, it was decided to include this category in the CIR qualitative disclosure index. Second, since the number of technology and user support items

has increased significantly, incorporating these items into a single category would be inappropriate. Therefore, this study contends that these items should be separated into two categories: user support features and corporate technologies. This contention is also supported by studies such as Davey and Homkajohn (2004), Aziz et al. (2011), and Almilia (2009) as they also used a similar classification for these items.

Once the categories for the items were decided, the 72 initial items were grouped into four categories: user support features, timeliness, technologies, and content. These categorised items are shown in the table below.

Table 6.1 Initial CIR Disclosure Items

1.0 User Support Features on Corporate Websites
English Version of Website
Chinese Version of Website
Other Language Versions of Website
Help/FAQs
Site Map
Site Search Features
Link to Homepage
Link to Top of the Page
Link to Chinese Securities Regulatory Commission Website
Link to the Chinese Stock Exchange Website that the company is listed in
Contact to the Webmaster
Email Addresses of the Company
Postal Addresses of the Company
Phone Numbers of the Company
2.0 Timeliness of the Information on Corporate Websites
Quarterly Report
Interim Report
Annual Report
Press Releases
Share Prices Update During Trading Hours

(Continued)

<u>3.0 Corporate Website Technologies</u>
Plug - in Software
Video/Audio Playing Software
Excel/Word Documents
Power Point Documents
Html Documents
PDF Files
Multimedia Technologies – Audio
Multimedia Technologies – Video
Hyperlink Inside the Digitised Annual Report
XBRL
<u>4.0 Content of Corporate Websites</u>
Historical Share Prices Disclosed
Historical Dividend Figures Disclosed
Company Background
Managers'/Directors' Background
Industry Information
Access to Press Releases on a Company's Homepage
Access to Investor Relations Information on a Company's Homepage
Annual Report for the Current Year (Summary)
Annual Report for the Past X Years (Summary)
Annual Report for the Current Year (Full)
Annual Report for the Past X Years (Full)
Audit Report for the Current Year
Audit Report for the Past 6 Years
Statement of Financial Performance for the Current Year
Statement of Financial Performance for the Past X Years
Statement of Financial Position for the Current Year
Statement of Financial Position for the Past X Years
Statement of Cash Flow for the Current Year
Statement of Cash Flow for the Past X Years
Notes of Financial Statements for the Current Year
Management Report and Analysis
Segmental Reporting by the Line of Business
Segmental Reporting by Region
Summary of Key Ratios over a Period of at least 3 Years
Summary of Financial Data over a Period of at least 3 Years
Report of the Board of Directors
Report of the Governance Board
Resolutions of Shareholders Meetings in Current Year
Top 10 Stockholders
Accounting Policy

(Continued)

Company's Charter
Material Events
Material Changes to Accounting Policy
Changes in Stockholders' Equity
Material Events in Past Years
Environmental Reporting
Sports Sponsorship
Technology Research and Technology Trade Show Sponsorship
Donations to Underdeveloped and Deprived Communities
Donations to Areas Hit by Natural Disasters
Donations to Schools in Deprived Areas
Donations to Medical Foundations

At this stage, a potential CIR qualitative disclosure index was constructed using previous studies. The items in the index capture the important elements of CIR and are considered to be comprehensive. This index is believed to be applicable to the objective of this study which is to examine the extent and quality of CIR practice across the three listing statuses (A, A+B, and A+H shares) in China. However, since the initial index was developed on the basis of a review of the prior Western-leaning literature, it was still not sufficient to ensure its validity in the Chinese context. To ensure that this index was relevant to the Chinese context, a consultative process with a panel of Chinese experts was conducted.

6.2.2 The Consultation Process with the Panel of Experts

To further validate the disclosure index constructed for the Chinese context, 25 Chinese stakeholders who are experts in the field of business and reporting were invited to participate in the consultation process. The selection of the panel members was purposive so as to ensure the participants offer enough knowledge to provide constructive feedback that could further validate the CIR disclosure index in the Chinese environment. The detail regarding the selection of the experts and the feedback from the expert panel are provided next.

Selection of the Experts

The selection of the experts began with a discussion between the author and a professor who is well-known in China. The aim of this discussion was to seek recommendations on possible candidates who would be eligible to be members of the panel. Professor Liu has taught many MBA and EMBA classes in the Peking University, and he has also been a guest lecturer in many other prestigious

universities in China (e.g., Tsinghua University, Fudan University, and Shanghai Jiao Tong University).

The reason for meeting and discussing the selection process with Professor Liu was to establish a relationship network known as *guanxi*. *Guanxi* is a concept of creating a web of connections in personal and business relationships; it is also a common approach that helps to establish an informal personal connection between two or more individuals (Luo, Huang, & Wang, 2012; Smith, Huang, Harb, & Torres, 2012). People can expand their web of connections greatly through establishing personal or business *guanxi* in which the parties included in the web can benefit each other significantly. Thus, *guanxi* is an essential element in Chinese society.

During the meeting a list of the criteria for selecting the panel members was given to the professor so that he could choose the best possible candidates. The criteria for the complete panel and the panel members are listed below.

- Must be a Chinese resident
- Should include a wide range of experts from various stakeholder groups (e.g., Directors, CEOs, CFOs, potential or current investors, government officials, and accountants)
- Must have experience in Chinese CIR practice, as well as specific understanding of overseas online reporting
- Must have done business overseas (preferable, but not essential)
- Must be willing to participate in the consultation process.

The author received a list of 50 potential candidates. An invitation was sent to the potential candidates, and 25 of them (comprising three CFOs, six general managers, two accountants, two academics, three government officials, six business owners, and three managing directors) agreed to be on the panel and participate in the consultation process.

As regards the size of a panel, Dalkey (1969) suggested that 15-20 members is the minimum number needed, whereas Martino (1972) believed that 10-30 panel candidates is reasonable for obtaining the opinions of stakeholders on particular matters. Therefore, a panel size of 25 members was considered to be appropriate

for the current research. Before the consultation process began, a certified translator was hired to translate the items from English to Chinese. To ensure the index was properly translated, a Mainland Chinese PhD student from the Waikato Management School was asked to verify the translated document once more. The outcome indicates that no issues were found; therefore, no changes were needed.

Once the number of experts was confirmed and the items were translated, meetings were convened to present and discuss the initial list of CIR disclosure items. Since the experts were busy with their study and businesses, it was impossible to set a meeting with all 25 of the participants together; therefore, several meetings were set for the first round of the consultation process. A second round of consultation was also scheduled, after changes had been made to the index in accordance with the first round feedback from the panel of experts. The details of the feedback are presented in the next section.

Feedback from the Panel of Experts – First Round

Before the consultation process, the experts were asked to take into consideration the costs (e.g., time, money, technologies) that can be involved in providing extra information, links, and any sophisticated items on a corporate website. The panel was also advised to take account on whether any costs (e.g., damage to corporate reputation) would occur if an item or any potential items were not provided on a corporate website. This guidance was provided to ensure that the panel members were fully aware of the possible cost-benefit factors before they made any recommendations. As a result, the items suggested by the experts are practical and realistic. During the consultation process, several suggestions were given by the experts. These recommendations are deemed valuable, not only because the panel experts have considerable experience in CIR practice, but also because many of them are also aware of online reporting in other national contexts, for example, the US and the UK. Their feedback was incorporated into the index.

After long discussion and meetings with the experts, a consensus was reached that 13 extra items were to be included in the CIR index (Please refer to Table 6.2). However, different opinions were voiced as to which category the items should be placed into. Originally, the item *access to financial information on companies' homepage* was classified under User Support Features on Corporate Websites and

explanation of technical terms was categorised in Content of Corporate Websites. More than half of the experts in the panel agreed with the classification of these two items. However, five members in the panel (one general manager, two CFOs, and one accountant) believed these two items should switch to different categories. They explained that *access to financial information on a company's homepage* might be seen as a user support feature, as this function allows fast access to corporations' financial information. However, the information included is the important part of this item, not its fast access function. Therefore, it was argued, this item should be classified under the Content of Corporate Websites category. The five experts also believed the item *explanation of technical terms* should move to another category. They believed that the purpose of having descriptions for the special terms is to help web users understand the meaning of those terms. Therefore, this information should be transferred to the category of User Support Features on Corporate Websites. The author then sent these recommendations via email to the other 20 experts. Two experts – one business owner and one managing director – persisted in their belief that these two items should remain in their original categories. However, after the author had phoned them and explained the reasons for the changes in more detail, both agreed to the change.

In addition, a few of the experts raised a query about several items regarding the meaning of *for the past X years*. The author explained that in the later weighting process, the questionnaire participants would be queried about the number of past years' financial information and reports that they expected to see on corporate websites. Therefore, in this initial stage, the term *X years* is used as it does not specify any particular number of years. The experts accepted the reasoning and agreed that no change was required on this matter. The modified CIR disclosure items were then sent back again to the 25 experts and second round meetings were set up for a second review of the draft CIR disclosure items.

Table 6.2 Additional CIR Disclosure Items

<u>1.0 User Support Features on Corporate Websites</u>
Links to Chinese Company's Investments
Instant Feedback Posting Feature
Explanations of Technical Terms
Access to Google Search Engine on a Company's Homepage
<u>2.0 Timeliness of the Information on Corporate Websites</u>
-
<u>3.0 Corporate Website Technologies</u>
Antivirus Checking System
Speaking Guiding System
<u>4.0 Content of Corporate Websites</u>
Health and Safety Report
Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report
Staff Training Plan
Access to Financial Information on a Company's Homepage
Shareholding Structure and Percentages of Top 10 Shareholders
Research and Development information
Government Policies towards a Company's Industry

Feedback from the Panel of Experts – Second Round

During the second round of the consultation process, no additional items were suggested; however, the experts believed that the index required several subcategories to further separate the items as the list was untidy. Therefore, the CIR disclosure index was modified once again. The final draft of the CIR qualitative disclosure index is shown below.

Table 6.3 Final Draft of the CIR Disclosure Items

<u>User Support Features on Corporate Websites</u>
1. <u>Version of Languages Available on Chinese Corporate Websites</u>
a. English Version of Website
b. Chinese Version of Website
c. Other Language Versions of Website
2. <u>General User Support Features on Chinese Corporate Websites</u>
a. Help/FAQs
b. Site Map
c. Site Search Features
d. Link to Homepage
e. Link to Top of the Page
3. <u>External Links on Chinese Corporate Websites</u>
a. Link to Chinese Securities Regulatory Commission Website
b. Link to the Chinese Stock Exchange Website that the Company is Listed in
4. <u>Contact Information on Chinese Corporate Websites</u>
a. Contact to the Webmaster
b. Email Addresses of the Company
c. Postal Addresses of the Company
d. Phone Numbers of the Company

(Continued)

5. <u>Other Additional User Support Features</u>
a. Links to Chinese Company's Investments
b. Instant Feedback Posting Feature
c. Explanations of Technical Terms
d. Access to Google Search Engine on a Company's Homepage
<u>Timeliness of the Information on Corporate Websites</u>
1. <u>Information Timeliness – Reports</u>
a. Quarterly Report
b. Interim Report
c. Annual Report
2. <u>Information Timeliness – Other Information</u>
a. Press Releases
b. Share Prices Update During Trading Hours
c. Forward Looking Statements
<u>Corporate Website Technologies</u>
1. <u>Downloadable Options on Chinese Corporate Websites– Software</u>
a. Plug - in Software
b. Antivirus Checking System
c. Video/Audio Playing Software
2. <u>Downloadable Options on Chinese Corporate Websites – Documents</u>
a. Excel/Word Documents
b. Power Point Documents
c. Html Documents
d. PDF Files
e. Multimedia Technologies – Audio
f. Multimedia Technologies – Video
3. <u>Other Available Technologies on Companies' Website</u>
a. Hyperlink Inside the Digitised Annual Report
b. Speaking Guiding System
c. XBRL

(Continued)

<u>Content of Corporate Websites</u>
1. <u>Financial Information Items on Corporate Websites</u>
a. Historical Share Prices Disclosed
b. Historical Dividend Figures Disclosed
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report
d. Access to Financial Information on a Company's Homepage
2. <u>Nonfinancial Information Items on Corporate Websites</u>
a. Staff Training Programmes
b. Company Background
c. Managers'/Directors' Background
d. Industry Information
e. Research and Development Information
f. Government Policies towards Company's Industry
g. Access to Press Releases on Companies' Homepage
h. Access to Investor Relations Information on Companies' Homepage
i. Shareholding Structure and Percentages of top 10 Shareholders
j. Company's Charter
3. <u>Online Annual Report Items – Financial Information Items</u>
a. Annual Report for the Current Year (Summary)
b. Annual Report for the Past 6 Years (Summary)
c. Annual Report for the Current Year (Full)
d. Annual Report for the Past 6 Years (Full)
e. Audit Report for the Current Year
f. Audit Report for the Past 6 Years
g. Statement of Financial Performance for the Current Year
h. Statement of Financial Performance for the Past 6 Years
i. Statement of Financial Position for the Current Year
j. Statement of Financial Position for the Past 6 Years
k. Statement of Cash Flow for the Current Year
l. Statement of Cash Flow for the Past 6 Years
m. Notes of Financial Statements for the Current Year
n. Management Report and Analysis
o. Segmental Reporting by the Line of Business
p. Segmental Reporting by Region

(Continued)

q. Summary of Key Ratios over a Period of at least 3 Years
r. Summary of Financial Data over a Period of at least 3 Years
4. <u>Online Annual Report Items – Nonfinancial Information Items</u>
a. Report of the Board of Directors
b. Report of the Governance Board
c. Resolutions of Shareholders Meetings in Current Year
d. Top 10 Stockholders
e. Accounting Policies
g. Material Events
h. Material Changes to Accounting Policies
i. Changes in Stockholders' Equity
j. Material Events in Past Years
5. <u>Online Corporate Social Responsibility Information Items</u>
a. Environmental Reporting
b. Sports Sponsorship
c. Technology Trade Show Sponsorship
d. Donations to Underdeveloped and Deprived Communities
e. Donations to Areas Hit by Natural Disasters
f. Donations to Schools in Deprived Areas
g. Donations to Medical Foundations
h. Health and Safety Report

The completed draft of the index was sent via email to each of the panel members for final consultation. Their replies were positive; therefore, no further changes were necessary. At this stage, the validation of the disclosure index items was complete; the second step was ready to be commenced.

6.2.3 Summary

This section presents the construction and selection of the 85 CIR qualitative disclosure items. First, previous CIR studies were reviewed thoroughly to identify 72 initial items. In order to further validate the initial CIR items for their applicability in the Chinese context, two rounds of the consultation process with 25 Chinese experts were conducted. Several changes were made as a result of the suggestions provided by the experts, and the final draft of the items and their category placement in the CIR qualitative disclosure index was completed. The following section details the process of the second step in the development of CIR qualitative disclosure index.

6.3 WEIGHTING OF CIR ITEMS

The second step of the CIR qualitative disclosure index development is the weighting process. In this process a questionnaire was used to survey the opinions of Chinese stakeholders regarding their views on the importance of each index item. The weighting process consists of several procedures: stakeholder selection, questionnaire development, questionnaire results analysis, and weightings calculation. Each procedure is presented in this section of the thesis.

6.3.1 Stakeholder Selection

The concept of guanxi was again an important tool for the selection process when selecting stakeholders (also known as participants and respondents) for the questionnaire survey. Initially, all 25 panel experts were invited to take part in the weighting process; however, due to their pre-commitments they were unable to participate. As a result, the 25 experts, as well as Professor Liu, were contacted once more to seek recommendations for potential survey participants. The experts and Professor Liu suggested 40 potential participants, 30 of whom agreed to join the survey. Ten of the participants suggested an additional 15 potential candidates to be part of the weighting process. The author contacted these 15 people by telephone, and all accepted the invitation to participate in the survey. Thus, a total of 46 stakeholders from various industries (e.g., automobile, banking and finance, IT, and manufacturing) were selected for the weighting process.

6.3.2 Questionnaire Development

Once the participants had been selected, the questionnaire was developed in accordance with the three steps listed below.

1. The development of the structure and content of the questionnaire
2. Choosing a rating scale of importance for the questionnaire
3. Questionnaire translation and reliability process.

Step 1 – The Development of the Structure and Content of the Questionnaire

This questionnaire was designed to obtain the participants' opinions about the CIR qualitative disclosure index items identified earlier, and was separated into six sections. These are: Background Information, User Support Features on Corporate Websites, Timeliness of Information on Corporate Websites, Corporate Website Technologies, Content of Corporate Websites, and Category Weightings.

The questionnaire (Refer to Appendix B.) starts with an instruction page which includes information such as the purposes of the questionnaire and instructions on filling out the questionnaire. A glossary page followed to explain any technical terms (e.g., forward looking statement, plug-in software, and hyperlinks inside an annual report) included in the questionnaire. The questions first asked for demographic details such as age, gender, and education level of the participants. The stakeholders were then required to rate the relative importance of the CIR items using an interval rating scale from one to five (See Table 6.4.). The questionnaire also included spaces to allow participants to add additional items and rate them simultaneously, if necessary. Lastly, the participants were asked to assign a weighting to each of the four categories (User Support Features on Corporate Websites, Timeliness of Information on Corporate Websites, Corporate Website Technologies, and Content of Corporate Websites). This last section of the questionnaire was an open-ended scale, the more important the category, the higher the weighting; however, the sum of the weightings assigned to the four categories must equal to 100. No cover letter was included in this questionnaire because the survey was not sent via email or postal mail; it was delivered personally to each stakeholder by the author to ensure that any confusion or misunderstanding which might arise during completion of the questionnaire survey could be dealt with straightaway. However, the participants asked only a few questions regarding the procedures for weighting the items, and each of these queries was answered immediately.

Step 2 – Choosing a Rating Scale of Importance for the Questionnaire

It was decided that an open-ended scale would not be used for rating the importance of each item, as Coy (1995), and Hooks (2000) pointed out that it is impractical to have participants rate an item's relative importance and give opinions on the existence of an item on an open-ended scale. Thus, a five-point rating scale with a **Not Available (N/A)** option was chosen for this research. The rating scale is presented below.

Table 6.4 Rating Scale of Importance

1	2	3	4	5
The item can either be included in a company's website or discarded as it is Very Unimportant	The item may still be disclosed but is Unimportant	The item has Neutral importance	The item should be disclosed and it is Important	The item is essential and is Very Important

The primary reason for adopting a five-point scale is that, as advised by Hooks (2000), it is easy to comprehend and quick to use. Second, it limits the extent to which participants can differentiate their responses, and avoids the issue of respondents' different interpretations of the level of importance indicated by a particular numerical value (Ingram & Robbins, 1992). This scale has been widely adopted by various studies such as Adhikari and Tondkar (1992), Hooks (2000), Hooks et al. (2002), Schneider and Samkin (2008), and Yi (2012). More importantly, Yi (2012) had already demonstrated that the use of a five-point scale survey is appropriate in the Chinese context for gathering stakeholders' opinions on the importance of disclosure items. As the questionnaire for this current study serves a similar purpose as Yi (2012), it would seem that a five-point scale questionnaire is the most suitable choice for this research. In addition, a N/A option was adopted to ensure that if a participant has no opinion in regard to an item's importance, instead of randomly selecting a rating from the scale, an N/A option is available for them to choose.

Step 3 – Questionnaire Translation and Reliability Process

Furthermore, as the questionnaire was used for obtaining opinions from the Chinese stakeholders, the final version of the questionnaire was in Chinese. However, as the author's two PhD supervisors are native English speakers, in order to obtain their recommendations and final consent, the questionnaire was first constructed in English. Several meetings were held between the author and the two supervisors; feedback was given regarding the design and wording of the questionnaire as well as the rating scale of importance. The author revised and modified the questionnaire many times based on their suggestions.

After the questionnaire was approved by the supervisors, similar translation procedures were undertaken as in the consultation process stage (Please refer to

page 132.). The result of these procedures was positive, and no changes were necessary. In order to ensure that the Chinese version of the questionnaire delivered the same message as the English version, the author asked a guest professor at Peking University to translate the Chinese version back into English. When comparing the two versions, only minor differences were found.

Lastly, the author asked a Mainland Chinese PhD student at Waikato Management School to assess the two versions of the questionnaire. The PhD student indicated that the instructions, the wording, and the items in the Chinese version were consistent with the English version. This reliability procedure gave support and assurance for the questionnaire's reliability, and so it was finalised and ready for use. The finalised questionnaire and the instructions page can be found in Appendix B.

6.3.3 Questionnaire Results

To determine the weightings for a CIR item, the assigned ratings were summed and divided by 46 to attain an average score; the higher the average score of an item, the greater the importance. The use of average scores to calculate the weightings is supported by Coy et al. (1993), Hooks (2000), and Yi (2012), as they believe it gives equal weight to each of the responses without producing misleading results. Buzby (1975), Dinius and Rogow (1988), Hooks et al. (2002), and Yi (2012) also advise that it is necessary to report average scores, as this figure could mediate the wide disparity of participants' opinions.

No additional CIR items were added by the questionnaire participants to any of the four categories. The CIR disclosure items identified, and the consensus achieved regarding these items at the first stage, may have accounted for this fact. The detail of the questionnaire results is presented in the follow sections.

User Support Features on Corporate Websites

This category consists of five subgroups: version of languages available, general user support features, external links, contact information, and other additional user support features. The response ratings for the items in each subcategory are presented in the same order, and the weighting for this category is then provided.

1. Versions of Languages Available

The questionnaire results are shown in the following table.

Table 6.5 Responses of Participants for Version of Language Available

User Support Features Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
1. Version of Languages Available								
a. English Version of Website	4	13	12	14	2	1	2.9	Neutral
b. Chinese Version of Website	0	0	0	14	32	0	4.7	Very Important
c. Other Language Versions of Website	4	15	23	2	0	2	2.4	Unimportant

Note:

The frequency signifies the number of participants (from a total of 46) who gave each of the items a rating.

The average = sum of (the ratings x frequencies)/46

Taking the *English version of website*, for example, the following sum demonstrates how its result was calculated: $2.9 = (4*1 + 13*2 + 12*3 + 14*4 + 2*5 + 1*0)/46$.

The table shows that for the *English version of website item* an average rating of neutral was identified. Various respondents rated this item as unimportant or very unimportant. Since Chinese companies are registered in China, it is more important to have a Chinese version rather than an English language version of a website. This was also the reason behind the rating of the *Chinese version of website* item as it was deemed very important or important by all the stakeholders, which in turn led to a high average rating of 4.7 being calculated. As to *other language versions of website*, the majority of the participants (42) rated this item as neutral, unimportant, or very unimportant. Only two stakeholders rated the item as important. They explained that from their experience as a foreign trader, they believed other language versions of a website would be more convenient for audiences with no Chinese and English language background.

2. General User Support Features

The results for General User Support Features category are presented in Table 6.6.

Table 6.6 Responses of Participants for General User Support Features

User Support Features Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
2. General User Support Features								
a. Help/FAQs	0	0	5	26	10	5	3.7	Important
b. Site Map	0	1	15	18	10	2	3.7	Important
c. Site Search Features	0	2	4	16	22	2	4.1	Important
d. Link to Homepage	0	0	4	17	24	1	4.3	Important
e. Link to Top of the Page	0	1	11	19	11	4	3.6	Important

The table above shows that the questionnaire participants deemed all of the General User Support Features items important. Among the average ratings, *site search features* and *link to homepage* score the two highest ratings, perhaps because these two items are the most common features on Chinese corporate websites, and, as stated by the respondents, an internal site search is important because it can provide quick searching and allows web users to gather information faster. As for the *help/FAQs*, *sitemap*, and *link to top of the page* items, they were rated important as the respondents believed these features could provide convenience for web audiences.

3. External Links

The results for the External Links category are shown below.

Table 6.7 Responses of Participants for External Links

User Support Features Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
3. External Links								
a. Link to Chinese Securities Regulatory Commission Website	3	4	12	16	8	3	3.3	Neutral
b. Link to the Chinese Stock Exchange Website that the Company is Listed in	1	2	12	14	11	6	3.3	Neutral

From the above table, an average importance rating of neutral was identified for the items *link to Chinese Securities Regulatory Commission (CSRC) Website* and *link to the Chinese Stock Exchange Website that the company is listed in*. Nevertheless, many stakeholders still rated links to websites of the CSRC and the Chinese Stock Exchange respectively as important or very important. However, it was later explained by the respondents that they gave such ratings not because they think the items are essential, but in the belief that companies have the responsibility to disclose as much information as possible.

4. Contact Information

The results for Contact Information are provided below.

Table 6.8 Responses of Participants for Contact Information

User Support Features Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
4. Contact Information								
a. Contact to the Webmaster	0	2	5	14	24	1	4.2	Important
b. Email Addresses of the Company	0	0	10	12	23	1	4.2	Important
c. Postal Addresses of the Company	0	0	15	11	19	1	4.0	Important
d. Phone Numbers of the Company	0	0	5	11	28	2	4.3	Important

As shown in the table above, all of the items in this subcategory received an average rating of important. This result indicates that most of the participants considered these items to be significant on corporate websites. In addition, numerous stakeholders suspected that the quality of the item *Contact to the webmaster* may vary between different companies. As they stated, Chinese information users (including the participants themselves) are normally less interested in web designers' contact details; therefore, a webmaster's contact information is usually not prominently displayed on corporate websites.

5. Other Additional User Support Features

The response rates for the Other Additional User Support Features items are presented in the following table.

Table 6.9 Responses of Participants for other additional User Support Features

User Support Features Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
5. Other Additional User Support Features								
a. Links to Chinese Company's Investments	0	0	0	0	46	0	5.0	Very Important
b. Instant Feedback Posting Feature	0	1	5	17	21	2	4.1	Important
c. Explanations of Technical Terms	0	0	0	0	46	0	5.0	Very Important
d. Access to Google Search Engine on a Company's Homepage	0	10	20	10	6	0	3.3	Neutral

The questionnaire results indicated that the stakeholders believed *links to Chinese company's investments* and *explanations of technical terms* are very important because information about a company's investments can be vital for decision makers. Also, descriptions of special terms could provide useful information for audiences in regard to the specific language or jargon used in a particular business sector. For *access to Google search engine on companies' homepage*, it is surprising that this item is considered to be of neutral importance rather than very unimportant. Several stakeholders explained that, based on their experience as a web user, it was common for them to find the information disclosed on a corporate website was insufficient, and they were thus required to open another blank page and retype the address in Google or Baidu (Chinese search engine that is equivalent to Google) to search for more information. The stakeholders believed it would be appreciated if the Google search engine were provided so that this search process could be done within the homepage of a corporate website. The stakeholders also recognised the significance of the item *instant feedback posting feature* and stated that it would be convenient if website users could post feedback on a corporate website instantly.

As to the weighting for the User Support Features on Corporate Websites category, the result is shown below.

Table 6.10 Weightings for User Support Features on Corporate Websites

User Support Features On Corporate Websites						
Weightings	0 - 10	11- 20	21 - 30	31 - 40	41 <	Average
Frequency	21	9	13	2	1	17.5

Note:

The frequency signifies the number of participants (a total of 46) who assigned a weighting in the specific range.

The average = sum of weightings/46

For example, $17.5 = (806) / 46$ demonstrates how the value was calculated.

The above table shows that most of the participants assigned a weighting of 30 or below, which resulted in an average weighting of 17.5 for this category. Several respondents explained that Chinese information users (including themselves) generally put more emphasis on a website's information content and information timeliness rather than on user support features and web technologies. Many stakeholders suspected the willingness of Chinese listed companies to put more effort into offering a wide variety of high quality online user support features on their website. Thus, they believed a lower rating should be assigned to this category. In addition, the highest weighting of 50 was assigned by a web designer. This person mentioned that because of his background, he is more interested in the features included on a corporate website than the other stakeholders would most likely be.

Timeliness of the Information on Corporate Websites

This category includes two subcategories: Information Timeliness – Documents, and Information Timeliness – Other Information. The results for items in these subgroups and the weighting of this category are presented in the following section.

1. Information Timeliness – Reports

The questionnaire results are shown in the following table.

Table 6.11 Responses of Participants for Information Timeliness - Documents

Timeliness of the Information on Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
1. Information Timeliness – Reports								
a. Quarterly Report	0	1	4	18	22	1	4.3	Important
b. Interim Report	0	0	3	16	26	1	4.4	Important
c. Annual Report	0	0	3	14	28	1	4.5	Very Important

According to the table above, the timeliness of *quarterly report*, *interim report* (also known as *6 monthly report* or *semiannual report*), and *annual report* received an average rating of important or very important respectively. A possible reason for these ratings is, as also mentioned by the panel, that Chinese information users tend to see financial data, especially financial reports, as an important source of information. Therefore, it was not surprising that these items received such ratings from the stakeholders.

2. Information Timeliness – Other Information

The response rates for Other Additional User Support Features are presented in the following table.

Table 6.12 Responses of Participants for Information Timeliness – Other Documents

Timeliness of the Information on Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
2. Information Timeliness – Other Information								
a. Press Releases	0	0	1	23	22	0	4.5	Very Important
b. Share Prices Update During Trading Hours	0	3	5	16	22	0	4.2	Important
c. Forward Looking Statements	0	2	5	22	17	0	4.2	Important

The above table shows that the timeliness of *press releases* was considered important or very important by 45 respondents. These participants believed that up-to-date corporate news is essential information for decision makers since it may contain information such as a firm's recent investment activities. Furthermore, many respondents perceived *forward looking statements* as important because Chinese information users tend to place great value on disclosed financial information such as the estimation of an organisation's future performance. For that reason, it was not surprising that *forward looking statements* received an average rating of important.

The results for the weightings for the Timeliness of the Information on Corporate Websites category are presented below.

Table 6.13 Weightings for Timeliness of the Information on Corporate Websites

Timeliness of the Information on Corporate Website						
Weightings	0 - 10	11- 20	21 - 30	31 - 40	41 <	Average
Frequency	7	9	22	3	5	27.7

The above table shows that most of the participants assigned a weighting of 21 – 30 or above, and the highest weighting for this category is 70. Despite there being only six items in this category, it has a higher average weighting of 27.7 than the User Support Features and Corporate Website Technologies category, even though both of these groups consist of more than six items. Many stakeholders valued this category greatly because, as they stated, many Chinese corporations are known as late disclosers. They tend to disclose information later than they should, and they are unlikely to release information in a timely fashion. The participants further stated that this reporting behaviour must be changed in order to remove this late discloser reputation, as well as to better attract domestic and foreign investors. Therefore, the respondents rated this category as one of the essential groups in the index.

Corporate Website Technologies

This category is separated into three subcategories: Downloadable Options on Chinese Corporate Website – Software, Downloadable Options on Chinese Corporate Website – Documents, and Other Available Technologies on Companies’ Website. The response rates for items in these subgroups and the weighting of this category are provided in the next section.

1. Downloadable Options on Chinese Corporate Websites – Software

The response rates for Downloadable Options on Chinese Corporate Websites – Software items are presented below.

Table 6.14 Responses of Participants for Downloadable Options on Chinese Corporate Websites – Software

Corporate Website Technologies Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
1. Downloadable Options on Chinese Corporate Websites - Software								
a. Plug-in Software	1	6	15	16	7	1	3.4	Neutral
b. Video/Audio Playing Software	0	15	21	10	0	0	2.9	Neutral
c. Antivirus Checking System	3	15	25	3	0	0	2.6	Neutral

The questionnaire results indicated that all three of the downloadable software items have an average importance rating of neutral. These results were not surprising as they supported the view of the panel that Chinese information users tend to have this software (playing software and antivirus software) installed on their computer already. As a result, Chinese stakeholders would be less likely to place emphasis on the availability of downloadable software on corporate websites. However, the result shows that 23 of the participants still rated the item *plug-in software* important or very important. They believe it is important for companies to have this item available on their website because there will always be web users that need to download the software.

2. Downloadable Options on Chinese Corporate Websites – Documents

The questionnaire results for Downloadable Options on Chinese Corporate Websites – Documents are provided below.

Table 6.15 Responses of Participants for Downloadable Options on Chinese Corporate Websites – Documents

Corporate Website Technologies Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
2. Downloadable Options on Chinese Corporate Websites – Documents								
a. Excel/Word Documents	1	0	10	15	19	1	4.0	Important
b. Power Point Documents	2	3	12	21	7	1	3.5	Important
c. Html Documents	0	2	17	19	3	5	3.2	Neutral
d. PDF Files	0	0	12	22	10	2	3.8	Important
e. Multimedia Technologies – Audio	0	0	20	16	9	1	3.7	Important
f. Multimedia Technologies – Video	0	1	21	13	9	2	3.5	Important

From the table above, it can be seen that the items *Excel/Word*, *PowerPoint*, and *pdf files* all received an average rating of important because, as a few of the participants explained, different document formats include particular functions (e.g., Excel files allow data analysis, and pdf files are able to digitised original paper-based documents) that could meet the needs of different information users. Therefore, companies should disclose documents in a variety of formats on their corporate websites. For multimedia files, many respondents expressed their interest regarding video and audio files on the Internet, and rated these two as important or very important features. However, the participants raised doubts in regard to the availability of the multimedia technologies because Chinese companies often excluded multimedia files from their websites. In addition, *html documents* is the only item to receive an average rating of neutral. This rating may

be because other document formats such as pdf are more common on corporate websites; therefore, the majority of the respondents felt html documents are not as important. Also, as a few of the participants mentioned, they rated some items important not because they thought the items were significant, but because companies have the responsibility to disclose as much information as possible.

3. Other Available Technologies on Companies' Website

The responses for the Other Available Technologies on Companies' Website items are presented in the following table.

Table 6.16 Responses of Participants for Other Available Technologies on Companies' Website

Corporate Website Technologies Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
3. Other Available Technologies on Companies' Website								
a. Hyperlink Inside the Digitised Annual Report	1	3	5	17	16	4	3.7	Important
b. Speaking Guiding System	2	5	19	10	6	4	3.0	Neutral
c. XBRL	0	1	4	19	18	4	3.9	Important

Many participants considered the *hyperlink inside the digitised annual report* item important or very important because they believed that this feature could add convenience in finding information in an annual report. The majority of the stakeholders rated the item *speaking guiding system* as neutral or unimportant. Although this item was suggested by the panel, many participants felt no need to have a speaking system, as they believed Help and FAQs information would be sufficient to aid the users. As for *XBRL*, several respondents rated the item as important because they were aware that this type of file is fully available on the website of the Shanghai Stock Exchange, and *XBRL* is quite popular overseas as well. Therefore, the participants were quite interested and hoped that *XBRL* could be provided on Chinese corporate websites.

The result for the weightings of the Corporate Websites Technologies category is presented below.

Table 6.17 Weightings for Corporate Website Technologies

Corporate Website Technologies						
Weightings	0 - 10	11- 20	21 - 30	31 - 40	41 <	Average
Frequency	19	14	9	0	1	17.0

Despite most of the items in this category being rated important by the participants, as shown in the table above, the majority of the respondents (19 and 14 respectively) still assigned a weighting of either 0-10 or 11-20 to this category. Consequently, this scoring led to a low average weighting of 17, which was much lower than the information timeliness category. However, this result was expected. The participants had mentioned earlier that Chinese information users often paid more attention to information content and timeliness rather than to the web technologies used on corporate websites. Also, the respondents expressed their doubts on the willingness of Chinese listed companies to provide a wide variety of online technologies on their website.

Content of Corporate Websites

Content of Corporate Websites consists of five subcategories: Financial Items on Corporate Websites, Nonfinancial Items on Corporate Websites, Online Annual Report Items – Financial Information Items, Online Annual Report Items – Nonfinancial Information Items, and Online Corporate Responsibility Information items. The results are presented in the following section.

1. Financial Information Items on Corporate Websites

The response rates for Financial Information Items on Corporate Websites are presented below.

Table 6.18 Responses of Participants for Financial Information Items on Corporate Websites

Content of Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
1. Financial Information Items on Corporate Websites								
a. Historical Share Prices Disclosed	1	1	6	25	12	1	3.9	Important
b. Historical Dividend Figures Disclosed	0	1	6	22	16	1	4.1	Important
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	0	2	13	20	10	1	3.8	Important
d. Access to Financial Information on a Company's Homepage	2	1	9	19	12	3	3.6	Important

The average importance rating for all of the items in this subcategory was important. This result supported the view of the respondents and the panel given earlier that Chinese information users tend to put considerable emphasis on the

information provided, especially financial data, on corporate websites. Thus, it was expected that the majority of the participants considered the items in this subcategory important or very important.

2. Nonfinancial Information Items on Corporate Websites

The results for Nonfinancial Information Items on Corporate Websites are provided below.

Table 6.19 Responses of Participants for Nonfinancial Information Items on Corporate Websites

Content of Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
2. Nonfinancial Information Items on Corporate Websites								
a. Staff Training Programmes	2	6	16	13	8	1	3.3	Neutral
b. Company Background	0	0	6	24	16	0	4.2	Important
c. Managers/Directors' Background	0	2	10	20	14	0	4.0	Important
d. Industry Information	0	0	5	19	21	1	4.3	Important
e. Research and Development Information	0	0	3	27	16	0	4.3	Important
f. Government Policies towards a Company's Industry	0	1	1	20	24	0	4.5	Very Important
g. Access to Press Releases on a Company's Homepage	0	0	8	21	14	3	3.9	Important
h. Access to Investor Relations Information on a Company's Homepage	1	0	5	20	18	2	4.0	Important
i. Shareholding Structure and Percentages of top 10 Shareholders	0	10	20	15	0	1	3.0	Neutral

As the table here indicates, an average importance rating of neutral was identified for *staff training programmes* and *shareholding structure and percentages of top 10 shareholders*. The *staff training programmes* item was recommended by the panel as they were very interested in the training implemented by listed companies. Many respondents, on the other hand, were not particularly interested in this item, as many of them (24 stakeholders) considered this information as neutral, unimportant or very unimportant. For the item *Government policies towards a company's industry*, more than half of the stakeholders (44 of them) believed it was important or very important. This rating is mainly because Chinese businesses are sensitive to the policies set by the Central Government and a slight policy change might affect the whole direction of a business. As to the rest of the items, such as *company background*, *industry information* and *access to press releases on a company's homepage*, an average rating of important was identified. This result supported the view mentioned earlier by the panel that Chinese information audiences (especially entrepreneurs, investors, and managers) tend to place great value on the company-related information released by listed corporations.

3. Online Annual Report Items – Financial Information Items

The response rates for Online Annual Report Items – Financial Information Items are presented below.

Table 6.20 Responses of Participants for Online Annual Report Items – Financial Information Items

Content of Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
3. Online Annual Report Items – Financial Information Items								
a. Annual Report for the Current Year (Summary)	0	2	6	18	18	2	4.0	Important
b. Annual Report for the Past 6 Years (Summary)	0	0	13	13	17	3	3.8	Important
c. Annual Report for the Current Year (Full)	0	0	0	5	41	0	4.9	Important
d. Annual Report for the Past 6 Years (Full)	0	2	4	17	21	2	4.1	Important
e. Audit Report for the Current Year	0	0	2	20	23	1	4.4	Important
f. Audit Report for the Past 6 Years	0	0	5	19	20	2	4.2	Important
g. Statement of Financial Performance for the Current Year	1	0	1	17	25	2	4.3	Important
h. Statement of Financial Performance for the Past 6 Years	0	1	3	19	22	1	4.3	Important
i. Statement of Financial Position for the Current Year	0	0	2	17	26	1	4.4	Important
j. Statement of Financial Position for the Past 6 Years	0	0	2	18	25	1	4.4	Important
k. Statement of Cash Flow for the Current Year	1	0	3	16	24	2	4.2	Important
l. Statement of Cash Flow for the Past 6 Years	1	1	5	17	21	1	4.2	Important
m. Notes of Financial Statements for the Current Year	0	0	4	19	20	3	4.1	Important
n. Management Report and Analysis	0	0	7	22	14	3	3.9	Important
o. Segmental Reporting by the Line of Business	0	0	4	25	15	2	4.1	Important
p. Segmental Reporting by Region	0	1	6	25	12	2	3.9	Important
q. Summary of Key Ratios over a Period of at least 3 Years	0	1	2	22	18	3	4.0	Important
r. Summary of Financial Data over a Period of at least 3 Years	0	0	3	23	17	3	4.0	Important

As can be seen in Table 6.20, all items in this subcategory received an average importance rating of important because, as stated earlier by the panel, Chinese information users tend to put strong emphasis on the disclosed financial data. Interestingly, the data showed that one item, *annual report for the past 6 years (Summary)*, has the highest number of neutral ratings (13). Several of the 13 participants explained that a summary annual report is only useful when the full version of an annual report is not provided, and that often a full version of an annual report will be available on a company's website. Thus, a neutral rating is most appropriate for this item.

4. Online Annual Report Items – Nonfinancial Information Items

The questionnaire results for Online Annual Report Items – Nonfinancial Information Items are presented below.

Table 6.21 Responses of Participants for Online Annual Report Items – Nonfinancial Information Items

Content of Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
4. Online Annual Report Items – Nonfinancial Information Items								
a. Report of the Board of Directors	0	0	3	26	15	2	4.1	Important
b. Report of the Governance Board	0	0	2	24	16	4	4.0	Important
c. Resolutions of Shareholders Meetings in Current Year	0	0	6	24	14	2	4.0	Important
d. Top 10 Stockholders	0	3	5	18	18	2	4.0	Important
e. Accounting Policies	0	0	9	25	9	3	3.7	Important
f. Material Events	0	0	3	26	14	3	4.0	Important
g. Changes in Stockholders' Equity	0	0	5	23	16	2	4.1	Important
h. Material Events in Past Years	0	0	6	26	13	1	4.1	Important
i. Material Changes to Accounting Policies	1	0	3	23	17	2	4.1	Important
j. Company's Charter	0	0	7	24	13	2	4.0	Important

The above table reveals that all of the online annual report nonfinancial information items received an average rating of important. This result was expected, because, as a few of the panel members had mentioned earlier, Chinese information users considered a corporation's annual report one of the essential reporting instruments; thus, any information items from an annual report would be deemed important. The questionnaire outcome shows clearly that the respondents share the same view as these panel members.

5. Online Corporate Social Responsibility Information Items

The results for Online Corporate Social Responsibility Information items are shown in the following table.

Table 6.22 Responses of Participants for Online Corporate Social Responsibility Items

Content of Corporate Websites Items	Frequency						Average	Importance
	1	2	3	4	5	N/A		
5. Online Corporate Social Responsibility Information Items								
a. Environmental Reporting	1	1	12	25	5	2	3.6	Important
b. Sports Sponsorship	1	4	27	9	5	0	3.3	Neutral
c. Technology Trade Show Sponsorship	1	1	21	13	5	5	3.1	Neutral
d. Donations to Underdeveloped and Deprived Communities	1	1	16	17	7	4	3.3	Neutral
e. Donations to Areas Hit by Natural Disasters	1	1	14	18	9	3	3.5	Important
f. Donations to Schools in Deprived Areas	0	1	14	18	10	3	3.6	Important
g. Donations to Medical Foundations	0	2	15	17	11	1	3.7	Important
h. Health and Safety Report	0	4	7	15	20	0	4.1	Important

As this table indicates, many participants (30 stakeholders) considered the item *Environmental reporting* as important or very important. Various respondents believed that the rapid development in China has caused the ecological environment to worsen. Since Chinese publicly traded organisations have utilised a large portion of the society's resources, the participants and the panel members

believe these firms have a responsibility to protect the environment, and also to report on the actions they have taken and their results. For that reason, it was not surprising that the average rating for this item is important. For *sports sponsorship*, *technology trade show sponsorship*, and *donations to underdeveloped and deprived communities*, the average importance ratings are all neutral. Several respondents stated that it is not common for Chinese companies to sponsor either sports or technology trade shows; therefore, these participants were not interested in such information and rated these items neutral or unimportant.

However, as to the items *donations to areas hit by natural disasters* and *donations to schools in deprived areas*, many respondents rated them important or very important, because, as the panel stated, it is part of the Chinese culture to help others who are weak or deprived. Thus, companies should disclose actions taken to help others in society. As to *donations to medical foundations*, although 28 respondents rated the item important or very important, several participants still expressed their doubts on whether Chinese corporations would report this information, because it is not common for Chinese firms to donate money to medical foundations. Lastly, a total of 35 respondents considered the item *health and safety report* was important or very important, because, as a few respondents also mentioned, since Chinese corporations are required to create an annual health and safety report, corporations should also make the report available on their website.

The finding for the weighting for the Content of Corporate Websites category is presented below.

Table 6.23 Weightings for Content of Corporate Websites

Content of Corporate Websites						
Weightings	0 - 10	11- 20	21 - 30	31 - 40	41 <	Average
Frequency	3	8	12	5	18	37.8

As stated earlier by the panel of experts, Chinese information users tend to focus predominantly on the information content of a corporate website. The results supported this view in that more than half of the participants gave this category a weighting of 20 or above, and three participants allocated the highest weighting of 80 to it. Overall, the average weighting of this category is 37.8.

Once the questionnaire results were analysed, the first draft of the CIR qualitative disclosure index was developed. It is presented in Appendix C.

6.3.4 Summary

This section presents the weighting process of the CIR qualitative disclosure index. A total of 46 stakeholders were selected through the use of extensive guanxi networking. The questionnaire was then constructed and tested thoroughly by gathering the opinions of the participants on the importance of the disclosure items and the weightings of each category. The questionnaire results indicated that, apart from several items that were rated neutral, (e.g., *Plug-in software*, *Antivirus checking system*, and *Staff training programmes*), the rest of the items were considered important or very important by the participants. As to the weightings of each category, the respondents placed the highest value on information content and timeliness, as these two categories received higher average weightings than the other two groups (user support features and corporate website technologies). Once the weighting of each item and category was identified, the next step was to develop the qualitative criteria for each item, and the qualitative scale for assigning scores. In the next section, the development of the qualitative criteria and qualitative scale is presented.

6.4 DEVELOPMENT OF THE QUALITATIVE CRITERIA

Once the weightings for CIR qualitative disclosure index items had been determined, the third step was to establish qualitative criteria for assessing the quality of Chinese CIR practice. Quality is one of the essential attributes for accounting information, but it is very difficult to assess (Imhoff, 1992; Botosan, 1997). However, without this assessment it would be difficult to distinguish between poor and excellent disclosures, and can cause a unequal problem among assessed companies (Hooks et al., 2001; Coy & Dixon, 2004). Therefore, the current study contends that the importance of examining the quality of CIR practice outweighed the difficulty of implementing the examination. In order to develop the qualitative criteria, three procedures were undertaken and they are: reviewing various sources (e.g., prior literature, numerous corporate websites, and other related information); interview process; and, scoring process design. In this section, the details of these procedures are presented.

6.4.1 Review of Prior Literature, Corporate Websites, and Other Related Sources

This procedure was followed first to identify the measurable components of quality for CIR practice, and then by reviewing of various corporate websites and other related sources to obtain the necessary information for criteria development. Based on prior studies, three measurable components were identified: comprehensiveness (Barrett, 1976; Wallace, Naser & Mora, 1994); timeliness (Courtis, 1976; Whittred, 1980); and, accessibility and usability (Hanafi et al., 2009; Aly et al. 2010).

Comprehensiveness

Comprehensiveness measures the density (fullness) of the information. Its premise is that if one company provides greater detail information than another, that comprehensiveness should be rewarded with a higher score (Wallace et al., 1994; Wallace & Naser, 1995; Hooks, 2000; Cheng & Jaggi, 2000). Wallace and Naser (1995) further stated that comprehensive information must offer the reader a sense that no essential aspect is left out; otherwise, the information would be considered as brief. Studies such as Hooks (2000) and Chen and Jaggi (2000) demonstrated that comprehensiveness is a measurable element of quality, and Yi (2012) further indicated that this component is also assessable in the Chinese context. Thus, comprehensiveness is considered to be one of the measurable components of CIR quality for this current research.

Information Timeliness

Information timeliness focuses on the speed of making the information available to the users (Ahmad & Kamarudin, 2003; Soltani, 2002). This component has become an important qualitative element of Internet reporting, particularly for information items such as financial statements (Ahmad & Kamarudin, 2003), periodic reports (annually, semi-annually, and quarterly), press releases, and stock quotes (Davey & Homkajohn 2004), and corporate governance information (McGee & Yuan, 2009). Numerous studies (e.g., Pircheggar & Wagenhofer, 1999; Davey & Homkajohn 2004; Abdelsalam & El-Masry, 2008) asserted that rapid information providers should be acknowledged and differentiated from other late disclosers. They also demonstrated that information timeliness is measurable and

can be adopted as a means to assess the overall quality of CIR. Therefore, the current research contends information timeliness should also be incorporated in the qualitative criteria of the CIR index items.

Accessibility and Usability

Accessibility and usability (or information understandability) can include elements such as user friendliness, ease of access, and information clarity on corporate websites (Watkins & Smith, 2007; Hanafi et al., 2009). Watkins and Smith (2007) believed that users would not revisit a website if it is perceived to be unusable and difficult to navigate, as these problems could create inconvenience for web audiences. A good website should incorporate high quality navigation facilities (e.g., sitemap and link to homepage), easily accessible options (e.g., access to corporate financial information on company's homepage), and readable information (e.g., high information clarity). Watkins and Smith (2008) thus suggested that this component is one of the essential factors contributing to website quality. Studies such as Xiao et al. (2004), Davey and Homkajohn (2004), Aly et al. (2010), and Boubaker et al. (2012) demonstrated in their studies that a company with greater accessibility on its website (e.g., the user can find investor relations information in one mouse click) should be acknowledged. Additionally, Xiao et al. (2004) also showed that accessibility and usability could be used to assess the quality of Chinese corporate websites. Thus, accessibility and usability together form another measurable component for this current study.

After the three measurable components were identified, the next step was to visit the website of the 20 largest corporations in the world¹⁴. The purpose for this step was to observe the CIR practice adopted by these top companies, and obtain the necessary information to assist in creating the criteria. The complete list of the 20 largest companies can be found in Appendix 1. Apart from visiting the top 20 firms' corporate websites, other related sources were also reviewed to assist in criteria development. These sources are as follows:

- Recommendations and suggestions from the panel of experts
- The Securities Law of the People's Republic of China

¹⁴The 20 corporations were ranked by Forbes magazine in the year of 2011 based on their market value, sales, profit, and assets.

- The Companies Act of the People’s Republic of China
- The Accounting Regulations of the People’s Republic of China.

An initial draft of the CIR index items’ criteria was constructed, based on the information collected through reviewing prior literature, corporate websites, other related sources, and in combination with the author’s knowledge of CIR. However, in order to further understand the expectations of Chinese stakeholders regarding the criteria of the items, 40 interviews were conducted. The next section presents the interview process and several suggestions/comments given by the interviewees.

6.4.2 Interview Process

It is believed by various authors such as Miles and Huberman (1994) and Hooks et al. (2001) that qualitative research is useful when there is a need to validate and explain quantitative data obtained from the same group. Thus, an interview process was instigated to add an additional “meaningful layer” to the research (Lee, 1991; Hooks et al., 2001). The interview process began with the selection of the interviewees, and proceeded to attain suggestions/comments from the participants.

The Selection of the Interviewees

Before beginning completion of the questionnaire in the weighting process stage, the participants were informed about the post questionnaire interview. Six of the participants were unable to stay for the interview due to their prior commitments, but 40 respondents agreed to participate in this process. Since the 40 interviewees had already spent an hour completing the survey, many of them requested that the interview process would take less than an hour or less than 30 minutes. Thus, in order to seize the opportunity to interview the participants, the author agreed to keep the interviews to between 20 and 45 minutes.

Suggestions/Comments from the Interviewees

The interviews offered an opportunity for the questionnaire participants to make suggestions or comments regarding the reasons behind their selection of the importance weightings, as well as their expectations in terms of disclosure items. Several interviewees gave a number of interesting opinions in regard to the criteria of the index items. It was also noted that the criteria suggested by the

interviewees also emphasised the three measurable components discussed earlier in this chapter (comprehensiveness, timeliness, and accessibility and usability). Some examples of the suggestions/comments made by the interviewees are presented below.

Interviewee three, a financial director, suggested that the *Help/FAQs* item should be expressed as clearly and concisely as possible. The participant also indicated that the information must be easy to find, otherwise it could create confusion and inconvenience for web users. Another interviewee (interviewee 14) recommended that *Chinese companies' investments* and *Explanation of technical terms* should include detailed information, as well as links to external websites that could offer more information to web audiences. On top of that, interviewees 15 and 16 also suggested these two items need to be included on a company's Chinese and English websites, and the information provided should be clear and concise. Another comment, made by interviewee 30, was that for the item *Plug-in software*, the descriptions and instructions about the software must be readable; the download links provided must be free from error, and the software must be available on both Chinese and English websites. As to the item *Environmental report*, interviewee 22 suggested that a company's environmental policies, visions and goals, strategies, and past achievements need to be disclosed. In addition, interviewee ten suggested that ease of accessibility of the report (Report can be found within three mouse clicks.) should also be part of this item's criteria.

The suggestions/comments from the interviewees offered some valuable insights for this current study. After the analysis of the interview results, the second draft of the criteria was completed. This step was then followed by the third procedure, the design of the scoring process.

6.4.3 Scoring Process Design

In order to assess the sample companies, a scoring process had to be devised for assigning a quality score to each item according to the qualitative criteria established previously. The scoring process adopted by most previous CIR researchers (e.g. Marston & Polei, 2004; Aly et al., 2010, Uyar, 2012; Boubaker et al., 2012) was mainly binary (or dichotomous). In their studies a scoring scale of 0 and 1 was used (0 for nondisclosure and 1 for disclosure). As demonstrated by

many articles such as Xiao et al. (2004), Lodhia et al. (2004), Khadaroo (2005), Celik et al. (2006), and Damaso and Lourenco (2011), this binary form of scoring was able to measure only the availability of the CIR items. However, the purpose of the disclosure index for this current research is not simply to assess the availability of CIR items, but also to assess the extent and quality of CIR practice. Thus, studies from other accounting subjects were also reviewed to seek additional information for designing a scoring process that would be suitable for this study.

It was found that numerous other accounting studies employed several different scoring processes with diverse scales to assess the quality of information in areas such as intellectual capital reporting, financial statements, and corporate social responsibility reports. Examples of the scoring scales include: Coy et al. (1993) using a 3-point scale (3 for excellent, 2 for satisfactory, and 1 for poor); Hooks et al. (2002) using a five-point scale with an N/A option (1-5 depending on the degree of detail given for each item, with a 0 awarded for items that are not applicable); Guthrie et al. (1999) using a four-point scale (0-3, 3 for monetary disclosure; 2 for numerical disclosure, and 1 for narrative disclosure); Schneider and Samkin (2008) and Yi (2012) using a six-point scale (0-5 depending on the information disclosed e.g., quantitative/monetary with narrations, quantitative/monetary, narrative, obscure, immaterial, and no disclosure).

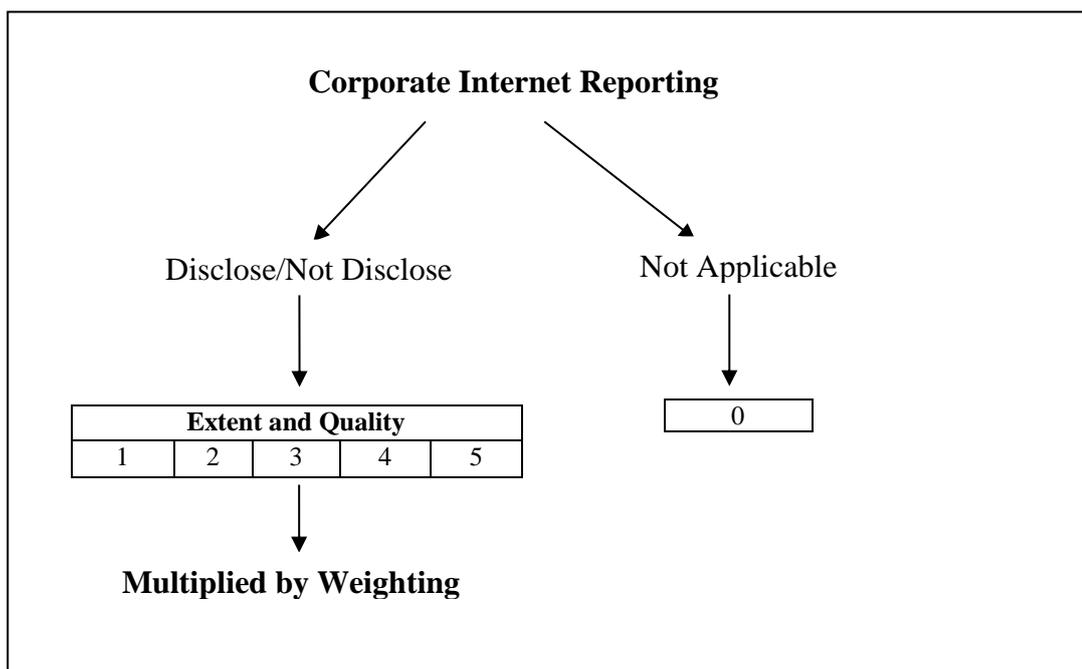
For the purpose of this research, the five-point scale (1-5) with an N/A (Not Applicable) option was considered to be the most relevant for two reasons. First, the hyperlinks provided on a corporate website may often not work properly, and documents or information may not be accessible for examination. Therefore, a N/A option is needed in order to account for this problem. Second, a five-point scale of 1-5 releases the score of 0 for the N/A option. It allows a 0 score instead of no score to be allocated to any not applicable items encountered. The table below shows the description of the five-point scale for this current study.

Table 6.24 Description of the Five Points Scale

Scores	Description
5	Maximum Disclosure
4	High Disclosure
3	Medium Disclosure
2	Low Disclosure
1	Minimum or No Disclosure

If a company has met everything or more on the criteria, a maximum score of 5 will be awarded. Otherwise the scores will be allocated on a pro rata basis. For instance, if a company met most of the criteria of an item, a score of 4 is awarded; less than that gains a score of 3, and so on. If a company fails to disclose an item or it only meets the minimum criteria, a score of 1 is assigned. This score was then multiplied by the weightings of the particular item to obtain a weighted score. Any not applicable items (e.g., an information item is disclosed on company's website but it is not accessible, or digitised documents such as annual reports cannot be opened) will receive a score of 0, and the items were not included when calculating the total possible score. This scoring process is summarised on the following figure:

Figure 6.2 Scoring Process



After the scoring process had been designed, it was passed to the author's PhD supervisors for their professional comments. Several minor alterations to the items' criteria were suggested, and changes were made accordingly. At this stage, the second draft of the CIR qualitative disclosure index was complete, and it was ready for pilot tests. The next section details the process and results of the pilot tests.

6.4.4 Summary

This section presents the procedures undertaken to develop the qualitative criteria for the CIR index items. The development process started with reviewing the prior literature to identify three measurable components (comprehensiveness, timeliness, and accessibility and usability). The next step involved visiting the 20 largest Chinese companies' corporate websites, in addition to reviewing other related sources, in order to draft an initial list of criteria for each index item. In order to obtain the opinions of Chinese stakeholders regarding item criteria, 40 interviews were conducted. Once the interview results had been analysed, the second draft of the criteria was constructed. The final stage of the criteria development was to design the scoring process. It was decided that a five-point scoring scale plus a N/A option was the most suitable choice for this current study. With the qualitative criteria and scoring process complete, the second draft of the CIR qualitative disclosure index was created and was then ready for the pilot tests. The next section details the process and results of the pilot tests.

6.5 PILOT TESTS

This section describes the fourth step of the development of the disclosure index. This step – pilot testing – consists of four parts. The first part constitutes the first round of the pilot test; the second part covers analysis and discussions of discrepancies from the test outcomes. The third involves the amendments of the disclosure index in accordance to the outcomes of the pilot test; the last part is to test the index once more to evaluate whether or not the amended index can reduce the score variations.

6.5.1 The Pilot Test

In order to assess the reliability and validity of the disclosure index, it was tested on six companies listed in A shares, A+ B-shares, or A+ H-shares on the Shanghai, Shenzhen, and Hong Kong Stock Exchanges.

This pilot test involved two participants, the author and a second assessor. The second assessor is a PhD student in the Waikato Management School from China who is also fluent in reading, writing, and speaking Mandarin. The index items and the criteria were explained in detail to the second assessor before commencing the pilot test; any queries from the second assessor were discussed to ensure he fully understood the index and the criteria. The author and the second assessor evaluated the six companies' websites, and the appropriateness and robustness of the index was then discussed.

6.5.2 Pilot Test Results

First Round Results

The pilot test results indicated that the scores given on several index items varied for assessor 1 and assessor 2. (The details of the first round pilot test can be found in Appendix D.) Discussions were held between the two assessors and it was found that the structure of several Chinese corporate websites was the main reason for these discrepancies; several items that were not found by the first assessor were found by the second assessor, or vice versa. To resolve this issue, both assessors exchanged their experience on the difficulties encountered during the pilot test, and through this exchange the author gained more insight into the navigation of the Chinese websites. This knowledge then helped the author to reduce the possibility of overlooking index items when assessing corporate websites. Furthermore, both assessors also reviewed and discussed in detail the reasons behind the scores each had given; both assessors were then able to come to an agreement on a final score for each item. Both assessors also agreed that several amendments to the index were also needed. The next section discusses the changes made to the qualitative disclosure index.

Amendments of the disclosure index

The purpose of these amendments is to fine-tune the disclosure index to make it more efficient and effective. These changes are listed below:

- The date range for companies to receive a maximum score on the *Annual Report* item has been changed from 60 days to 100 days, based on the reporting requirements date in China-GAAPs.
- If the disclosure date is not displayed on timeliness items, these items would be considered as not applicable; thus a score of 0 is given. Without the date, the author cannot assess the timeliness of the information disclosed.
- Item *Company Charter* content category was originally classified in the subcategory “Online Annual Report Nonfinancial Item”. It has now been reclassified as “Nonfinancial Information Items on Corporate Website”.
- Both assessors decided that the two items, *Antivirus Checking System* and *Speaking Guiding System*, should be taken out of the index for two reasons. First, many of the interview participants believed that web users would already have a virus checking system installed; therefore, it was not necessary to add this feature on a corporate website. Also, various interviewees stated that the item *Speaking Guiding System* was unnecessary because a sitemap was already sufficient to serve the guiding purpose. Second, as the pilot test results showed, none of the tested corporate websites has added these features, and this evidence further supported the assertions of the questionnaire participants that both items were redundant. In light of this finding, both assessors believe that it may not be appropriate to expect companies’ websites to incorporate such features; thus it would be unreasonable to penalise them for not including such features on their website.
- It was decided that some items should be merged into one item. Although many studies such as Marston and Polei (2004), Boubakeret al. (2012), and Uyar (2012) have treated some of these items separately, these studies adopted a dichotomous index. In other words, no criteria were assigned to each of the items, so these items needed to be assessed individually. However, as this study is using a qualitative index, the author can use

qualitative criteria to assess the items even if they merge together. These items are listed below:

- Financial performance, position, and cash flow statements items were merged into one item: *Financial statements*.
- Word documents and Excel documents were merged into one item – *Microsoft Office documents*.
- Multimedia – Audio and Multimedia – Video was also merged into one item.
- Annual report for the current year (full) and annual report for the current year (summary) were merged into one item: *Annual report for the current year*.
- Annual report for the past six years (full) and annual report for the past six years (summary) were merged into one item: *Annual reports for the past six years*.
- *Audit report for the current year and audit reports for the past six years* were merged into one item: *Auditor reports*.
- *Material events and material events in past years* were merged into one item: *Material events*.
- *Accounting policies and material changes to accounting policies* were merged into one item: *Accounting policies*.

The weightings for the newly merged items were recalculated. For the *Financial statements* item, the weighting was recalculated by using the sum of financial statements' weightings (performance, position, and cash flow) divided by three. For the rest of the items, a new weighting was determined by using the sum of the two original items divided by two.

- The format of the five-point scale was modified. The revised format is shown in Table 6.25. It was decided to tailor the qualitative criteria of each item to become five level criteria so that each criterion can show clearly the requirements that need to be met in order to earn the scores. This modification may minimise any difficulties and confusions when applying the index to the CIR assessment.

Table 6.25 New Format of the Five Points Scale

<i>Scores</i>	<i>Description</i>
5	Criteria (Maximum Disclosure) for achieving a score of 5
4	Criteria (High Disclosure) for achieving a score of 4
3	Criteria (Medium Disclosure) for achieving a score of 3
2	Criteria (Low Disclosure) for achieving a score of 2
1	Criteria (Minimum Disclosure or No Disclosure) for achieving a score of 1

There were no major changes required to the disclosure index apart from these minor amendments, and in total 71 items were finalised. Variations were also discussed to reduce any issues that might reoccur in actual data collection. In light of this pilot testing, the author and the second assessor both believed that this disclosure index was now ready for the second round of pilot tests.

Second Round Results

The results of the second pilot tests were reviewed and discussed by the two assessors. (Details of the second round pilot test results can be found in Appendix E.) Several coding and arithmetic mistakes were found and the items with these errors were reassessed. Based on the results, the score variations in the second pilot test were much lower than in the first pilot test. This outcome showed that the amendments made to the qualitative index improved the overall consistency of the results produced, and also indicated that this instrument is not only valid but also reliable in practice. As a result of the outcomes of the second pilot test, both assessors believed that the index had been stringently validated and was now ready for use. The final draft of the CIR qualitative disclosure index and items' criteria can be found in Appendices F and G.

6.6 CHAPTER SUMMARY

This chapter presents the development of a CIR qualitative disclosure index. First, a total of 71 initial CIR index items were identified from prior literature, and then a two-round consultative process with a panel of experts comprising 25 members was conducted to validate the items. Second, a questionnaire survey with 46 Chinese stakeholders was carried out to assign weightings to each index item and category. The responses from the participants for each item were summed and the

calculated number was divided by 46 to attain an average that represents the weighting of the item. Third, the qualitative criteria for assessing the quality of each CIR item were also established through reviewing various sources (prior studies, websites of the largest 20 companies in the world, and other related information), as well as 40 interviews. In addition, it was decided to employ a five-point scale with an N/A option for quality score allocation purposes. Finally, a draft CIR qualitative disclosure index went through two rounds of pilot tests. Several amendments were made after the first round of the pilot test, and 71 items were finalised. As to the results of the second pilot test, the overall consistency was improved, which signified that this index was not only valid but also reliable in practice.

Once the index had been constructed, it was used to assess the CIR quality of three groups of Chinese listed companies (A shares, A+B shares, and A+H shares firms). The results and discussion of this assessment are presented in the next chapter.

CHAPTER SEVEN

RESULTS, ANALYSIS, AND DISCUSSION

7.1 INTRODUCTION

The previous chapter presented the development and testing of the Corporate Internet Reporting (CIR) index to measure the extent and quality of online disclosure in the Chinese context. This chapter reports on the results gathered from applying the index to assess and score the CIR by Chinese companies. The structure of the chapter is organised as follows.

- 7.2 Item by item analysis and information asymmetry
- 7.3 Category and final CIR qualitative scores by listing status and industries
- 7.4 Determinants of Chinese CIR practice
- 7.5 Summary

7.2 ITEM BY ITEM ANALYSIS AND INFORMATION ASYMMETRY

This section reports on the extent and quality regarding the disclosure of CIR items by Chinese companies in the categories of User Support Features on Corporate Websites, Timeliness of Information on Corporate Websites, Corporate Website Technologies, and Content of Corporate Websites. Simultaneously, a comparison between the stakeholders' expectations and the actual CIR reporting of A¹⁵, A+B¹⁶, and A+H¹⁷ shares groups is also conducted to obtain an understanding of the current disclosure level on CIR items and to identify the level of information asymmetry in the Chinese context. In addition, based on results of item by item analysis, the current level of Chinese CIR practices is reviewed and the application of the CIR theoretical framework is also discussed.

¹⁵ A shares companies are single-listed firms. They are listed on the Shanghai or Shenzhen Stock Exchange.

¹⁶ A+B shares companies are dual-listed corporations. They are listed on A and B shares on the Shanghai or Shenzhen Stock Exchange.

¹⁷ A+H shares firms are dual-listed companies. They are listed on A and H shares on the Shanghai or Shenzhen Stock Exchange, and the Hong Kong Exchange.

7.2.1 User Support Features on Corporate Websites

This category consists of 18 items that are separated into five subgroups: version of languages available, general user support features, external links, contact information, and other additional user support features.

1. Versions of Languages Available

This subgroup consists of three items: English version of website, Chinese version of website, and other language versions of website.

Extent of Reporting

Table 7.1 Number of Disclosures for Items in Versions of Language Available

User Support Features Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
1. Version of Languages Available						
a. English Version of Website	14	19	25	58	77%	Neutral
b. Chinese Version of Website	25	25	25	75	100%	Very Important
c. Other Language Versions of Website	1	0	0	1	1%	Unimportant

As the data shown above indicates, all the A+H shares firms offered both *English* and *Chinese version(s) of website*. As for companies in A and A+B shares, their Chinese website versions were available to the public, but 11 and 6 companies respectively did not provide an English version of their website. The result of A+H shares for item *English version of website* was to be expected as dual-listed firms were more likely to encounter foreign investors with no Chinese background. Although the outcome for the A+B shares group was unexpected, two reasons might explain this result. First, as A+B shares¹⁸ firms are listed in the Mainland stock market, they are likely to come across more non-English speaking domestic investors than foreign investors, which may reduce the incentive for firms to offer an English version of their website. Second, as mentioned by several panel members and questionnaire respondents, information users tend to consider the Chinese version of corporate websites as much more important than the English version of corporate websites. Even if Chinese information users are fluent in English, there is not much incentive to visit an English version of a website as the information provided in a Chinese version of the website is usually

¹⁸ In February 2001, the Chinese government permitted individual domestic investors with legal foreign currency accounts to own and trade B shares (Liu & Liu, 2007; Mei, Scheinkman & Xiong, 2009)

more comprehensive and more extensive. Consequently, Chinese corporations are further de-motivated to provide their website in English.

In addition, for item *other language versions of website*, only one company (in A shares) offered a Spanish version of its website. As this item was rated unimportant by the Chinese stakeholders, it was not surprising that this item had a low disclosure rate.

Quality of the Disclosed Items

7.2 Frequency of Qualitative Ratings for Disclosed Items in Versions of Language Available

User Support Features Items	A Shares						A+ B shares						A+ H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
1. Version of Languages Available																		
a. English Version of Website	0	4	8	2	0	2.9	2	9	4	4	0	2.5	0	3	13	9	0	3.2
b. Chinese Version of Website	11	4	8	2	0	2.0	9	8	4	4	0	2.1	0	3	13	9	0	3.2
c. Other Language Versions of Website	0	0	0	1	0	4.0	0	0	0	0	0	0.0	0	0	0	0	0	0.0

Note:

1. *ADQR (Average Disclosure Quality Rating) = Sum of (number of disclosures for an item * quality rating) / total disclosures for an item.* Using the average rating of an English version of a website in A shares demonstrates how to calculate this result, i.e., $(0*1+4*2+8*3+2*4+0*5+0*0)/14 = 2.9$. The available maximum rating for ADQR is 5, and minimum available rating is 0.

Included in Table 7.2 is the number of companies that received a qualitative rating of 1 – 5 for their disclosed items. A rating of 0 indicates an item is not applicable, meaning an item's quality cannot be assessed for reasons such as faulty links, no report uploading date, or no digitised current year annual report.

In terms of the overall quality, none of the sampled companies was awarded a top rating. The major weakness of the websites was the difference in the layouts and the amount of information provided on companies' Chinese and English versions of their websites. For example, the website layouts (e.g., the location of sitemap, site search, and contact details) of the China Yangtze Power Company's Chinese website were completely different from its English website, and the amount of information disclosed on the websites of China Merchants Securities Company differed as it provided a full version of its current and past years' annual and interim reports on its Chinese version website, but these reports were omitted from its English website. Only one company, the Industrial and Commercial Bank

of China (ICBC) in the A+H shares category came very close to receiving a top rating of 5. Figure 7.1 provides a screenshot of the abstract of ICBC's English and Chinese versions websites. As the screenshot clearly shows, the layouts, information, and website options for its English and Chinese website versions are identical. Although some of the information was found to be missing from its English version of the website, this firm came the closest to meeting all the criteria suggested by the stakeholders. (These criteria can be found in Appendix E.) In addition, the A+H shares category was the best performer and obtained an Average Disclosure Quality Rating (ADQR) of 3.2 for both of the items *English version of website* and *Chinese version of corporate website*.

Furthermore, of all the sampled companies, only one firm, Shandong Gold Mining Company (A shares), provided a website in additional languages (in Spanish). However, because of several inconsistencies in the information content and the web layouts between this company's three versions of its website, a quality rating of 4 was awarded.

Figure 7.1 Comparison between the English and Chinese versions of Corporate Websites



2. General User Support Features

General user support features covers five items: help/FAQs, sitemap, site search features, link to homepage, and link to the top.

Extent of Reporting

Table 7.3 Number of Disclosures for Items in General User Support Features

User Support Features Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
2. General User Support Features						
a. Help/FAQs	15	3	13	31	41%	Important
b. Site Map	15	16	24	55	73%	Important
c. Site Search Features	9	11	15	35	47%	Important
d. Link to Homepage	25	24	25	74	99%	Important
e. Link to Top of the Page	6	2	4	12	16%	Important

For General User Support Features, items such as *help/FAQs*, *site search features*, and *link to the top* were found to be regularly omitted from the sampled companies' website, as only 31, 35, and 12 corporations respectively included such items in their CIR practice. In particular, amongst the three share groups, A+B shares has the lowest disclosure rate on item *help/FAQs*, and A shares is the worst performer in *site search features*. For item *link to the top*, all three shares groups performed badly as their disclosure rates were all extremely low. As these items were rated important by the stakeholders, this result suggests an information gap between the demand of the stakeholders and the actual disclosure of the firms.

On the other hand, items *sitemap* and *link to homepage* are often included on Chinese corporate websites. The A+H shares group has the highest number of companies (24) with an online sitemap, whilst 15 from A shares and 16 from A+B shares have made this item available. However, considering that stakeholders believe that a sitemap is an important item (They expected that all the firms would offer this feature.), the number of disclosures for A and A+B shares was still low. As to item *link to homepage*, only one firm from A+B shares failed to supply this feature.

Quality of the Disclosed Items

Table 7.4 Frequency of Qualitative Ratings for Disclosed Items in General User Support Features

User Support Features Items	A Shares						A+B shares						A+H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
2. General User Support Features																		
a. Help/FAQs	0	8	5	1	1	2.7	0	2	1	0	0	2.3	0	10	2	1	0	2.3
b. Site Map	0	0	0	7	8	4.5	0	1	0	7	8	4.4	0	0	0	6	16	4.8
c. Site Search Features	0	6	3	0	0	2.3	0	8	2	0	1	2.5	0	9	1	4	1	2.8
d. Link to Homepage	0	0	0	10	15	4.6	0	0	0	8	16	4.7	0	1	0	2	22	4.8
e. Link to Top of the Page	0	0	0	2	4	4.7	0	0	0	2	0	4.0	0	0	0	1	3	4.8

In terms of the quality of the disclosures, it was found that the provision of *help/FAQs* and *site search features* on the sampled firms' corporate website was poor. For instance, A, A+B, and A+H shares received an ADQR of 2.7, 2.3, and 2.3 respectively for *help/FAQs*, and 2.3, 2.5, 2.8 respectively for *site search features*. As regards *help/FAQs*, many firms, such as Shanxi Lu'an Environmental Energy Development, PetroChina, the Bank of China, Shanghai International Port, Livzon Pharmaceutical Group and Jiangsu Yanghe Brewery, offered *help/FAQs* on their Chinese website only, or the FAQs on their English site were in Chinese. Several of the companies also made the information hard to locate and it was badly worded. As for the *site search features* provided, companies such as Shandong Gold Mining Company and Kweichow Moutai Company offered a faulty site search feature that did not work properly. As to the other firms (e.g., China Communications Construction, Zijin Mining Group, and Shanghai Zhenghua Heavy Industries), the sorting and advance search abilities were often defective.

The quality of the *sitemap* item, on the other hand, varies between the share groups. A+H shares were the best performer with an ADQR of 4.8, followed by A and A+B shares with an ADQR of 4.5 and 4.4 respectively. Despite these high ratings, a few of the *sitemaps* provided were either faulty or revealed content inconsistencies in the English and Chinese sitemaps, when the two versions of the website were compared. As for the *link to homepage* feature, the quality was high, as an ADQR of 4.6, 4.7, and 4.8 was obtained by A, A+B, and A+H shares respectively. However, the feature proved to be faulty in the case of a small number of firms, or the link was only available on the companies' Chinese version of their website.

Although only 12 corporations in total included the item *link to the top of the page* on their website, the quality was quite high as the ADQRs of the three groups were all above 4. Out of these 12, seven achieved all the qualitative criteria and received a top rating of 5. For the other five firms, a minor issue was found as some features appeared on either the Chinese version or the English version of their website only, but not on both.

3. External Links

This subcategory includes two items: links of the CSRC's website and Chinese Stock Exchange websites.

Extent of Reporting

Table 7.5 Number of Disclosures for Items in External Links

User Support Features Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
3. External Links						
a. Link to Chinese Securities Regulatory Commission Website	10	4	6	20	27%	Neutral
b. Link to the Chinese Stock Exchange Website that the Company is	7	4	5	16	21%	Neutral

As shown by the table above, the disclosure rate for items *link to Chinese Securities Regulatory Commission (CSRC) website* and *links to Chinese Stock Exchange websites* was not high. The data indicated that only 20 and 16 firms in total made these two items available. This result was expected since various members from the panel and several stakeholders stated that Chinese information users tend to pay little attention to the availability of the links for the CSRC website and the Chinese stock exchanges' websites. It is possible that this common perception has negatively influenced the willingness of corporations to provide the links on their website.

Quality of the Disclosed Items

Table 7.6 Frequency of Qualitative Ratings for Disclosed Items in External Links

User Support Features Items	A Shares						A+ B shares						A+ H shares							
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR		
3. External Links																				
a. Link to Chinese Securities Regulatory Commission Website	0	1	0	9	0	3.8	0	0	0	3	1	0	4.3	0	0	0	6	0	0	4.0
b. Link to the Chinese Stock Exchange Website that the Company is	0	0	0	7	0	4.0	0	0	0	3	1	0	4.3	0	0	0	5	0	0	4.0

In terms of quality, the stakeholders suggested that the provided links must be easy to locate and functional as well as available on both the Chinese and English

versions of corporate websites. However, a total of 18 and 15 companies in the three shares groups respectively made the *links to CSRC website* and *links to Chinese Stock Exchange websites* available only on their Chinese website, and one company (in A shares) was found to have CSRC and stock exchange website links that were difficult to locate and defective. The only company that met all the criteria for the items was Shanghai Mechanical and Electrical Industry in A+B shares. Its links were easy to locate and could be found on both versions of its corporate website. As to the overall quality, A+B shares was the top performer with an ADQR of 4.3 for both items. The worst discloser for item *links to CSRC website* was A shares with an ADQR of 3.8, and both A and A+B shares obtained the same ADQR of 4.0 for *links to Chinese Stock Exchange websites*.

4. Contact Information

Contact information consists of four items: contact to webmaster, email addresses, postal addresses, and phone numbers.

Extent of Reporting

Table 7.7 Number of Disclosures for Items in Contact Information

User Support Features Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
4. Contact Information						
a. Contact to the Webmaster	8	2	4	14	19%	Important
b. Email Addresses of the Company	21	15	21	57	76%	Important
c. Postal Addresses of the Company	23	23	22	68	91%	Important
d. Phone Numbers of the Company	23	24	23	70	93%	Important

The table above shows that the number of disclosures for the item *contact to webmaster* is not high, as only 14 companies in total have disclosed such an item. Even though the item was rated as important by the stakeholders, they also pointed out that Chinese website users generally pay little or no attention to the web designers' contact details, and this fact may reduce the willingness of firms to present such information on their website. As the result shows, the stakeholders' view was supported. As to the item *email addresses of the company*, four corporations in A shares, ten in A+B, and four in A+H shares did not present any email contacts on their website (Nor was there an emailing system or an email link on their website either.). This is a surprising result. In the Internet era, it was unexpected to find that there are still companies (especially, large corporations) that exclude email addresses from their contact details.

While the majority of the firms disclosed *postal address of the company* and *phone numbers of the company* on both of their English and Chinese corporate websites (68 and 70 firms in total respectively), it was noted that some large companies (i.e., Poly Real Estate Group, Jiangsu Yanghe Brewery, Chongqing Changan Automobile, and China Petrochemical Corporation) failed to do so. These firms may assume that having an email address online is sufficient, and that postal addresses or phone numbers are not, therefore, needed on their website. However, the stakeholders perceived the situation differently, as they considered provision of the *postal address of the company* and *phone numbers of the company* to be equally important as *email addresses*. This finding indicates an inconsistency between the expectations of the stakeholders and some firms' actual disclosures.

Quality of the Disclosed Items

Table 7.8 Frequency of Qualitative Ratings for Disclosed Items in Contact Information

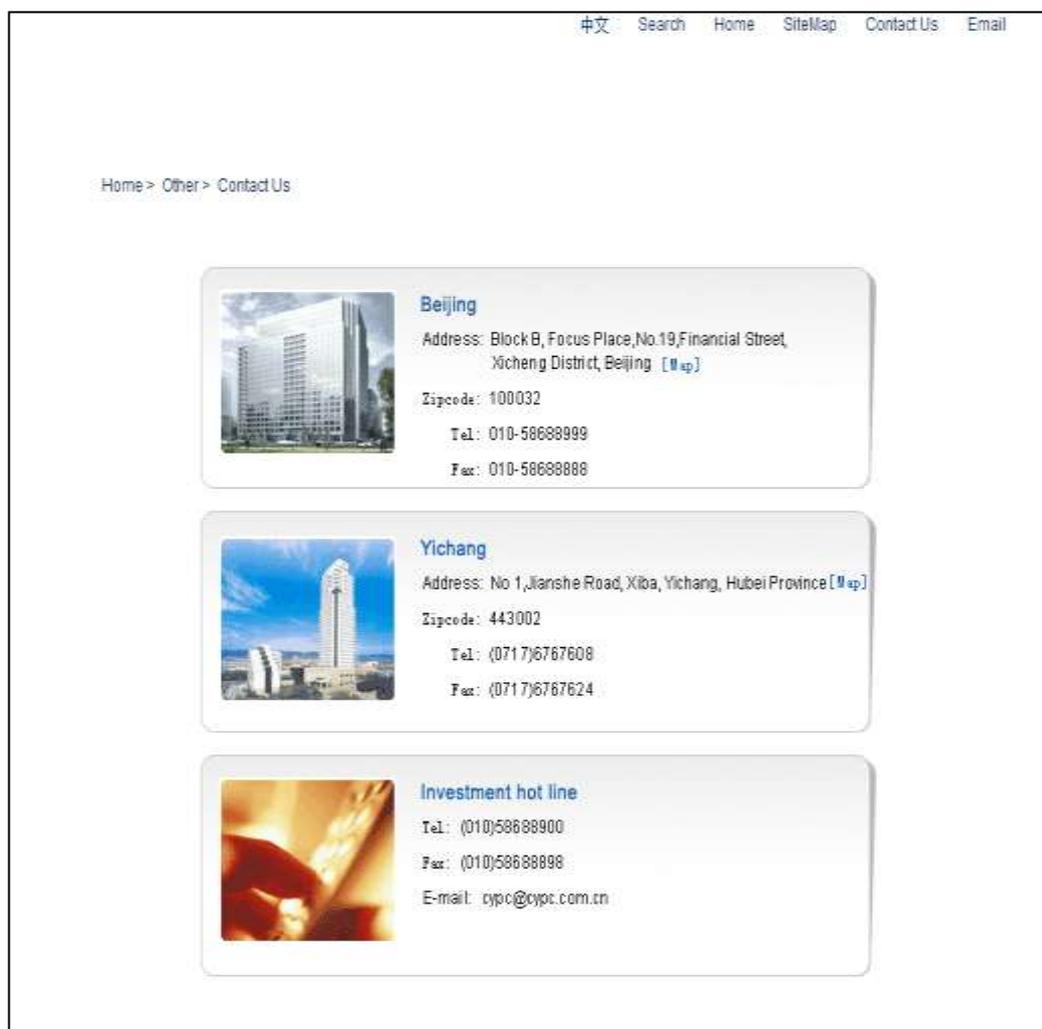
User Support Features Items	A Shares							A+ B shares							A+ H shares						
	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR
4. Contact Information																					
a. Contact to the Webmaster	0	4	1	3	0	0	2.9	0	2	0	0	0	0	2.0	0	4	0	0	0	0	2.0
b. Email Addresses of the Company	0	2	16	3	0	0	3.0	0	2	13	0	0	0	2.9	0	5	14	2	0	0	2.9
c. Postal Addresses of the Company	0	0	0	22	1	0	4.0	0	0	3	12	8	0	4.2	0	0	11	7	4	0	3.7
d. Phone Numbers of the Company	0	0	14	8	1	0	3.4	0	0	20	4	0	0	3.2	0	1	12	9	1	0	3.4

None of the sampled firms received a top rating of 5 for the quality of their disclosure on the *contact to the webmaster* item. Failure to achieve the highest score was because the disclosed details include webmaster's email address or phone numbers only; other information suggested by the stakeholders, such as the webmaster's corporate website, however, was not provided. As a result, the ADQRs for the three shares groups were all below 3. For the item *email addresses of the company*, the addresses provided by many firms were either not hyperlinked or hyperlinked but did not work properly. Therefore, ADQRs of 3, 2.9, and 2.9 were calculated for A, A+B, and A+H shares respectively. Furthermore, the current study found that many companies failed to meet the expectations of the stakeholders in terms of supplying *postal addresses* and *phone numbers*. The information provided did not include both the headquarters' and branches' contact details on the corporate websites, and several firms provided

this information on their Chinese version of the website only. Consequently, the ADQRs of these two items for the three shares groups are all well below 4.5.

The screenshot below offers an example of the only company (China Yangtze Power Company in A shares) that has achieved a top rating in both *postal addresses of the company* and *phone numbers of the company*. This company supplies both the headquarters' and the branches' phone numbers with area codes and postal addresses (and zip codes), and this information is also available in both Chinese and English (the screenshot is given in English).

Figure 7.2 Top Rating Corporate Contact Details (Postal Addresses and Phone Numbers)



5. Other Additional User Support Features

The other additional user support features subcategory consists of four items: Chinese companies' investments, instant feedback posting features, explanation of technical terms, and access to Google search engine on companies' homepage.

Extent of Reporting

Table 7.9 Number of Disclosures for Items in Other Additional User Support Features

User Support Features Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
5. Other Additional User Support Features						
a. Links to Chinese Company's Investments	20	10	15	45	60%	Very Important
b. Instant Feedback Posting Feature	10	12	5	27	36%	Important
c. Explanations of Technical Terms	17	0	4	21	28%	Very Important
d. Access to Google Search Engine on a Company's Homepage	0	0	0	0	0%	Neutral

There appears to be a reluctance to disclose detailed *explanations of technical terms* in both A+B and A+H shares firms. The stakeholders rated this item very important, as they believed descriptions of technical terms could provide understanding to web audiences about specific terminologies used in a particular industry. Surprisingly, none of the A+B shares firms disclosed such information yet many of them were specialists in the area of high-tech, medical engineering, and manufacturing. *Links to Chinese company's investments* were also considered by the stakeholders to be very important; yet 30 companies in total gave no information at all and, interestingly, A+B shares was the worst performer. It had been assumed that dual-listed firms would be likely to disclose such information to portray an image of transparency to attract foreign investors.

For the *instant feedback posting feature*, the interviewed stakeholders considered such an item to be important since it allowed instant communication between companies and web audiences. However, more than half of the firms in the three shares groups did not offer this feature on their websites. Lastly, although the rating for *access to Google engine on companies' homepage* was neutral, the stakeholders still believed that having this item on a corporate homepage could provide convenience for website users. However, none of the sampled firms provided such a feature on their homepage.

Overall, the extent of reporting in this subcategory showed a vast information gap between the expectations of stakeholders and the actual disclosures of corporations.

Quality of the Disclosed Items

Table 7.10 Frequency of Qualitative Ratings for Disclosed Items of Other Additional User Support Features

User Support Features Items	A Shares						A+B shares						A+H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
5. Other Additional User Support Features																		
a. Links to Chinese Company's Investments	0	14	6	0	0	2.3	0	7	3	0	0	2.3	0	14	1	0	0	2.1
b. Instant Feedback Posting Feature	0	1	8	1	0	3.0	0	5	7	0	0	2.6	0	3	2	0	0	2.4
c. Explanations of Technical Terms	0	14	2	1	0	2.2	0	0	0	0	0	0.0	0	3	0	0	1	2.8
d. Access to Google Search Engine on a Company's Homepage	0	0	0	0	0	0.0	0	0	0	0	0	0.0	0	0	0	0	0	0.0

The stakeholders believed that a high quality disclosure of *Links to Chinese companies' investments* and *explanation of technical terms* should be detailed as well as easy to find, and that links to external websites for additional information should also be provided. The results, however, showed that many sampled firms in the three groups, e.g., the Agricultural Bank of China and the China Merchants Bank, merely described their investments briefly (e.g., without any disclosure on the actual market values or types of investments), explained the technical terms only superficially, and provided the information in Chinese only. Also, none of the companies offered links to redirect users to external websites where they could obtain additional information regarding their investments and technical terms. This result was surprising, especially for firms in A+H shares. The companies that are dual-listed on the Hong Kong Stock Exchange (which is one of the biggest and most internationalised stock exchanges in the world) were expected to have higher quality of disclosures on these two items to portray an image of transparency because they have more opportunity to encounter foreign investors than companies listed on the Mainland stock exchanges. Overall, the ADQR of all three shares groups were below 3, indicating a large mismatch between the expectations of the stakeholders and corporate practice.

For the *instant feedback posting feature* item, it was found that many firms did not include a file uploading function (e.g., multimedia files or word documents), and the provided features allowed users to leave messages and email addresses only. This result shows that many qualitative criteria recommended by the stakeholders

were not met, and, consequently, the ADQRs for the three shares groups were all below 2. Lastly, since no company had incorporated a *Google search engine* on its website, an ADQR of zero was assigned to each shares group.

7.2.2 Timeliness of the Information on Corporate Websites

The panel of experts and the stakeholders considered this category as one of the most important elements in Internet reporting, because, as strongly claimed by the experts, Chinese corporations tend to disclose information later than they should, and they are unlikely to release information in a timely fashion. The stakeholders also agreed and believed that, in order to attract investors from abroad, this reporting habit must be changed. This category consists of six items and is separated into two subcategories: Information Timeliness – Documents, and Information Timeliness – Other Information.

1. Information Timeliness – Documents

This subcategory consists of three items: quarterly report, interim report, and annual report. Companies need to provide these reports on their website before or on the regulated reporting days in order for their reporting to be considered as timely. The Chinese accounting standard regulated days for disclosing quarterly, interim, and annual reports are 30, 60, and 120 days respectively.

Extent of Reporting

Table 7.11 Number of Disclosures for Items in Information Timeliness – Reports

Timeliness of the Information on Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
1. Information Timeliness - Reports						
a. Quarterly Report	23	19	23	65	87%	Important
b. Interim Report	23	18	24	65	87%	Important
c. Annual Report	23	18	25	66	88%	Very Important

The panel and the stakeholders all believed that every publicly listed firm, especially the large dual-listed companies, should provide up-to-date reports (quarterly, semi-annually, and annually) for two reasons. First, as many dual-listed firms are in the frontline of foreign trading in terms of products and shares, they should disclose these reports on their own website to portray an image of transparency. Second, the business practice of large listed corporations tends to be a role model for other smaller firms (an idea similar to the theory of institutional isomorphism), so they have a responsibility to demonstrate good reporting

practice. However, as the above table shows, not all of the sampled firms provided all three reports on their website; in particular, many companies in A+B shares group failed to disclose up-to-date reports online. This finding indicates a significant discrepancy between the stakeholders' expectations and corporations' practice regarding the extent of financial reports, and is thus an area that needs to be addressed in the future.

Timeliness of the Disclosed Items

Table 7.12 Frequency of Qualitative Ratings for Items of Information

Timeliness – Reports

Timeliness of the Information on Corporate Websites Items	A Shares						A+B shares						A+H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
1. Information Timeliness - Reports																		
a. Quarterly Report	0	1	0	14	0	3.9	0	0	1	11	0	3.9	1	0	0	14	0	3.8
b. Interim Report	0	0	4	9	2	3.9	0	0	3	7	1	3.8	0	2	2	9	3	3.8
c. Annual Report	0	0	1	7	6	4.4	0	0	0	3	8	4.7	0	0	0	2	15	4.9

As to the timeliness of the provided reports, no maximum rating was awarded to any of the sampled firms for the *quarterly report* item, because none of them made the disclosure within 15 days following the end of the first three months and nine months of an accounting period (the criteria set by the interviewed stakeholders). The majority of firms, however, (e.g., Lu Zhou Lao Jiao, Shanghai Zhenghua Heavy Industries, and the Bank of Communication), uploaded their *quarterly report* between 16-30 days following the end of the first 3 months and 9 months of an accounting period. As to the *interim report*, the results showed that 11 firms in A shares, eight in A+B shares, and 12 in A+H shares voluntarily made the 2012 interim report available on the web on or earlier than the regulated reporting time of 60 days. Among these firms, two from the A shares (Hua Xia Bank and the China Merchants Securities Company), one from the A+B shares (the China Merchants Property Development Company), and three from the A+H-shares (Zijin Mining Group, Anhui Conch Cement, and Huaneng Power International) disclosed their report within 45 days following the end of the first half of an accounting period. The other firms (e.g., Lu Zhou Lao Jiao and Shanghai Friendship Group), however, uploaded the report later than the regulated reporting days. This finding is consistent with the stakeholders' view that some Chinese companies tend to disclose online corporate information in a tardy

fashion. Overall, the disclosure timeliness for these two items needs to be improved as the ADQRs are all below 4. Current practice is unacceptable, since these items are rated as important and are expected by the stakeholders to be reported in a timely fashion.

In terms of the disclosure for the item *annual report*, 13 firms with A shares, 11 with A+B shares, and 17 with A+H shares disclosed this item within the regulated reporting time of 120 days, or before. Among these firms, six, eight, and 15 firms in A, A+B, and A+H shares respectively made the disclosure at least 20 days earlier than the regulated reporting deadline. In addition, it seems that Chinese corporations perceive the disclosure of annual reports as more important than the other two reports, because, as the ADQRs indicate (All have a higher rating than for the other two reports), firms in the three shares groups tend to provide their annual reports on their corporate website in a more timely fashion.

Moreover, Table 7.12 shows a number of firms in A shares, A+B shares, and A+H shares received a not applicable rating of 0 for the three items. This rating indicates that while a company has provided a report, it failed to provide an uploading date. Without the uploading date it is not possible to assess the timeliness of the disclosed reports; therefore, assigning a rating of 0 to these firms is the most appropriate choice. In order to illustrate the meaning of uploading date, the following screenshot is presented to show one of the websites that includes an uploading date on its reports.

Figure 7.3 Uploading Date on Corporate Reports

You are here: Home > Investor Relations > Financial Information > Financial Reports

Financial Information

Financial Highlights | **Financial Reports** | Credit Ratings | Financial Supplements

2013-04-27	First Quarterly Report of 2013	161KB
2013-04-23	2012 Annual Report	9.92MB
2013-03-29	2012 Annual Results Announcement	254KB
2012-10-30	Third Quarterly Report of 2012	163KB
2012-09-24	2012 Interim Report	6.52MB
2012-08-30	2012 Interim Results Announcement	279KB
2012-04-28	First Quarterly Report of 2012	149K
2012-04-26	2011 Annual Report	2.14M
2012-03-31	2011 Annual Results Announcement	280K
2011-10-28	Third Quarterly Report of 2011	158KB
2011-09-30	2011 Interim Report	5.76M
2011-08-25	2011 Interim Results Announcement	286KB
2011-04-29	First Quarterly Report of 2011	652KB
2011-04-29	2010 Annual Report	9.89MB
2011-04-02	2010 Annual Results Announcement	319K
2010-10-28	Third Quarterly Report of 2010	618KB
2010-09-27	2010 Interim Report	1402KB
2010-08-27	2010 Interim Results Announcement	271KB
2010-04-29	First Quarterly Report of 2010	151KB

[Next]

2. Information Timeliness – Other Information

This section presents and discusses the results of the individual items in Information Timeliness – Other Information for A, A+B, and A+ H-shares. Other information in this subcategory includes items such as press releases, share price updates during trading hours, and forward looking statements.

Extent of Reporting

Table 7.13 Number of Disclosures for Items in Information Timeliness – Other Information

Timeliness of the Information on Corporate Websites items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
2. Information Timeliness - Other Information						
a. Press Releases	25	25	25	75	100%	Very Important
b. Share Prices Update During Trading Hours	25	25	25	75	100%	Important
c. Forward Looking Statements	2	0	0	2	3%	Important

As the items *press releases* and *share prices update during trading hours* were two of the most commonly disclosed pieces of online information, it was not surprising that all of the firms in the three shares groups provided them on their

website. On the other hand, although it was not usual to have *forward looking statements* on a corporate website, the stakeholders nevertheless believed that disclosure of this information was important. Its importance is because Chinese information users placed high value on the financial estimation of an organisation's future performance. However, only two companies in A shares provided this item on their website. Even though a small section was found in many companies' annual reports to briefly explain their future business plans, the author decided not to include this finding as part of the assessment. This decision is made to be consistent with the suggestions of the panel that discrete forward looking statements should be made available on a webpage to avoid the time wasted searching through annual reports for the information.

Timeliness and Quality of the Disclosed Items

Table 7.14 Frequency of Qualitative Ratings for Items of Information Timeliness – Other Information

Timeliness of the Information on Corporate Websites Items	A Shares							A+ B shares							A+ H shares						
	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR
2. Information Timeliness - Other Information																					
a. Press Releases	2	0	1	6	16	0	4.3	4	2	3	4	12	0	3.6	1	0	2	3	19	0	4.5
b. Share Prices Update During Trading Hours	12	-	5	-	8	0	0.0	15	-	8	-	2	0	0.0	18	-	6	-	1	0	0.0
c. Forward Looking Statements	0	1	0	1	0	0	3.0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0.0

As to the timeliness of the disclosed *press releases*, 16 firms with A, 12 with A+B, and 19 with A+H shares had updated their information a month before the researcher's examination of their website. Several companies (e.g., Kweichow Moutai Company and Daqin Railway in A shares, Shanghai Mechanical and Electrical Industry and Shenzhen Chiwan Wharf Holdings in A+B shares, and Yanzhou Coal Mining in A+H shares), on the other hand, had not issued any press releases for more than four months. As it was assumed that all the sampled firms would be active in updating their corporate news to portray an image of transparency to their shareholders, these findings were surprising. In addition, the A+B shares group has the lowest ADQR, indicating that, on average, companies in this group tend to update their press releases in an tardy fashion. For the item *share prices update during trading hours*, the A shares group has more firms with a top quality rating than the other two groups. This result was unexpected as it was assumed that dual-listed firms would be more inclined to demonstrate

information timeliness to their shareholders and investors abroad by following a shorter time span on their share prices updates.

As to the item *forward looking statements*, the panel and the stakeholders stated that the information should be updated constantly (i.e., quarterly, semiannually, and annually), and it must include strategic goals, forecasts (e.g., profit, sales, and costs), as well as estimations of market shares and financial ratios. None of the disclosed statements fully met the criteria suggested by the stakeholders, and only one firm included information such as strategic goals and forecasts (e.g., profit, sales, and costs) in its forward looking statements.

7.2.3 Corporate Website Technologies

The corporate website technologies category has a total of eight items, and they are separated into three subcategories: Downloadable Options on Chinese Corporate Website – Software, Downloadable Options on Chinese Corporate Website – Documents, and Other Available Technologies on Companies' Website.

1. Downloadable Options on Chinese Corporate Websites – Software

This subcategory consists of two items: plug-in software and video/audio playing software.

Extent of Reporting

Table 7.15 Number of Disclosures for Items in Downloadable Options on Chinese Corporate Websites – Software

Corporate Website Technologies Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
1. Downloadable Options on Chinese Corporate Websites - Software						
a. Plug - in Software	3	1	2	6	8%	Neutral
b. Video/Audio Playing Software	0	1	0	1	1%	Neutral

As the above table shows, the *plug-in software* and *video/audio playing software* items are often omitted from Chinese corporate websites. Only three companies in A shares (Kweichow Moutai Company, Poly Real Estate Group, and China United Network Communications), one in A+B shares (Dazhong Transportation Group), and two in A+H shares (Bank of Communication and China Life Insurance) offered a plug-in software download option on their website. This outcome was expected as this item is not often provided on corporate websites, and the stakeholders also rated this item at neutral. For the item *video/audio*

playing software, only one company (Yantai Zhangyu Pioneer Wine Company) with A+B shares provided this item, and none of the A and A+H shares firms made it available on their corporate website. This result was consistent with the stakeholders' view that Chinese information users tend to have video/audio playing software installed on their computer already; therefore, most of the firms may not offer this item on their corporate websites.

Quality of the Disclosed Items

Table 7.16 Frequency of Qualitative Ratings for Disclosed Items of Downloadable Options on Chinese Corporate Websites – Software

Corporate Website Technologies Items	A Shares						A+ B shares						A+ H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
1. Downloadable Options on Chinese Corporate Websites - Software																		
a. Plug - in Software	0	0	0	3	0	4.0	0	0	0	1	0	4.0	0	0	0	2	0	4.0
b. Video/Audio Playing Software	0	0	0	0	0	0.0	0	1	0	0	0	2.0	0	0	0	0	0	0.0

To be recognised as achieving high quality in the item *plug-in software*, the panel and the stakeholders recommended that descriptions and instructions about the software must be clearly presented; download links provided must be free from error, and this feature must be available on both the Chinese and English versions of corporate websites. Apart from making software available only on the Chinese version of their website, the rest of the criteria were met; thus, a rating of 4 was awarded to the sampled firms. For *video/audio playing software*, the quality of the provided links was poor as many were faulty and no other information (e.g., software description and download instruction) was presented.

2. Downloadable Options on Chinese Corporate Websites – Documents

Documents included in this category are Microsoft documents, multimedia files (video and audio), html documents, and pdf files.

Extent of Reporting

Table 7.17 Number of Disclosures for Items in Downloadable Options on Chinese Corporate Websites – Documents

Corporate Website Technologies Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
2. Downloadable Options on Chinese Corporate Websites - Documents						
a. Microsoft Office Documents	3	1	2	6	8%	Important
b. Multimedia Technologies - Video and Audio	8	6	11	25	33%	Important
c. Html Documents	25	25	25	75	100%	Neutral
d. PDF Files	22	21	25	68	91%	Important

Several stakeholders rated as important the items *Microsoft documents* and *multimedia technology – video and audio* because they believed corporations should offer a variety of different types of files on their website as each file format has its own unique functions. However, as shown in Table 7.17, the disclosure rate for these items was poor as in total only six and 25 of the sampled companies provided these two items on their website. However, as the stakeholders had previously noted that Chinese companies often exclude multimedia files from their websites, the finding outcome for this item was expected.

Furthermore, the results for items *html documents* and *pdf files* were consistent with the claim made by the experts and the stakeholders. They stated that html and pdf documents are the most frequently provided files on Chinese corporate websites, and most of the firms should have these items on their website. As the above table shows, the disclosure rate for both items was high, as all the sampled companies made html documents available, and 22 firms in A and A+B shares and 25 in A+H shares provided pdf files on the Internet.

Quality of the Disclosed Items

Table 7.18 Frequency of Qualitative Ratings for Disclosed Items of Downloadable Options on Chinese Corporate Websites – Documents

Corporate Website Technologies Items	A Shares						A+ B shares						A+ H shares						
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	
2. Downloadable Options on Chinese Corporate Websites - Documents																			
a. Microsoft Office Documents	0	0	3	0	0	3.0	0	0	1	0	0	3.0	0	0	2	0	0	0	3.0
b. Multimedia Technologies - Video and Audio	0	2	6	0	0	2.8	0	4	1	1	0	2.5	0	6	5	0	0	0	2.5
c. Html Documents	0	6	19	0	0	2.8	0	0	25	0	0	3.0	0	0	25	0	0	0	3.0
d. PDF Files	0	0	0	22	0	4.0	0	0	0	21	0	4.0	0	0	0	25	0	0	4.0

As the table shows, the majority of the sampled firms received a quality rating of 3 or below because the disclosed items did not achieve many of the criteria suggested by the stakeholders. For instance, most of the *Microsoft documents* provided did not include a description and abstract of the documents (e.g., version of the software use) and the information content. For the *multimedia files* that were offered by entities such as the Bank of China, CSG Holdings, and SANY Heavy Industries, no descriptions on the format of the multimedia files (e.g., MP4, WMA, or Flash video/audio) could be found. As to the *html documents* presented by the China Yangtze Power Company, the Shenzhen Chiwan Wharf Holdings, and PetroChina, no content description of the file was included, and most of the documents were available only on their Chinese website. As a result, the ADQRs for these items were 3 or below, which signified a significant gap between stakeholders' expectations and the actual corporate disclosures.

The quality of the disclosed item *PDF files*, on the other hand, was quite high, because entities such as Daqin Railway, the China National Accord Medicines Corporation, and CSR Corporation met most of the qualitative criteria for the item (e.g., easy to access, and documents are not read-only files). However, it was also acknowledged that two minor issues were found on the disclosed item. First, a notice about which plug-in software is needed to view the file was not disclosed, and second, several PDF files were not provided on many companies' English version of the website. However, in spite of these minor deficiencies, all three groups still received an ADQR of 4.

3. Other Available Technologies on Companies' Website

The two items in this subcategory are hyperlink inside the online annual report and XBRL documents.

Extent of Reporting

Table 7.19 Number of Disclosures for Items in other Available Technologies on Companies' Website

Corporate Website Technologies Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
3. Other Available Technologies on Companies' Website						
a. Hyperlink Inside the Digitised Annual Report	8	3	4	15	20%	Important
b. XBRL	0	0	0	0	0%	Important

The two items in this subgroup, *hyperlinks inside the digitised annual report* and *XBRL*, are often neglected in corporate websites. Although many participants considered these two items as important, only eight firms in A shares, three in A+B shares, and four in A+H shares included hyperlinks inside their annual reports, and none of the companies provided XBRL on their website.

Quality of the Disclosed Items

Table 7.20 Frequency of Qualitative Ratings for Items of Other Available Technologies on Companies' Website

Corporate Website Technologies Items	A Shares						A+B shares						A+H shares								
	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR
3. Other Available Technologies on Companies' Website																					
a. Hyperlink Inside the Digitised Annual Report	0	0	1	0	7	0	4.8	0	0	1	2	0	0	3.7	0	0	0	0	4	0	5.0
b. XBRL	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0.0	0	0	0	0	0	0	0.0

According to the Table above, the hyperlinks provided by the 11 total companies in A and A+H shares received a top rating of 5, as they achieved all the item's qualitative criteria. However, the links provided by one and three firms with A and A+B shares respectively could not be easily found in their annual report, and some of the provided links failed to take users to the selected content. Therefore, a rating of four or below was assigned. In addition, since none of the firms disclosed the item *XBRL*, an ADQR of 0 was calculated.

7.2.4 Content of Corporate Websites

Content of corporate websites has a total of 39 items and they are classified into five subcategories: Financial Items on Corporate Websites, Nonfinancial Items on Corporate Websites, Online Annual Report Items – Financial Information Items, Online Annual Report Items – Nonfinancial Information Items, and Online Corporate Responsibility Information Items.

1. Financial Items on Corporate Websites

This subcategory includes four items: historical share prices disclosed, historical dividend figures disclosed, key information at a glance on current year's financial statements in company's annual report, and access to financial information on a company's homepage.

Extent of Reporting

Table 7.21 Number of Disclosures for Items in Financial Items on Corporate Websites

Content of Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
1. Financial Information Items on Corporate Websites						
a. Historical Share Prices Disclosed	9	3	8	20	27%	Important
b. Historical Dividend Figures Disclosed	12	8	12	32	43%	Important
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	11	2	8	21	28%	Important
d. Access to Financial Information on a Company's Homepage	16	8	17	41	55%	Important

The stakeholders rated the items *historical share prices disclosed*, *historical dividend figures disclosed* and *key information at a glance on current year's financial statements in company's annual report* as important; however, these items were often omitted from Chinese corporate websites. Table 7.21 shows that the disclosure rates for these items were all below 50%, and A+B shares group had the lowest disclosures among the three shares groups. The stakeholders believed that, since public listed firms finance their funds from the public, they have a responsibility to provide these financial items online to notify their investors (especially minority shareholders). The result, however, demonstrated a gap between the expectations of stakeholders regarding the online financial items and the actual disclosures of corporations.

For the item *access to financial information on a company's homepage*, it was suggested by the panel that the search for financial information could be easier and less time consuming if this feature were provided on a website's homepage. The stakeholders (questionnaire respondents) also supported this view and rated the item important. However, the results indicated that the disclosure rate for such a feature was poor (especially for the A+B shares group) indicating that future improvements must be made.

Quality of the Disclosed Items

Table 7.22 Frequency of Qualitative Ratings for Disclosed Items of Financial Items on Corporate Websites

Content of Corporate Websites Items	A Shares						A+ B shares						A+ H shares						
	1	2	3	4	5	ADQR 0-5	1	2	3	4	5	ADQR 0-5	1	2	3	4	5	ADQR 0-5	
1. Financial Information Items on Corporate Websites																			
a. Historical Share Prices Disclosed	0	1	5	3	0	3.2	0	0	2	1	0	3.3	0	1	0	2	5	0	4.4
b. Historical Dividend Figures Disclosed	0	2	4	4	2	3.5	0	0	2	6	0	3.8	0	1	0	1	10	0	4.7
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	0	3	3	3	2	3.4	0	0	0	1	1	4.5	0	2	1	3	2	0	3.6
d. Access to Financial Information on a Company's Homepage	0	13	1	2	0	2.3	0	6	1	1	0	2.4	0	17	0	0	0	0	2.0

The overall quality for the item *historical share prices disclosed* was average as only five companies in A+H shares were awarded a top rating of 5. The rest of the companies provided only either the external links or the historical share prices, but not both. The findings also indicated that many companies presented the stock information on their Chinese website only.

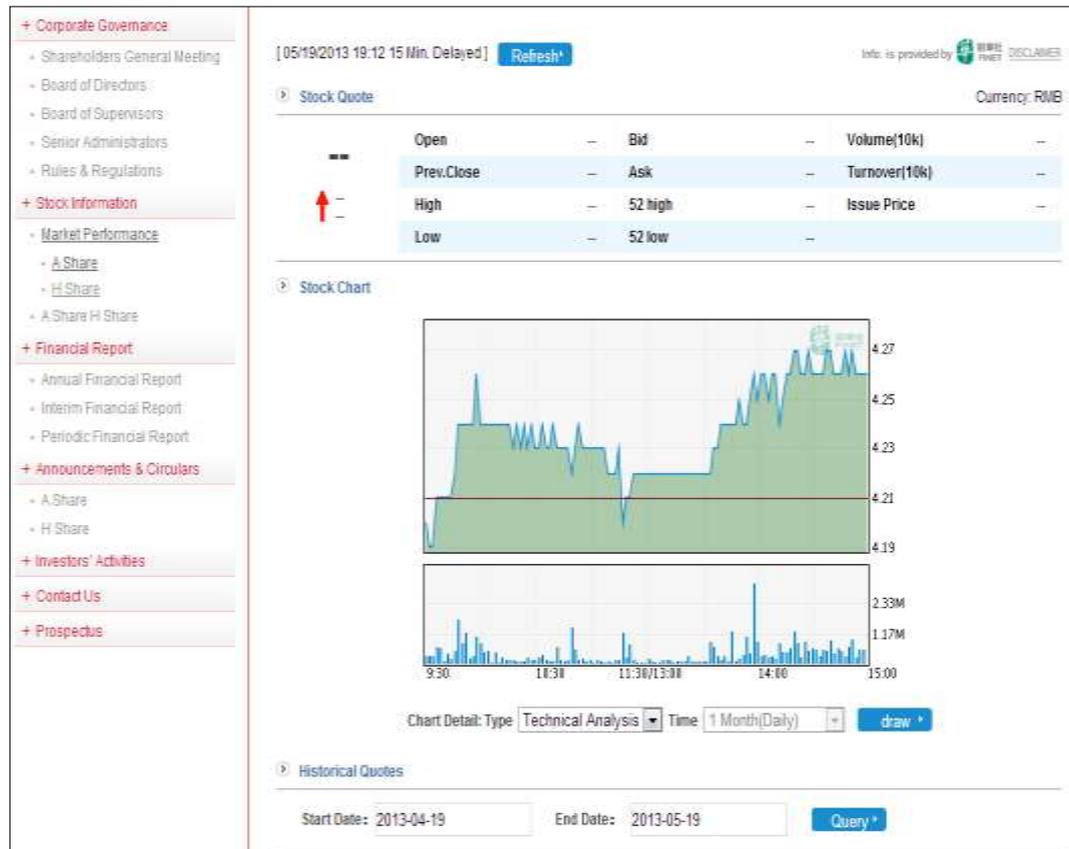
Figure 7.4 below shows the screenshot of an example of high quality disclosing of historical share prices (disclosed by the CSR Corporation). From the screenshot, it can be seen that this website allows the user to search for historical share quotes. It also enables audiences to click on the *info is provided by* icon to gain access to an external finance website for detailed stock information.

As to the item *historical dividend figures disclosed*, only a few firms (two in A and ten in A+H shares) met all of the item's criteria, such as disclosing the historical dividend figures on their own website, offering links that can redirect users to an external webpage for detailed information, and providing all these features on both of the English and Chinese versions of their corporate website. The quality of the item provided by other companies, on the other hand, was not as good. Many of them merely disclosed current year dividend figures, and such information appeared only on companies' Chinese websites.

For the item *key information at a glance on current year's financial statements in a company's annual report*, the above table shows that only two firms from A and A+H shares and one from A+B shares met all the qualitative criteria. For the remaining firms, detailed information, such as operating expenses, revenue figures, and ratios, was omitted from their website. Lastly, it was suggested by the panel of experts that *access to financial information on a company's homepage* should

include financial highlights, stock quotes, and financial ratios, (in addition to its being available on the firm's web homepage) to avoid a time consuming search process. The disclosure practice however, was inconsistent with the stakeholders' expectations. The majority of the sampled firms displayed only financial figures and no analysis was provided to explain the meaning of the figures. As a result, the ADQRs of the three shares groups were all below 3.

Figure 7.4 Top Quality Rating Historical Share Prices Disclosed



2. Nonfinancial Items on Corporate Websites

Nonfinancial information on corporate websites comprises ten items: staff training programme, company background, managers'/directors' background, research and development information, government policies towards a company's industry, access to press releases on a company's homepage, access to investor relation information on a company's homepage, and company's charter.

Extent of Reporting

Table 7.23 Number of Disclosures for Items in Nonfinancial Items on Corporate Websites

Content of Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
2. Nonfinancial Information Items on Corporate Websites						
a. Staff Training Programmes	9	11	16	36	48%	Neutral
b. Company Background	24	24	25	73	97%	Important
c. Managers'/Directors' Background	16	8	20	44	59%	Important
d. Industry Information	24	22	25	71	95%	Important
e. Research and Development Information	21	17	7	45	60%	Important
f. Government Policies towards a Company's Industry	24	21	25	70	93%	Very Important
g. Access to Press Releases on a Company's Homepage	23	22	25	70	93%	Important
h. Access to Investor Relations Information on a Company's Homepage	20	8	20	48	64%	Important
i. Shareholding Structure and Percentages of top 10 Shareholders	9	5	9	23	31%	Neutral
j. Company's charter	14	6	18	38	51%	Important

As shown in Table 7.23, 70 or more of the sampled corporations in each shares group made the items *company background*, *industry information*, *government policies towards a company's industry*, and *access to press releases on a company's homepage* available on their corporate websites. Since these were some of the items that Chinese information users would be interested in (Hence the items were rated important or very important by the stakeholders.), it was not surprising that the disclosure rates were high. In addition, information users often pay extra attention on the information item *government policies towards a company's industry* because, as the panel and the stakeholders stated, Chinese businesses and decision makers are very sensitive to the policies set by the Central Government because a slight change in policy could affect the whole direction of a business.

In contrast to the high disclosure rate of the four items above, the number of disclosures was low for the other six items (all below 50 firms). It was found that among the three shares groups, A+B shares has the lowest disclosure rate on most of these six items (*managers'/directors' background*, *access to investor relations information on company's homepage*, *shareholding structure and percentage of the top 10 shareholders*, and *company's charter*), and A shares has the fewest disclosures in the item *staff training programmes*. Although A+H shares had the lowest exposure for *research and development information*, it is worth noting that firms in A+H shares were mostly in the finance and banking sectors and that these

sectors were not likely to have research and development projects. Thus, it was expected that the number of disclosures in this item would be low for the A+H shares group. In addition, as five of these six items were rated important, it was assumed that the number of disclosures would be higher. However, a contrary result was found and a gap between the information demand of the stakeholders and the actual reporting of the sampled companies was identified.

Quality of the Disclosed Items

Table 7.24 Frequency of Qualitative Ratings for Disclosed Items of Nonfinancial Items on Corporate Websites

Content of Corporate Websites Items	A Shares						A+B shares						A+H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
2. Nonfinancial Information Items on Corporate Websites																		
a. Staff Training Programmes	0	5	3	1	0	2.6	0	9	1	1	0	2.3	0	13	3	0	0	2.2
b. Company Background	0	2	7	10	5	3.8	0	17	6	0	1	2.4	0	14	9	1	1	2.6
c. Managers'/Directors' Background	0	3	10	3	0	3.0	0	1	7	0	0	2.9	0	1	19	0	0	3.0
d. Industry Information	0	13	8	3	0	2.6	0	17	5	0	0	2.2	0	19	6	0	0	2.2
e. Research and Development Information	0	11	9	1	0	2.5	0	12	5	0	0	2.3	0	6	1	0	0	2.1
f. Government Policies towards a Company's Industry	0	8	15	1	0	2.7	0	17	4	0	0	2.2	0	24	1	0	0	2.0
g. Access to Press Releases on a Company's Homepage	0	0	0	13	10	4.4	0	0	1	12	9	4.4	0	0	0	6	19	4.8
h. Access to Investor Relations Information on a Company's Homepage	0	3	5	4	8	3.9	0	5	3	0	0	2.4	0	17	3	0	0	2.2
i. Shareholding Structure and Percentages of top 10 Shareholders	0	4	1	3	1	3.1	0	0	0	4	1	4.2	0	4	4	1	0	2.7
j. Company's charter	0	0	0	13	1	4.1	0	0	0	6	0	4.0	0	0	0	7	11	4.6

For the quality of the disclosed information, it was found that the item *staff training programmes* that was provided by the sampled companies failed to meet many of the criteria suggested by the stakeholders. The disclosed information included only brief descriptions on their staff training programme, and it was available in Chinese only. As for other details, such as the training activities, the number of participants, and the training locations, these were not included. As a result, none of the shares groups received an ADQR above 2.6. The quality of the item *company background*, on the other hand, varies between the three shares groups. The A shares group has the highest ADQR of 3.8, as the information disclosed by A shares firms achieved either all or most of the qualitative criteria for this item. The other two shares groups, however, all obtained a rating below 3. The company background disclosed by the majority of the A+B and A+H shares firms lacked detail (e.g., no disclosure on company size, areas of business, and products range), and the information was available only on the Chinese version of

their website. As this item was rated important by the stakeholders, failure to satisfy many of the qualitative criteria also indicated a mismatch with the expectations of the stakeholders.

Similarly, much information was omitted in the disclosed *managers'/directors' background*. Many firms included only the names, education level, and professional experience of the managers and directors, but other additional information, such as hobbies/interests and personality which was highly recommended by the panel and the stakeholders (They believed it could deliver a personal friendly touch to create a feeling of closeness to information users,), was omitted. As a result, overall ADQRs of 3 and below for the three shares groups were calculated, and this figure indicated that the quality of the disclosed information was only average.

As to the item *industry information*, a low ADQR of 2.6 for A shares and 2.2 for A+B and A+H shares was calculated. This score was due to the fact that most of the firms merely provided a brief introduction on their overall industry and their “success” in the business sector, but presented no detailed information regarding the industry statistical figures, potential growth estimations, or on current or future issues. As the stakeholders and many members in the panel expected that listed firms would be more willing to provide detailed online industry information to reduce potential investors’ uncertainties, and, at the same time, attract foreign investments, this finding showed a large discrepancy between the stakeholders’ demand and companies’ actual disclosure practice. Likewise, the disclosed *research and development information* was poor in quality. The information provided by the majority of the sampled companies omitted details such as the amount invested in research programmes, possible completion dates, and estimations of the potential outcomes. The accessibility of this item was also poor as the information could be found only on firms’ Chinese version websites. Due to the inadequacies of these disclosures, none of the three shares groups obtained an ADQR higher than 2.5.

For the item *government policies towards a company’s industry*, the stakeholders believed that this item was very important because a slight change in a single policy can affect the survivability of a business; therefore, this item should be

provided in detail. Despite the expectations of the stakeholders, the information presented by more than 20 of the sampled companies was brief with only simple introductions to the policies being provided. Also, only a few firms offered links on their website to redirect users to the official Government webpage or pages that offered detailed information about the policies.

As to the item *access to press releases on a company's homepage*, ten firms from A shares, nine from A+B shares, and 19 from A+H shares met all the qualitative criteria. A slightly lower rating was assigned to the other 32 firms because of the slow access to press releases information (e.g., the information cannot be found within two mouse clicks) or a nonworking press releases link being provided. In spite of these minor problems, the ADQRs for each of the three shares groups were all above 4. For the item *access of financial information on companies' website homepage*, A shares was the best performer, as it was the only group whose firms achieved all or most of the item's qualitative criteria. As for the other two shares groups, since their companies offered this item on their Chinese website only and information such as financial highlights, dividends, and nonfinancial information (e.g., intellectual capital) was not presented, a rating of 3 and below was assigned. Consequently, there is a large difference between the ADQR results for A shares, and A+B, and A+H shares.

In the item *shareholder structure and percentages of top 10 shareholders*, brief information was provided by many firms in A+H shares, but only a few in A and A+B did the same. High quality disclosures were found for one firm each in the A and A+B shares, as they disclosed the information in detail along with additional aspects such as operating industry and background information of the shareholders. Subsequently, A+B shares has the highest ADQR of 4.2 as it has the best overall quality of the disclosed information, whereas A+H shares has the lowest ADQR of 2.7. As to the final item *company's charter*, the stakeholders believed that to be recognised as high quality, the disclosed information must include the name of the company, its registered address, shareholders' rights, responsibilities a company has towards its shareholders, amount of company's registered capital, the operating industry/ies, and directors' and governance board's responsibilities. They also suggested that this item should be easy to find (can be found within 3 mouse clicks), and that the information needs to be

available in both Chinese and English. As a result, 11 A+H companies and one A shares company respectively met all of the above criteria. For the remaining companies, as the information was provided in Chinese only, a lower rating was awarded. Overall, the disclosure quality of A and A+B shares was high with an ADQR of 4.1 and 4 respectively. As for A+H shares, it has the highest ADQR with 4.6.

3. Online Annual Report Items – Financial Information Items

This subcategory consists of 10 items and they are: current year and past 6 years' annual report, auditor report, financial statements, notes of financial statements, management report and analysis, segmental reporting by the line of business, segmental reporting by region, summary of key ratios over a period of at least 3 years, and summary of financial data over a period of at least 3 years.

Extent of Reporting

Table 7.25 Number of Disclosures for Items in Online Annual Report Items – Financial Information Items

Content of Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
3. Online Annual Report Items - Financial Information Items						
a. Annual Report for the Current Year	23	18	25	66	88%	Important
b. Annual Report for the Past 6 Years	21	21	24	66	88%	Important
c. Audit Report	23	21	25	69	92%	Important
d. Financial Statements	23	21	25	69	92%	Important
e. Notes of Financial Statements	23	21	25	69	92%	Important
f. Management Report and Analysis	23	18	25	66	88%	Important
g. Segmental Reporting by the Line of Business	23	18	25	66	88%	Important
h. Segmental Reporting by Region	23	18	25	66	88%	Important
i. Summary of Key Ratios over a Period of at least 3 Years	23	18	25	66	88%	Important
j. Summary of Financial Data over a Period of at least 3 Years	23	18	25	66	88%	Important

For the online annual report financial items, the stakeholders and the panel considered the current year and the past 6 years' annual reports (as well as other online annual report items) as important, and they believed that corporations have a responsibility to disclose these reports voluntarily on their website. The result indicates that the majority of the sampled firms have met this expectation as only nine firms in total failed to disclose these items, and the disclosure rates of all the online annual report items are all above 66.

Quality of the Disclosed Items

Table 7.26 Frequency of Qualitative Ratings for Items of Online Annual Report Items – Financial Information Items

Content of Corporate Websites Items	A Shares						A+ B shares						A+ H shares							
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR		
3. Online Annual Report Items- Financial Information Items																				
a. Annual Report for the Current Year	0	0	0	18	5	4.2	0	0	0	13	5	4.3	0	0	0	6	19	4.8		
b. Annual Report for the Past 6 Years	0	1	6	11	3	3.8	0	3	4	11	3	3.7	0	1	6	7	10	4.1		
c. Audit Report	0	0	8	12	3	3.8	0	4	5	10	2	3.5	0	0	8	7	10	4.1		
d. Financial Statements	0	0	8	12	3	3.8	0	4	5	10	2	3.5	0	0	8	7	10	4.1		
e. Notes of Financial Statements	0	1	7	12	3	3.7	0	4	5	10	2	3.5	0	0	8	7	10	4.1		
f. Management Report and Analysis	0	0	9	14	0	2	3.6	0	0	18	0	0	7	3.0	0	0	17	8	0	3.3
g. Segmental Reporting by the Line of Business	0	0	9	11	3	2	3.7	0	0	6	10	2	7	3.8	0	0	10	14	1	3.6
h. Segmental Reporting by Region	0	0	9	11	3	2	3.7	0	0	6	10	2	7	3.8	0	0	10	14	1	3.6
i. Summary of Key Ratios over a Period of at least 3 Years	0	22	0	1	0	2	2.1	0	18	0	0	0	7	2.0	0	25	0	0	0	2.0
j. Summary of Financial Data over a Period of at least 3 Years	0	0	22	1	0	2	3.0	0	0	18	0	0	7	3.0	0	0	25	0	0	3.0

From the table above it can be seen that for the items *annual report for the current year*, *annual report for the past 6 years*, *auditor report*, *financial statements*, and *notes to financial statements*, A+ H shares were the best performers as many A+H companies achieved most of the criteria suggested by the stakeholders for these four items (e.g., comprehensive information and easy access). For A and A+B shares companies, the main deficiencies were the ease of access to the reports as it took more than six mouse clicks to locate some of these firms' annual reports, and several firms neglected to provide these four items on the English version of their website.

As to item *management report and analysis*, the stakeholders suggested that a high quality disclosure should include detailed financial and nonfinancial information. Financial information can contain financial figures (e.g., revenues, profits, assets values, and liabilities values) and narrations. Visual aids (e.g., graphs and tables) should be used to support the financial analysis provided. Nonfinancial information, such as intellectual capital, corporate environmental policies, and corporate social responsibilities actions, ought to be part of the report as well. Also, the information must be available on both the Chinese and English versions of a company's website. The results indicated that the management report disclosed by 14 and eight firms in A and A+H shares respectively contained detailed analysis of financial information with the support of financial figures/ratios and visual aids. However, the shortcomings for their reports were

the lack of nonfinancial information and the accessibility of the information on their English version of the website. Due to these deficiencies, a rating of 4 was awarded. For the remaining firms, lower ratings were given because only brief analysis was provided and no visual aids and nonfinancial information were presented. In terms of the overall quality, the best performer amongst the three groups was A shares with a ADQR of 3.6, and A+B shares was the weakest with a ADQR of 3.

For items *segmental reporting by line of business* and *segmental reporting by region*, it was suggested by several panel members that Chinese corporations are only interested in practising minimum disclosure (e.g., brief analysis of segmental reporting information with financial figures such as sales in dollar amount shown) rather than taking the initiative to provide more information. The questionnaire participants agreed with this view, but they were also hoping that, with the increasing experience of interacting with foreign corporations, this reporting habit would change. However, the results showed that only six companies in total met all the qualitative criteria. Many other companies still employed the “old” reporting style and presented brief analysis with little explanation on unfavourable or declining financial figures (e.g., reduced net profits in a region or in a line of business). Overall, the A, A+B, and A+H shares ADQR scores are similar at 3.7, 3.8, and 3.6 respectively.

Finally, the overall quality of the disclosed items *summary of key ratios over a period at least 3 years* and *summary of financial data over a period of at least 3 years* by firms in A, A+B, and A+H shares was the lowest among the items in this subcategory. Only brief analysis and narrations were presented to give details regarding the ratios and the summary of financial data, and these two items were not included on the sampled firms’ English websites.

In addition, a few companies from A and A+B shares received a not applicable rating of 0 because no digitised annual reports were found on their website. Thus, no further examinations on the rest of the online annual report items could be performed.

4. Online Annual Report Items – Nonfinancial Information Items

Nonfinancial annual report items can include items such as report of the board of directors, report of the governance board, resolutions of shareholders' meetings in current year¹⁹, top 10 stockholders, material events, changes in stockholders' equity, and accounting policies.

Extent of Reporting

Table 7.27 Number of Disclosures for Items in Online Annual Report Items – Nonfinancial Information Items

Content of Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A + B - Shares	A + H - Shares	Total n = 75	Total in %	
4. Online Annual Report Items - Nonfinancial Information Items						
a. Report of the Board of Directors	23	18	25	66	88%	Important
b. Report of the Governance Board	23	18	25	66	88%	Important
c. Resolutions of Shareholders Meetings in Current Year	23	18	25	66	88%	Important
d. Top 10 Stockholders	23	18	25	66	88%	Important
e. Material Events	23	18	25	66	88%	Important
f. Changes in Stockholders' Equity	23	18	25	66	88%	Important
g. Accounting Policies	23	18	25	66	88%	Important

The above table shows that two and seven companies in A and A+B shares respectively did not disclose a digitised annual report on their website; consequently, no online annual report nonfinancial items could be found either. As for the A+H shares group, all 25 sampled companies disclosed these items on their corporate websites.

Quality of the Disclosed Items

Table 7.28 Frequency of Qualitative Ratings for Disclosed Items of Online Annual Report Items – Nonfinancial Information Items

Content of Corporate Websites Items	A Shares							A+ B shares							A+ H shares							
	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR	1	2	3	4	5	0	ADQR	
4. Online Annual Report Items - Nonfinancial Information Items																						
a. Report of the Board of Directors	0	0	2	19	2	2	4.0	0	0	14	2	2	7	3.3	0	0	23	2	0	0	3.1	
b. Report of the Governance Board	0	0	2	19	2	2	4.0	0	1	15	0	2	7	3.2	0	0	25	0	0	0	3.0	
c. Resolutions of Shareholders Meetings in Current Year	0	2	13	8	0	2	3.3	0	1	14	3	0	7	3.1	0	0	17	8	0	0	3.3	
d. Top 10 Stockholders	0	0	0	18	5	2	4.2	0	0	0	13	5	7	4.3	0	0	0	6	19	0	4.8	
e. Material Events	0	0	2	17	4	2	4.1	0	0	2	14	2	7	4.0	0	0	1	23	1	0	4.0	
f. Changes in Stockholders' Equity	0	0	0	19	4	2	4.2	0	0	1	14	3	7	4.1	0	0	1	24	0	0	4.0	
g. Accounting Policies	0	18	5	0	0	2	2.2	0	18	0	0	0	7	2.0	0	25	0	0	0	0	2.0	

¹⁹ Current year refers to year 2012

As can be seen in the table above, two companies in A and A+B shares respectively received a perfect rating of 5 for the items *report of the board of directors* and *report of the governance board*. The top rated disclosed reports not only included basic information, such as the names of the board of directors and members of the governance board, number of the meetings held, and abstract of the resolutions made, but also provided detailed information (e.g., thorough explanations of each resolution, business prospects of the company, and clear and concise independent opinions on material events). The reports provided by other firms, on the other hand, lacked detail, as they included only the name of the directors and the governance board members and a general description of the resolutions. The accessibility of the reports was also an issue because they could be found on only the Chinese version of their corporate websites. Due to these limitations, a rating of 4 and below was given.

Furthermore, the quality of *the resolution of shareholders' meetings in current year* was not ideal as the ADQRs of the three groups were all below 3.5. It was found that the majority of the disclosed resolution did not include information such as the location of each shareholder's meeting and detailed explanations on the resolutions made. An accessibility issue was also identified, as most of the sampled firms made the information available only on the Chinese version of their website. As for disclosure of the *top 10 stockholders*, the only issue here related to the accessibility of the information, as the item could not be found on many of the sampled companies' English version of their website. Thus, the ADQRs for the three groups were all above 4. Similarly, one of the main issues for the item *material events* was the accessibility of the information, as it could not be located on the English language website of six, 13, and 18 firms in A, A+B, and A+H shares respectively. As to the content of the information, several interviewed stakeholders suggested that it must include significant law suit(s), notices on bankruptcy, restructuring, and notices on cessation of trading. Other information, such as buying or selling assets where the amounts are greater than 10% of a company's total asset value, should also be provided. Although the material events disclosed by companies in the three shares groups contained much information, a few qualitative criteria were still not met. For instance, the significant lawsuits of Huaxin Cement, an A shares firm, were provided briefly

with only the title of the cases. Although links to more information were presented to redirect the users to external websites, the aspects of the lawsuits were not provided on the company's annual report. Nevertheless, despite the shortcomings mentioned above, the overall information quality (ADQR) of the three groups was still reasonably high (A: 4.1; A+B: 4; A+H: 4).

The quality of the item *changes in stockholders' equity* also appeared to be good as the ADQR for the three groups were all equal to or above 4. The information content provided by most of the firms matched with the item's criteria as names of shareholders, changes in shareholding percentages, actual amounts of shares held, and types of shares (e.g., A, B, or H shares) were all disclosed. However, two shortcomings were identified. First, it was found that Chinese corporations seldom provide the reasons behind the changes in stockholders' equity. However, a possible explanation may be that any large amount of equity change would already be announced through press conferences or press releases; therefore, corporations might believe that there was no need for repeat such disclosures. Second, the information was not displayed on most companies' English version of their website. Because of these two deficiencies, the majority of the firms received a rating of 4, and only a few achieved a top rating of 5.

Finally, the *accounting policies* item was found to have the worst quality among the items in this subcategory. The disclosed accounting policies by 18, 18, and 25 firms in A, A+B, and A+H shares respectively excluded information such as the end and start dates of the current accounting period, exchange rate used and related accounting treatments, and material changes to accounting policies. The accessibility issue was also found in this item as 18, 13, and 6 firms in A, A+B, and A+H shares did not provide accounting policies on the English version of their website. Consequently, a low ADQR of 2.2 and below was calculated for all the three shares groups.

5. *Online Corporate Social Responsibility Information Items*

Online Corporate Social Responsibility Information (online CSR information) consists of eight items: environmental report, sports sponsorship, technology trade show sponsorship, donations to underdeveloped and deprived communities,

donations to areas hit by natural disasters, donations to schools in deprived areas, donations to medical foundations, and health and safety report.

Extent of Reporting

Table 7.29 Number of Disclosures for Items in Online Corporate Social Responsibility

Content of Corporate Websites Items	Number of Companies					Level of Importance
	A - Shares	A+B - Shares	A+H - Shares	Total n = 75	Total in %	
5. Online Corporate Social Responsibility Information Items						
a. Environmental Reporting	14	7	14	35	47%	Important
b. Sports Sponsorship	3	2	3	8	11%	Neutral
c. Technology Trade Show Sponsorship	7	1	5	13	17%	Neutral
d. Donations to Underdeveloped and Deprived Communities	16	9	16	41	55%	Neutral
e. Donations to Areas Hit by Natural Disasters	13	9	15	37	49%	Important
f. Donations to Schools in Deprived Areas	17	10	15	42	56%	Important
g. Donations to Medical Foundations	1	1	0	2	3%	Important
h. Health and Safety Report	16	4	14	34	45%	Important

According to Table 7.29, the disclosure rates for online Corporate Social Responsibility (CSR) items were not ideal. For the item *environmental reporting*, the panel believe that, since corporations have used a large portion of society's resources, corporations have a responsibility to disclose their goals and any actions they have taken to help the environment. Although the item was rated important by the stakeholders, only 13, seven, and 14 companies in A, A+B, and A+H shares respectively provided such an item on their website. For the items *sports sponsorship* and *technology trade show sponsorships*, the panel mentioned that it is still not common for Chinese firms to sponsor these types of events; thus, the disclosure rate would not be high. The stakeholders also agreed with this view and rated both of these items as neutral. The results for these two items were to be expected as only a few firms (in total six firms for sports sponsorship and 11 for technology trade show sponsorship) disclosed such information on their corporate website.

For the three donation items *donations to underdeveloped and deprived communities*, *areas hit by natural disasters*, and *schools in deprived areas*, it was expected that all 75 sampled firms would disclose these items on their website, because, as several panel members as well as the stakeholders stated, it is part of the Chinese culture that a party that has greater ability should help others in need. As the resources held by public traded organisations are gathered mainly from

their society, they not only have the ability but also the responsibility to aid the growth of that society. Thus, the stakeholders believed that listed corporations have an obligation to report what they have done to improve and develop the community. The results, however, showed that only 15, eight, and 16 firms with A shares, 12, eight, and 15 with A+B shares, and 16, nine, and 15 with A+H shares respectively presented these items on their websites. As to the fourth donation item, *donations to medical foundations*, it was assumed that there would at least be two disclosures, as two firms in A+B shares were in the medical sector. However, none of the sampled companies disclosed such information.

For the final item *health and safety report*, several stakeholders mentioned that Chinese corporations are now required to disclose an annual health and safety report, but it is not necessary to display it on corporate websites. However, many stakeholders believed that a company's *health and safety* report should be made available on its website because of its importance. The result, on the other hand, showed that 16 corporations from A shares, four from A+B shares, and 14 from A+H shares provided such reporting online. In addition, two companies (China Yangtze Power Company and Chongqing Changan Automobile) received a not applicable rating of 0 because the online CSR links on their website were faulty and could not redirect the page properly.

Overall, the disclosure rates were not up to the expectation of the stakeholders as many of the firms in the three groups failed to disclose their CSR information. When the number of disclosures for the CSR and the annual report items were compared, it seemed that the main reporting focus of Chinese corporations is still remains on annual report items.

Quality of the Disclosed Items

Table 7.30 Frequency of Qualitative Ratings for Disclosed Items of Online Corporate Social Responsibility

Content of Corporate Websites Items	A Shares						A+ B shares						A+ H shares					
	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR	1	2	3	4	5	ADQR
5. Online Corporate Social Responsibility Information Items																		
a. Environmental Reporting	0	2	7	4	0	3.2	0	4	3	0	0	2.4	0	7	5	2	0	2.6
b. Sports Sponsorship	0	1	1	0	0	2.5	0	1	0	0	0	2.0	0	3	0	0	0	2.0
c. Technology Trade Show Sponsorship	0	3	1	2	0	2.8	0	0	0	0	1	0.0	0	5	0	0	0	2.0
d. Donations to Underdeveloped and Deprived Communities	0	6	6	3	0	2.8	0	8	0	0	1	2.0	0	9	6	1	0	2.5
e. Donations to Areas Hit by Natural Disasters	0	5	4	3	0	2.8	0	8	0	0	1	2.0	0	9	5	1	0	2.5
f. Donations to Schools in Deprived Areas	0	7	5	4	0	2.8	0	9	0	0	1	2.0	0	8	6	1	0	2.5
g. Donations to Medical Foundations	0	0	0	0	0	0.0	0	0	0	0	1	0.0	0	0	0	0	0	0.0
h. Health and Safety Report	0	4	6	5	0	3.1	0	1	1	1	0	3.0	0	5	5	4	0	2.9

As is evident from the table above, the result for *environmental reporting* shows that only one company from A shares met all the criteria, and received a top rating of 5. The majority of the disclosures suffered several shortcomings. First, many of the reports provided tended to focus heavily on past achievements but omitted the goals and plans for the future. Second, only a few firms provided the environmental report on their English version of their website, and of these firms, fewer than five companies presented the report in both Chinese and English. It was expected that the quality of the disclosed information would be higher in order to convey an environmentally friendly image in the degenerating Chinese ecological environment. However, the results indicated that the quality level of many of the disclosed environmental reports still needs to be improved.

For the items *sports sponsorships* and *technology trade show sponsorships*, since it is not common for Chinese firms to sponsor these proceedings, the information disclosed is presumed to be minimal. As was expected, the quality of the disclosed *sports sponsorships* and *technology trade show sponsorships* was low. The main issues with the disclosed information were that there was no inclusion of details about the actual amount of money and/or types of supplies sponsored (e.g., water, food, or equipment). Furthermore, the information was omitted on the firms' English version website, and there was poor accessibility to the information (took users more than three mouse clicks to locate the data). In addition, A shares was the best performer among the three groups for these two items, as it was the

only group to have firms receive a rating above 2, and as a result, it has the highest ADQR for these two items.

As to the items *donations to undeveloped and deprived communities* and *donations to areas hit by natural disasters*, many sampled firms emphasised the praise they received for their past achievements. However, the background of the underdeveloped and deprived communities and areas hit by natural disasters was rarely provided in detail (e.g., population and economic losses in the areas), and the amount of money donated. Moreover, any future follow-up plans were seldom, or briefly, disclosed. The issues of accessibility were also identified as the information was hard to locate and/or it was not available on the English language versions of corporates' websites. Consequently, no shares groups obtained an ADQR above 3, indicating a mismatch with the quality demand of the stakeholders.

For the item *donations to schools in deprived areas*, the information provided was often in Chinese only, and many firms excluded descriptions of the available scholarships, the background of the schools, and follow-up plans for the future in their disclosed donations information. However, one company in A shares (the Industrial Bank) matched the quality demand of the stakeholders with disclosure of the detailed information that was often excluded by others. A issue with this disclosure, however, was the availability of the information. The item was not presented on the English version of the company's website, which cost it the top rating for this item. As to the item *donations to medical foundations*, since no sampled companies disclosed it on their corporate website, no quality assessment could be done. As a result, a 0 ADQR was allocated to each shares group.

Finally, for *health and safety report*, none of the sampled firms met all the criteria. The main issue with the disclosed information was that the narrations were brief, with no additional explanations on the policies set by the corporations. Also, the findings indicated that the disclosed item was seldom in English, and the information was available only on the Chinese version of corporate websites. With these deficiencies, 14 firms from A and A+ H-shares and 21 from A+ B-shares received a rating ranging from 2 to 4.

In summary, the results established that many features and technology items were not included on companies' websites, and Chinese corporations were still placing more emphasis on the disclosure of paper-based report items. As for the timeliness and quality of the disclosed items, financial items tend to be more up-to-date as well as better in quality than nonfinancial information. In terms of the reporting extent and quality, it was only in several items that the expectation of the stakeholders was matched or exceeded by the three shares groups. Many items that were deemed important or very important by the stakeholders were not disclosed well by the sampled companies. The results also indicated that there is a wide information gap between the demand of the stakeholders and the actual reporting of the corporations.

7.2.5 Current Level of Chinese CIR Practices

In the previous sections, the extent and quality of CIR by Chinese companies were examined. On the basis of these results, the current overall level of CIR practice in Mainland China was quite low, as many of the index items were not disclosed and the quality of the information and features was not great. Of the 71 index items, the total disclosure rate for 28 items was below 50% (three shares groups combined), and of those 28 items, 18 were rated important or very important by the stakeholders. As for quality, the comprehensiveness, accessibility and usability of the provided information and features failed to meet many of the criteria suggested by the stakeholders, as the three share groups were given an ADQR of 3 and below for 40 items (30 of which were rated important and very important). This finding indicates that the information provided lacked detail, could not be easily accessed, was difficult to find, or was included on the Chinese version of corporate websites only. Furthermore, the findings also identified that Chinese corporations did not incorporate high quality technological features on their website, as the disclosed items in the categories for User Support Features and Corporate Website Technologies were low in provision and quality. The result showed that 10 out of 18 items in User Support Features and six out of eight items in Corporate Website Technologies had less than 50% disclosures, and many features offered in these two categories were either hard to find, could not be accessed, or did not function properly. As several of these user support and technological items were recommended by the panel and rated as important or

very important by the stakeholders, this outcome showed a gap between the expectations of the stakeholders and the actual disclosure of corporations.

However, the current study also acknowledged several positive aspects in the Chinese companies' disclosure of CIR items. First, when the disclosure rate of several information items is compared with the results of Xiao et al. (2004) and Li et al. (2005), the disclosure level has improved. Table 7.31 shows the comparison of several information items' results between the current research and the two previous Chinese CIR studies.

Table 7.31 Comparison of the Disclosure Rates for Various Information Items

User Support & Corporate Technologies Features	The Current Research	Xiao et al. (2004)	Lin et al. (2005)
Quarterly Report	86.7%	25.1%	49.2%
Interim Report	86.7%	4.9%	51.1%
Annual Report for the Current Year	88.0%	33.0%	55.1%
Annual Report for the Past 6 Years	88.0%	45.8%	58.4%
Press Releases	100.0%	-	80.9%
Historical Share Prices Disclosed	26.7%	5.4%	6.5%
Historical Dividend Figures Disclosed	42.7%	-	15.5%
Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	28.0%	-	7.6%
Managers'/Directors' Background	58.7%	-	38.5%
Top 10 Stockholders	88.0%	71.9%	-
Company's charter	50.7%	8.4%	27.5%
Notes of Financial Statements	92.0%	42.9%	-
Management Report and Analysis	88.0%	69.5%	-
Segmental Reporting by the Line of Business	88.0%	69.0%	-
Segmental Reporting by Region	88.0%	69.0%	-
Summary of Key Ratios over a Period of at least 3 Years	88.0%	71.9%	-
Summary of Financial Data over a Period of at least 3 Years	88.0%	72.4%	-
Resolutions of Shareholders Meetings in Current Year	88.0%	52.7%	-
Material Events	88.0%	51.2%	-
Audit Report	92.0%	40.9%	-

Second, the disclosure timeliness of many sampled firms for items *annual reports* and *press releases* was consistent with the expectation of the stakeholders. Many of the disclosed annual reports (especially the reports provided by firms in A+H shares) were made available on corporations' websites either earlier than or at the

same time as required by the regulated reporting days (120). As for *press releases*, more than 45 firms in total had uploaded press releases a month (some even 2 or 3 days) before the assessment, which showed that the Chinese corporations were constantly updating their corporate news on their website. Third, even though the disclosure rates for many user support and technological items were not up to the expectation of the stakeholders, when compared with the results of Xiao et al. (2004) and Lin et al. (2005), there was a definite improvement. Table 7.32 below presents the brief comparison of the disclosures in several technological and support items.

Table 7.32 Comparison of the Disclosure Rates in User Support and Corporate Technologies Features between Chinese CIR Studies

User Support & Corporate Technologies Features	The Current Research	Xiao et al. (2004)	Lin et al. (2005)
English version of Website	77.0%	47.3%	46.6%
Help/FAQs	41.3%	2.0%	2.5%
Site Map	73.3%	31.0%	-
Site Search Features	46.7%	23.2%	11.2%
Link to Chinese Securities Regulatory Commission Website	26.7%	6.9%	11.8%
Link to the Chinese Stock Exchange Website that the Company is Listed in	21.3%		19.1%
Contact to the Webmaster	18.7%	18.7%	-
Instant Feedback Posting Feature	36.0%	11.8%	12.9%
Microsoft Office Documents	8.0%	0.5%	0.0%
Multimedia Technologies - Video and Audio	33.3%	0.5%	3.1%
PDF Files	91.0%	28.6%	-
Hyperlink Inside the Digitised Annual Report	20.0%	0.0%	3.4%

It is clear from this table that, although there is an improvement in supplying user support and corporate technology features on corporate websites, items such as *English version of website*, *sitemap*, and *pdf files* are of particular note, as their disclosure rate has increased dramatically to 70% and above.

In summary, although there were several positive highlights, the overall level of CIR practices was still weak, suggesting that Chinese firms were not utilising the Internet for communicating with various stakeholders in society. As the Internet has become a universal tool for reporting and disseminating corporate information to the public, this shortcoming has led to an information gap between the expectations of stakeholders and the actual reporting of Chinese corporations. It

would appear to be necessary for Chinese corporations to improve their level of CIR practice (both in extent and quality) in the future.

7.2.6 Application of the CIR Theoretical Framework

The constructed theoretical framework in this research (Refer to Chapter 4.) suggests that CIR can be seen as a tool that can serve as a communication bridge between an organisation and stakeholders. An organisation can adopt CIR practice to minimise information asymmetry by promoting two-way communication between itself and stakeholders. This communication will send a legitimacy signal to the public and at the same time discharge the organisation's accountability to various stakeholders. According to the views presented in the constructed theoretical framework, several factors have contributed to the current level of Chinese CIR practices.

First, since the reform of Chinese state-owned enterprises in the 1990s, many Chinese firms have been transformed from purely state-owned enterprises into shareholding structure corporations (state-owned, private-owned, and public-owned shares). Many firms also established a Western business structure and a modern corporate governance system. The relationship model of agent-principle between the management and various stakeholder groups (e.g., government agencies, shareholders, and potential investors) was introduced into the Chinese business context during the reform process. On the basis of this relationship model, information asymmetry between the management and the stakeholders often occurred. The concept of information asymmetry suggests that the stakeholders usually lack information about areas such as the operation, potential growth estimation, and corporate social responsibility of an organisation; therefore, they will require, and sometimes force, the organisation to disclose such information. Under such pressure, it is not surprising that the level of disclosure for financial information (e.g., annual reports, Chinese investment information, and industry information) and user support and technological features have improved over the years.

Second, when environmental and social problems erupted in China, many large public listed firms were heavily criticised by the public for overusing natural resources and devastating the ecological system for profit. Given this

circumstance, the current study assumed that Chinese corporations would adopt the expanded relationship model of organisation-stakeholders in terms of their CIR practice. This expanded relationship model advocates that an organisation is part of a broader societal system, and it should discharge its accountability not merely to shareholders, but also to other stakeholders in the society. In order to survive, corporations need to disclose not only financial, but also nonfinancial information, such as corporate social responsibility information, to gain and maintain legitimacy status. The results, however, showed that both the extent and quality of many online annual report information items were much greater than corporate social responsibility disclosures. This finding indicates that Chinese corporations continue to maintain an agent-principal relationship rather than adopting the wider perspective advocated by the organisation-stakeholder model. A possible explanation may be that currently the sense of citizen rights in China is not as robust as in many Western countries, so the social pressure put upon Chinese corporations is still not strong enough to force them to become more stakeholder (other than shareholders and potential investors) oriented in terms of information reporting. However, if the environmental and social problems worsen and the awareness of citizen rights becomes stronger (the Internet has begun to play a huge role in promoting citizen rights in China.), it is possible that more stakeholders (e.g., academics, environmentalists, and general citizens) will pressure Chinese companies to provide more and higher quality corporate social responsibility information on their website.

Third, the CIR theoretical framework also promotes two-way communication, indicating that organisations not only provide information to, but also need to receive feedback from, stakeholders in order to understand the information needs and wants of the public. However, as the results showed, many Chinese corporations did not adopt a two-way communication style as a large number of index items and items' qualitative criteria suggested by the panel members and the stakeholders were neither provided nor achieved. As a result, an extensive information asymmetry was identified. This discrepancy demonstrates that Chinese corporations are still focusing largely on a one-way style of communication in which companies provide information on the basis of their preference, rather than in consultation with public demands. Also, the low level of

availability in several feedback channels, for example, *email addresses* and *instant posting feedback features* indicates that Chinese firms are reluctant to provide a platform for stakeholders to express their opinions about the types of information they wanted to find or their concerns on corporate issues. As there is an increasing opportunity for Chinese stakeholders to raise their voice through the use of the Internet, Chinese corporations will need to change their current method of reporting and implement a more open and flexible communication style in order to better reflect the expectations of their society and reduce the information asymmetry.

In addition, the lack of a generally accepted CIR theoretical framework and practice guidelines, along with over-emphasis on the importance of financial information, might also be the reasons discouraging many companies from improving their current level of CIR practices. Without a generally accepted CIR theoretical framework and practice guidelines, it is likely that a corporation will follow its own preference to provide information online. As the majority of Chinese firms tend to believe that financial information is much more important than other types of data, it is not possible to expect them to disclose additional information other than financial data, not to mention meeting the information demand of the public. Therefore, a generally accepted CIR theoretical framework and practice guidelines must be developed to guide the CIR practice of Chinese corporations.

In summary, the current overall level of CIR practice in Mainland China was not great as many of the index items were not disclosed and the quality of the information and features provided was poor. Based on the CIR theoretical framework constructed for this research, several factors that had contributed to the current level of Chinese CIR practices were identified and discussed. First, the effect of agent-principal relationship model has positively influenced the level of disclosure by Chinese corporations. However, other factors, such as low recognition of the organisation-stakeholder relationship, perpetuate a largely one-way communication style. Moreover, a lack of a generally accepted CIR theoretical framework and practice guidelines, and a financial information focus have negatively contributed to the current level of Chinese CIR practices.

The next section reviews and analyses the category and final CIR qualitative scores by listing status and industries.

7.3 CATEGORY AND FINAL CIR QUALITATIVE SCORES BY LISTING STATUS AND INDUSTRIES

As the Chinese stock market is unique in that the shareholding structure of public firms can either be single (A shares) or dual-listed (A+B or A+H shares), it would be interesting to compare the category and final scores of CIR for companies with different shareholding structures. The category and final scores of CIR by industry type were also examined in order to explore which industrial sector in China is leading in online disclosure performance. In order to further analyse the scores, a significance test was also conducted to discover the possibly significant differences in the category and final CIR qualitative scores between the three listing statuses and industry groups. In addition, the application of the constructed CIR theoretical framework is also presented.

7.3.1 Category and Final CIR Qualitative Scores by Listing Status

The category and final CIR qualitative scores by listing status are shown below (For the scores of each sampled company, please refer to Appendix H.).

Table 7.33 Category and Final CIR Qualitative Scores by Listing Status

Listing Status	Explanation	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
	Available Maximum Scores:	17.5	27.7	17	37.8	100
A - Shares (n = 25)	Average	7.8	14.2	5.9	20.3	48.3
	Standard Deviation	1.1	6.6	1.0	4.8	9.6
	No. of Companies with a Total Score over 50					13
	No. of Companies with a Total Score over 55					6
	No. of Companies with a Total Score over 60					1
A + B - Shares (n = 25)	Average	6.8	11.5	5.3	15.4	38.9
	Standard Deviation	1.2	6.3	1.0	5.7	11.1
	No. of Companies with a Total Score over 50					4
	No. of Companies with a Total Score over 55					1
	No. of Companies with a Total Score over 60					0
A + H - Shares (n = 25)	Average	7.8	14.2	5.9	20.7	48.6
	Standard Deviation	0.8	5.9	0.8	1.6	5.9
	No. of Companies with a Total Score over 50					13
	No. of Companies with a Total Score over 55					2
	No. of Companies with a Total Score over 60					0

From the table it can be seen that the A+B shares group appeared to have the lowest average category and total score (of 38.9) when compared to the scores for A and A+H shares groups which came out at 48.3 and 48.6 respectively. This result is because the A+ B-shares group has the lowest scores in every category. Both A and A+H shares, on the other hand, have very similar category scores in User Support Features on Corporate Websites, Timeliness of Information on Corporate Websites, Corporate Website Technologies, and Content of Corporate Websites (e.g., 7.8 vs. 7.8, 14.2 vs. 14.2, 5.9 vs. 5.9, and 20.3 vs. 20.7). The A and A+H shares groups also have the same number of companies scoring over 50 (13 firms); however, A shares is the only group with a score of 60 and above (one company). In addition, the A+B shares group appears to have the lowest number of companies with a score of over 50 (five firms) when compared to the other two groups.

These results are a surprise as dual-listed firms are open to attracting foreign investors in which during the process they may obtain knowledge regarding the online reporting behaviour of overseas companies. Also, numerous sampled corporations, especially firms from A+H shares, are large companies (in terms of market capitalisation) as well as top performers in their industries. It was assumed that for these reasons dual-listed firms would be more active in reporting their corporate information and offer advanced corporate technologies online.

The overall reporting level, however, indicates that the quality of the disclosed items and the information availability of the three share groups are still below the expectations of the panel and the stakeholders. This situation results because various items that are considered to be important by the panel and the stakeholders are hardly disclosed (e.g., explanation of technical terms, access to Google search engine on companies' homepage, and video/audio playing software). Many of the disclosed items, on the other hand, did not meet the criteria suggested by the panel and the stakeholders. The quality rating for many sampled companies' disclosed items was below 3, and none of the firms from the three groups achieved a top rating for more than 30 items (from a total of 71 items). These results demonstrated the existence of a gap between the demand and expectations of the stakeholders and the actual reporting by the sampled public listed organisations. Clearly with the current online reporting behaviour, it is

unlikely that this gap will reduce. In order to achieve that end, further improvements must be made to enhance the quality and availability of the items so as to better build a communication bridge between the stakeholders and corporations.

In order to further analyse the scores by listing status, a significance test was also conducted.

Significance Test

The purpose of the following analysis is to evaluate any significant difference in the information scores between the three listing statuses. Use of the common ANOVA assumes a normal distribution for each group with the same variance in the population. As the result of statistical tests (normality, homogeneity, and robust tests) showed that the scores were nonparametric, an alternative Kruskal-Wallis test, which does not require the assumption of normality, was used. The table below shows the result of the Kruskal-Wallis test.

Table 7.34 Kruskal-Wallis Tests for Differences in Total Score, User Support Features, Timeliness, Technologies, and Content – Listing Status

Average Scores & Significance Results					
Listing Status	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A Shares	48.3	7.8	14.2	5.9	20.3
A+B Shares	38.9	6.8	11.5	5.3	15.4
A+H Shares	48.6	7.8	14.2	5.9	20.7
Significance Level	0.001***	0.002***	0.115	0.038**	0.000***

***. The mean difference is **Highly Significant** at the 0.01 level.

** The mean difference is **Significant** at the 0.05 level.

*. The mean difference is **Moderately Significant** at the 0.1 level.

According to the table above, there was strong evidence of a significant difference in the scores of the three listing statuses for the categories Total Score, User Support Features on Corporate Websites, Corporate Website Technologies and Content of Corporate Websites in which the p-values were all at the significance level of 0.05 and below. This result indicates that, overall, A and A+H shares firms tend to disclose and offer significantly more information and website features than do A+B shares corporations. However, it is difficult to confirm from this analysis whether there is a difference between A and A+H shares regarding

the amount of information presented and features provided. Therefore, a post hoc study is conducted. The table below shows the results of the post hoc test.

Table 7.35 Post Hoc Tests for Differences in Total Score, User Support Features, Timeliness, Technologies, and Content – Listing Status

Listing Status	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A V.S A+B	0.002***	0.003***	0.077*	0.036**	0.000***
A+H V.S A+B	0.001***	0.002***	0.069*	0.019**	0.000***
A+H V.S A	.712	.697	.969	.812	.669

***. The mean difference is Highly Significant at the 0.01 level.

** . The mean difference is Significant at the 0.05 level.

*. The mean difference is Moderately Significant at the 0.1 level.

As the above table shows, the disclosure level with regard to the extent, comprehensiveness, accessibility and usability, and timeliness of firms in A and A+H shares groups are significantly higher than that for companies in A+B shares. There are several explanations for this result. . There are several explanations for this result. Firstly, A+B shares companies tend to be smaller in size; thus, they may have fewer resources to refine or disclose more information on their website. Secondly, A+B shares firms are more inclined to use their website as a marketing tool than for reporting practice. It was found that these firms disclosed much information about their products and services, yet provided little on non-marketing related data. Thirdly, A+B shares companies may not be aware of the importance of maintaining high online reporting quality as they are normally local organisations and they tend to focus on the domestic market. Thus, A+B shares firms may put minimum effort on their CIR practice. For A and A+H shares groups, on the other hand, no significant result was found, indicating that the level of disclosure between companies in A and A+H shares was similar. The test indicates that the provision and quality of the CIR items between firms in A and A+H shares are very similar.

On the basis of the analyses above, the average category and final scores, as well as the level of reporting between A and A+H shares are comparable, and this similarity indicates that firms in A and A+H shares have similar provision and quality on their CIR practices. This finding is consistent with the view of the constructed CIR theoretical framework, as it recognises the possibility of similar

CIR practices between organisations (or groups of organisations), because in order to survive and to respond to the institutional pressure from the business context or society, organisations tend to adopt the institutional practice of other organisations and become more similar in structure and behaviour (e.g., reporting behaviour) (DiMaggio & Powell, 1983; Deegan, 2002; Dillard et al., 2004). Since many firms in both the A and A+H shares groups are some of the largest in the Chinese market, society tends to scrutinise them more closely by monitoring and comparing them in respect to their operations, performance, and disclosures. Therefore, under such pressure from society (e.g., shareholders, investors, the Government, and competitors), A and A+H shares firms may imitate each other's CIR practices, and as the results have shown, the extent and quality of their CIR practices are gradually becoming similar.

7.3.2 Category and Final CIR Qualitative Scores by Industry

According to the industry classifications provided by the Hong Kong Exchange and Clearing Ltd and the Shanghai Stock Exchange, the sampled firms were classified into seven categories comprising manufacturing, mining and quarrying, finance and insurance, transportation and storage, real estate and construction, electricity, gas, and water, and others (e.g., medicine, jewellery, retail, and IT). The category and final CIR qualitative scores by these seven industries are exhibited in the table below (For the scores of the sampled companies, please refer to Appendix I.).

Table 7.36 Category and Final CIR Qualitative Scores by Industry

Industry Type	Explanation	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
Available Maximum Scores:		17.5	27.7	17	37.8	100
Manufacturing (n = 28)	Average	7.4	11.1	5.6	17.2	41.3
	Standard Deviation	1.0	6.2	1.1	5.8	10.1
Mining & Quarrying (n = 8)	Average	7.0	13.5	5.5	19.2	45.3
	Standard Deviation	0.8	7.7	0.7	4.5	10.5
Finance & Insurance (n = 21)	Average	8.2	14.9	5.9	20.8	49.8
	Standard Deviation	0.9	5.2	0.8	2.5	6.0
Transportation & Storage (n = 5)	Average	6.6	13.2	6.0	20.4	46.2
	Standard Deviation	1.9	7.1	1.2	2.9	8.8
Real Estate & Construction (n = 5)	Average	7.0	15.8	6.0	21.8	50.7
	Standard Deviation	1.3	6.9	0.6	1.5	6.2
Electricity, Gas, & Water (n = 3)	Average	8.1	16.4	6.5	19.3	50.3
	Standard Deviation	0.1	1.4	1.2	1.7	4.2
Others (n = 5)	Average	6.4	13.4	4.8	13.3	37.9
	Standard Deviation	1.1	8.7	1.2	7.7	17.6

As the above table shows, the finance and insurance and the electricity, gas, and water industries scored the highest for the category of User Support Features on Corporate Websites with an average score of 8.2 and 8.1 respectively. The other industry grouping, on the other hand, was the poorest with an average score of 6.4. For the Timeliness of the information on corporate websites, real estate and construction and electricity, gas, and water demonstrated the highest average qualitative scores of 15.8 and 16.4, whereas the manufacturing industry obtained the lowest online reporting score of 11.1. The electricity, gas, and water industry was again the top scorer achieving the highest average score of 6.5 for the category of Corporate Website Technologies, while the others group was the poorest with an average score of 4.8. As to the disclosure of Content of Corporate Websites items, real estate and construction achieved the highest average score of 21.8 and the others group again received the lowest average score of 13.3.

For the total CIR qualitative score, the best performers are real estate and construction and the electricity, gas, and water industry which achieved similar average total scores of 50.7 and 50.3, while the others group obtained the lowest score of 37.9. This result was not a surprise as five of the eight companies in real estate and construction and the electricity, gas, and water industry are owned by

the state or heavily controlled by the state. This fact means that those companies should be accountable to the people and to Chinese society as a whole; therefore, it is to be expected that they would be more active in CIR. The finance and insurance industry was the second best performer as it achieved an average score of 49.8. The other four industries comprising transportation and storage, mining and quarrying, manufacturing, and others had a similar disclosure quality and overall level of reporting for which they have an average total score of 46.2, 45.3, 41.3, and 37.9 respectively. In addition, a significance test was also conducted to perform an in-depth analysis of the significant difference between each the industry groups.

Significance Test

In order to test the significance of reporting level by industries, the groupings for each business sector needed to be rearranged, because the number of companies in each industry group is very uneven (e.g., finance and insurance had 21 firms whereas electricity, gas, and water had only 3). In order to solve this problem, the author decided to reorganise the companies into three new industry groups: manufacturing (28 firms), finance and insurance (21 firms), and others (26 firms). As the data of the three industry groups were nonparametric, the Kruskal-Wallis test was adopted once again. The table below shows the result of the Kruskal-Wallis test.

Table 7.37 Kruskal-Wallis Tests for Differences in Total Score, User Support Features, Timeliness, Technologies, and Content - Industries

Average Scores & Significance Results					
Industry Group	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
Manufacturing	41.3	7.4	11.1	5.6	17.2
Finance & Insurance	49.8	8.2	14.9	5.9	20.8
Others	46.0	7.0	14.4	5.6	18.9
Significance Level	0.011***	0.001***	0.088*	0.663	0.075*

***. The mean difference is **Highly Significant** at the 0.01 level.

. The mean difference is **Significant at the 0.05 level.

*. The mean difference is **Moderately Significant** at the 0.1 level.

According to the table above, a significant difference in the reporting level was found between the three industry groups for categories of Total Score, User Support Features on Corporate Websites, Timeliness of the Information on Corporate Websites and Content of Corporate Websites. This result indicates that,

overall, firms in finance and insurance tend to disclose and offer significantly more information and website features than corporations in the other two business sectors. This result is consistent with the views in the constructed CIR theoretical framework. The framework suggests that organisations tend to have similar reporting levels in their own business sector and differ from firms in other industries. Also, in order to survive in their society, firms need to signal the public positively to gain legitimacy status and to maintain a good relationship with stakeholders. Based on these views, the assumption can be made that firms within the same industry are likely to have similar levels of disclosure, because a firm's failure to adopt similar disclosure practices to others in an industry can be interpreted as a negative signal by the public (Craven & Marston, 1999; Aly et al., 2010), and this signal can damage the relationship between an organisation and its stakeholders. On the basis of this argument, it was not surprising that a significant difference was found between the three industry groupings.

The next section reviews and examines the relationships between the qualitative determinants and CIR practice in China.

7.4 QUALITATIVE DETERMINANTS OF CHINESE CIR PRACTICE

Research regarding the significance relationship between the qualitative determinants (also known as qualitative or influential factors) and CIR practices in countries such as the US, the UK, Germany, and Malaysia has been undertaken in many previous studies (Patten, 2002; Marston & Polei, 2004; Haniffa & Rashid, 2004; Abdelsalam et al., 2007; Kelton & Yang, 2008; Homayoun & Rahman, 2010; Dâmaso & Lourenço, 2011). However, only a small number of analyses have been carried out in the Chinese context (Xiao et al., 2004; Lin et al., 2005). In order to fill this research gap, this current study explored the possible relationship between qualitative factors such as company size, profitability and ownership structures, and the overall quality of the CIR practice of Chinese corporations. In addition, the concepts such as agency costs, information asymmetry, signalling, and organisation – stakeholder relationship included in the developed theoretical framework were also adopted to explain the possible

relationship between the qualitative determinants of CIR and the extent and quality of CIR practice.

7.4.1 Research Approach

As many previous studies (e.g., Marston & Polei, 2004; Xiao et al., 2004; Uyar 2012; Boubaker et al., 2012) adopted Pearson Correlation as part of their method to test the significance of the qualitative determinants' relationship with CIR practice, it may seem appropriate to adopt the same method for this current research. However, most parametric statistical analysis methods such as Pearson Correlation assume that the data are normally distributed with the same variance in the population. So it was necessary to test the normality and homogeneity of the data to verify whether it could meet this assumption. As all the data of the three shares groups were nonparametric, an alternative method to Spearman Correlation which does not require the assumption of normality was chosen for exploring the significance of the relationship between the qualitative factors and CIR practice in China.

7.4.2 Qualitative Determinant Characteristics and Chinese CIR Practices

This section examines the correlations between CIR practices by Chinese firms and a variety of determinant factors such as firm size, profitability (or firm performance), and the three Chinese specific shareholding structures (e.g., state ownership, institutional ownership, and public ownership). The results of the examination into each of these determinant characteristics is presented and discussed next.

Firm Size

Company size has been identified as one of the qualitative factors that could influence the extent of companies' CIR practice. Various studies (e.g., Bonsón & Escobar, 2002; Debreceny et al., 2002; Marston & Polei, 2004; Celik et al., 2006; Desoky & Mousa, 2009; Dâmaso & Lourenço, 2011; Joshi & Al-Bastaki, 2011) pointed out that companies of greater size are likely to disclose more information either on paper or via the Internet for several reasons. First, large companies are likely to have lower reporting and competitive costs in preparing and disclosing information (Ferguson et al., 2002). Second, corporations of greater size tend to possess more resources and necessary knowledge that allow them to better utilise

the Internet for reporting purposes (Boubaker et al., 2012) than smaller firms do. Third, additional disclosures allow shareholders of large size firms to employ fewer monitoring measures to control the management teams, which decrease the agency costs and information gap between the shareholders and the managers. Fourth, companies of larger size tend to have higher political costs than smaller companies because they are subject to public and regulatory scrutiny. Without proper attention, this may cause a high tension in the relationship between corporations and their stakeholders (e.g. shareholders, potential investors, and general citizens) in a society. Thus, they are likely to disclose more information to legitimise their status in the society to gain public support for reducing such costs (Xiao et al., 2004).

The value of total asset, as well as the natural logarithm (log) of market capitalisation, is often adopted as a proxy to denote the size of a firm. For this study, the natural log of market capitalisation is chosen as a measurement base of corporate size for three reasons. First, many previous studies such as Larran and Giner (2002), Haniffa and Rashid (2004), Hamid and Salleh (2005), Kelton and Yang (2008), and Dâmaso and Lourenço (2011) have selected this method to represent corporate size, which shows that this proxy is an acceptable measurement in a wide range of national contexts. Second, Xiao et al. (2004) have demonstrated that market capitalisation is an appropriate corporate size measurement in the Chinese context. Lastly, a natural logarithm of market capitalisation can help to avoid the impact of skewed data in the statistical analysis. The results of the analysis are presented on Table 7.37.

As the table shows, a significant positive correlation was found between firm size and the extent and quality of Content of Corporate Websites in the A and A+H shares groups. As many A and A+H shares firms are some of the largest corporations in the Chinese market, it was expected that, due to reasons such as greater political costs, higher public and regulatory scrutiny, and more resources on hand, these firms would report significantly more information to legitimise their status in the society to gain public support. Thus, it would not be surprising that they would have better content on their corporate website. This outcome is also consistent with the findings of Xiao et al. (2004) and Lin et al. (2005). In the case of A+B firms, since the size of these companies is relatively small when

compared to A and A+H shares firms, so it was not surprising that no significant relationship was identified for this group.

Table 7.38 Spearman Correlation Tests between Firm Size and Chinese CIR Practices

Listing Status	Total Score	Firm Size			
		User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	0.119	0.219	-0.029	-0.126	0.371*
A+B	0.206	0.286	0.239	0.150	0.249
A+H	-0.051	0.297	-0.287	-0.164	0.496**

***. The mean difference is **Highly Significant** at the 0.01 level.

.. The mean difference is **Significant at the 0.05 level.

*. The mean difference is **Moderately Significant** at the 0.1 level.

Profitability

Profitability is suggested to be another determinant that can influence the extent of CIR practice. The measurement bases for profitability can differ between studies (e.g., net income and earnings per share); however, the most common ones are found to be return on asset (ROA), return on equity (ROE), and profit after tax (PAT). By using these measurement bases, various studies have found consistent outcomes that support the positive association of CIR practice and profitability (e.g., Celik et al., 2006; Almilia, 2009; Homayou & Rahman, 2010; Aly et al., 2010; Boubaker et al., 2012). Several writers suggested reasons behind the positive association of profitability and CIR practices. For instance, Amilia (2009), Agyei-Mensah (2011), and Boubaker et al. (2012) believe profitable companies may have more financial resources on hand to disclose more information voluntarily. As suggested by signalling theory, more profitable firms tend to signal their high performance to investors and differentiate themselves from low performance competitors. Aly et al. (2010) also indicated that by disclosing more information, especially positive news to the public, the management of profitable firms can showcase their ability, which can help them to ensure the continuation of their position as well as increasing the levels of their compensation.

In order to test the association between profitability and the extent and quality of CIR practices by A, A+B, and A+H shares firms, ROE and PAT were chosen as a proxy to determine the performance of corporations. In addition, it is interesting to

find that the PAT and ROE in some large companies (e.g., Kweichow Moutai Company, China Pacific Insurance Group, and SANY Heavy Industries) are lower than firms with a smaller size (e.g., China Merchants Bank, Bank of Communication, and Anhui Conch Cement). The detail of each sampled companies' capitalisation, PAT and ROE can be found on Appendix K. The results of the test are shown in the table below.

Table 7.39 Spearman Correlation Tests between Profitability and Chinese CIR Practices

Profitability - PAT					
Listing Status	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	0.264	0.294	0.112	-0.153	0.461^{***}
A+B	0.356^{**}	0.281	0.345[*]	0.088	0.401^{**}
A+H	-0.184	0.332	-0.410^{**}	-0.221	0.507^{***}
Profitability - ROE					
Listing Status	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	-0.417^{**}	-0.141	-0.375^{**}	-0.330	-0.174
A+B	-0.145	-0.217	0.051	-0.142	0.000
A+H	-0.050	0.256	-0.143	0.001	0.173

*****.** The mean difference is **Highly Significant** at the 0.01 level.

****.** The mean difference is **Significant** at the 0.05 level.

*****. The mean difference is **Moderately Significant** at the 0.1 level.

It can be seen that when profitability is measured by PAT, all three shares groups are significantly positively related to the Content of Corporate Websites. This result is consistent with the assumptions of Amilia (2009), Agyei-Mensah (2011), and Boubaker et al. (2012), as they stated that profitable companies tend to signal their high performance to the public through additional disclosures in order to differentiate themselves from low performance firms. In addition, only the A+B shares group is significantly positively correlated to Total Scores and Timeliness of the Information on Corporate Websites. Since A+B shares firms are relatively small in size when compared to A and A+H companies, they tend to have less competitive advantage in terms of attracting potential investors (both domestic and foreign) in the Chinese sharemarket. Therefore, one can assume that high profitability A+B shares firms are likely to signal their performance to

differentiate themselves from low earning A+B companies and thus enhance their competitive advantage over A and A+H shares corporations for market capitalisation.

It was interesting to find that profitability-PAT and profitability-ROE were significantly negatively associated with several index categories for the A and A+H shares groups. There are three reasons that may explain this outcome. First, some profitable companies may use accounting information to explain bad news rather than to promote good news (Uyar, 2012). Thus, it is likely that these firms will delay the exposure of such information to the public to minimise the negative influence of bad news. Second, signalling the public about high profitability may attract more competitors into the market, which can result in higher competitive costs and reduce profits in the future (Sánchez et al., 2011). Third, as A and A+H shares groups contain some of the largest companies in China it is likely that their disclosed information would be closely scrutinised by the public. Therefore, they may disclose the information in a delayed manner to ensure any negative influence of the provided data is minimised. This may de-motivate profitable firms from disclosing rich and timely information on their website.

State Ownership

State-owned shares are a type of non-tradable A shares normally owned by the Chinese Government, or an entity that represents the Government. Although many state-owned enterprises are releasing their state-owned shares to the market, the Government is still the block-holder in many publicly listed enterprises. It is assumed by various writers that the higher the proportion of state ownership in a firm, the less likely it is that it will engage in voluntary reporting and CIR (Ferguson et al., 2002; Xiao et al., 2004; Xiao & Yuan 2007). For instance, Xiao et al. (2004) found a negative relationship effect between the extent of CIR and state-owned shares ownership. This situation is due to the fact that this type of shareholder does not have company profitability as its primary concern, and the shareholders usually have privileged access to private information (Xiao et al., 2004). Therefore, the greater the proportion of state-owned shares in a company, the less likely it is to adopt CIR to disclose additional information. Other writers (e.g., Xiao & Yuan, 2007; Wang et al., 2008; Tagesson, et al., 2009), however, believe that since state-owned enterprises tend to be scrutinised by mass media

and ought to serve as good reporting examples to privately own firms, the state would be likely to pressure them to disclose more information to the public to portray an image of transparency. Similarly, as the Chinese Government is interested in developing an image of a good reputation and transparency through current state-owned enterprises, many listed corporations, especially high state ownership firms are encouraged to pay extra attention to additional disclosure (Xiao & Yuan, 2007; Wang et al., 2008).

In order to test the relationship between state ownership and the extent and quality of CIR, the percentage proportion of state-owned shares in the total number of shares was calculated for each sampled firm. The table below presents the correlation between state ownership and Chinese CIR practices.

Table 7.40 Spearman Correlation Tests between State Ownership and Chinese CIR Practices

Listing Status	Total Score	State-Ownership			
		User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	-0.086	0.212	-0.027	-0.263	-0.267
A+B	-0.108	-0.144	0.064	-0.248	-0.299
A+H	0.035	0.124	-0.004	-0.062	0.086

***. The mean difference is **Highly Significant** at the 0.01 level.

** The mean difference is **Significant** at the 0.05 level.

*. The mean difference is **Moderately Significant** at the 0.1 level.

No significant correlation was found between state ownership and Total Score and each of the item's categories. This result contrasts with the findings of Xiao et al. (2004) and does not support the assumptions of other writers such as Xiao and Yuan (2007) and Wang et al. (2008). This result may indicate that since state shareholders already have access to private information, they may be less likely to intervene in, as well as pay attention to, the online reporting practice (e.g., timeliness and content of information) of a corporation.

Institutional Ownership

Institutional shares, which are another type of non-tradable A shares, are normally held by domestic companies, where the state is the majority shareholder, and other non-individual legal entities or institutions. Previous empirical evidence showed that institutional ownership has a positive impact on the adoption and extent of

CIR. For instance, Xiao et al. (2004) found a positive relationship effect on institutional ownership and Internet reporting. This result indicates that as some institutions may be partly owned by government, they have the ability to direct the amount of information disclosed by corporations (Xiao et al., 2004). Consistent with this finding, Lin et al. (2005) also found a positive relationship between online information disclosure and institutional ownership. They explained that as many institutional investors are government officials or companies owned by local government agencies, they have the ability and power to demand the release of extra information. Furthermore, as pointed out by Wang et al. (2008), since the government is trying to develop a transparent image for listed companies, these institutional investors are likely to pressure firms to disclose more information.

In order to test the institutional ownership and CIR practice level of the three shares groups, the percentage proportion of institutional shares in the total number of shares was calculated. Table 7.40 shows the association between institutional ownership and Chinese CIR practices.

Table 7.41 Spearman Correlation Tests between Institutional Ownership and Chinese CIR Practices

Listing Status	Total Score	Institutional Ownership			
		User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	0.241	-0.079	0.281	-0.006	-0.232
A+B	0.179	-0.158	0.422**	-0.095	-0.127
A+H	-0.196	-0.120	-0.086	-0.158	-0.261

***. The mean difference is **Highly Significant** at the 0.01 level.

** . The mean difference is **Significant** at the 0.05 level.

* . The mean difference is **Moderately Significant** at the 0.1 level.

Institutional ownership is found to have significantly positive correlation to Timeliness of the Information on Corporate Websites for A+B shares only. The one may assume that because some institutions have the ability to direct the amount of information disclosed by corporations (Xiao et al., 2004; Lin et al., 2005), they may also possess the power to enforce timely disclosures. Therefore, it is possible that institutional shareholders in A+B shares firms are able and more likely to pressure the management to release information in a timely fashion. In

addition, no significant relationship was found between institutional ownerships and Total Score and all the item categories for the remainder of the share groups.

Public Ownership

Public shares are a type of tradable A shares that can be purchased by individual investors in SHSE and SZSE. Companies with high proportions of tradable A shares also indicate a high ownership spread or dispersion. Agency theory suggests that information asymmetry as well as agency costs tend to increase when the shareholding structure of a company becomes more dispersed (Fama & Jensen, 1983; Marston & Poley, 2004; Boubaker et al., 2012). Therefore, it is expected that companies with higher levels of ownership diffusion are more likely to disclose additional information voluntarily in order to reduce information asymmetry and the related agency costs (Boubaker et al., 2012). Several empirical studies (e.g., Marston & Poley, 2004; Fekete, Tiron-Tudor, & Mutiu, 2009; Aziz et al., 2011; Boubaker et al., 2012) also supported these views and found a positive relationship between public ownership and CIR practices. In China, consistent with the outcome in other contexts, Lin et al. (2005) also found a positive association between public ownership and the extent of Chinese CIR practices. However, no relationship effect was found in the study of Xiao et al. (2004). Xiao et al. (2004) suggested that relatively low proportional individual investors' ownership and limited access to the Internet may be the cause of their finding.

To test the association between public ownership and Chinese CIR practices for this research, the percentage proportion of public shares in the total number of shares was determined. Table 7.42 presents the association between public ownership and Chinese CIR practices.

Table 7.42 Spearman Correlation Tests between Public Ownership and Chinese CIR Practices

Public Ownership					
Listing Status	Total Score	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites
A	-0.036	-0.188	-0.081	0.158	0.323
A+B	-0.031	0.080	-0.266	0.148	0.128
A+H	0.059	-0.234	0.125	-0.104	-0.107

***. The mean difference is **Highly Significant** at the 0.01 level.

** . The mean difference is **Significant** at the 0.05 level.

* . The mean difference is **Moderately Significant** at the 0.1 level.

Similar to Xiao et al. (2004), this research also found no significant relationship between public ownership and the extent and quality of Chinese CIR practices. Interestingly, the proportions of public ownership in the majority of the sampled companies in this research are all higher than 60%, some even up to 80% or 100%. On this basis, it can be assumed that Chinese corporations still focus heavily on providing information based on their own preferences and disregard the information demands of the public. Therefore, even with the high proportion of public ownership, no effect on reporting can be found.

7.5 CHAPTER SUMMARY

In this chapter the extent and quality of CIR by Chinese corporations are assessed and different analyses are performed to further interpret the results. These analyses include: item by item and information asymmetry, current CIR level and CIR theoretical framework, listing status and industrial sectors, significance tests, and the associations between CIR and a series of determinant factors.

The item by item analysis found that many items, especially user support and technological features, which were deemed important or very important by the stakeholders, were either not disclosed or had a disclosure rate of 50% and below. Although more than 80% of the sampled firms incorporated online annual report items (e.g., financial statements and audit reports) into their corporate websites, the stakeholders expected that these items would have a 100% disclosure rate. In the case of disclosure quality, only a small number of firms in the three shares groups fully met the qualitative criteria suggested by the stakeholders. Much of the information provided and the features offered lacked details, were hard to

locate, or were provided on Chinese versions of corporate websites only. On the basis of these findings, a wide information gap between the demand of the stakeholders and the actual reporting of the corporations was identified.

On the basis of the item by item analysis, the current level of Chinese CIR practices was not great. However, several positive highlights were also acknowledged, as positive improvements were found on the disclosure rates of several financial, user support and technological features when compared with the results of previous Chinese CIR studies. When the constructed theoretical framework was applied to the current research findings, several factors that contributed to the current level of Chinese CIR were identified. It was found that under the effect of the agent-principal relationship model and information asymmetry concept, stakeholders (e.g., the government officials, shareholders, and potential investors) tend to force the organisation to perform additional disclosure. This coercion contributed to the improvement in the disclosure rate of several index items. However, many firms continue to maintain an agent-principal relationship model rather than adopting the wider perspective of an organisation-stakeholder model, to focus on a one-way communication style, to lack a generally-accepted CIR theoretical framework and practice guideline, and to over-emphasise the importance of financial information. These factors have contributed negatively to the current level of Chinese CIR practices.

In order to further analyse the results, the category and final scores by listing status and industry sectors were examined, and significance tests were also conducted. It was found that A and A+H shares groups have similar average final CIR qualitative scores, and that the A+B shares group has the lowest average final score. For the disclosure performance amongst the industries, the real estate and construction and electricity, gas, and water industry have the highest average final score amongst the industries, while the “others” group obtained the lowest. In the significance test, it was found that A and A+H shares groups report significantly more than A+B shares, and a significant difference in the reporting level between the three industry groups (financial and insurance, manufacturing, and others) was also identified.

Finally, consistent with many previous studies, this research also tested the relationship between Chinese CIR practices and various qualitative determinate factors. Factors such as firm size, profitability-PAT, and institutional ownership are significantly positively correlated with several index categories and Total Score for A, A+B, or A+H shares group. Determinants such as profitability-PAT and profitability-ROE were both found to be significantly negatively associated with Timeliness of Information on Corporate Websites for A and A+H shares, and profitability-ROE was also significantly negatively related to Total Score for A shares. No significant relationship was found in all the index categories and Total Score for the three shares groups in the case of state ownership and public ownership for the three shares groups.

In the next chapter, the summary, recommendations and future research opportunities for the thesis are presented.

CHAPTER EIGHT

SUMMARY, CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

This last chapter of the thesis provides a review of the research and explains how the research objectives have been achieved. The chapter also presents the recommendations for Corporate Internet Reporting (CIR) guidelines applicable to the Chinese context on the basis of the research findings. The chapter draws to its conclusion with the presentation of opportunities for further research.

8.2 REVIEW OF THE THESIS

For decades companies have published reports and disseminated information through traditional paper-based methods such as annual reports. This traditional method of reporting has now been identified as untimely, irrelevant, and unable to properly reflect the current state of the business world. CIR, on the other hand, offers flexible presentation, wide coverage, improved timeliness, greater accountability, and large information capacity; it also can help companies to create an image of transparency. With these many advantages, the number of companies that have implemented Internet reporting to disclose information has increased greatly since the late 1990s. Commensurate with this trend, research regarding the extent of CIR practice in various contexts is growing. However, in China, many corporations are lagging behind in the uptake of this technology, and no CIR practice model from the perspective of Chinese stakeholders to guide Chinese listed companies has been developed. In order to address this issue, the current research was conducted in the Chinese context.

The overall aim of this study was to develop and apply a CIR practice model for Chinese public listed companies and to make recommendations to improve Chinese CIR practice. To achieve this end, there were three primary research objectives:

1. To develop a qualitative disclosure index from the perspective of Chinese stakeholders;

2. To assess the extent and quality of CIR practice by Chinese listed corporations;
3. To explore the factors which may determine the extent and quality of CIR practice by Chinese listed companies.

In the following, the way in which each of these objectives was achieved is reviewed.

8.2.1 Development of the Disclosure Index

The first research objective was to develop a qualitative disclosure index which reflected the perspective of Chinese stakeholders; four steps were involved in this process.

The first step involved two procedures: the review of relevant sources to obtain potential disclosure items, and the consultation process with the panel of experts. An initial list of 72 items was identified through the review of prior literature, Chinese accounting standards, CSRC regulations, and the websites of the 20 largest companies in the world. Two-rounds of consultation process with a panel of 25 experts were then conducted, and this further extended the list to 85 items. The second step of the index development was to weight the relative importance of the CIR items. Weightings were assigned to each of the items and categorised by 46 stakeholders through the use of a questionnaire survey. Items considered of greater importance to the stakeholders were awarded higher weights than those they considered to be of less importance.

The third step was to develop criteria of index items. Most previous studies involving disclosure indices in the area of CIR have focused on the extent of disclosure. They assess only the absence and presence of each item. However, this research is concerned not just with the number of items disclosed, but also with the level of quality of each disclosure. In order to assess the quality of CIR practices by Chinese corporations, 40 post-questionnaire interviews were conducted to assist in criteria development. The suggestions/comments gathered from the interviews were then combined with the information obtained from reviewing various corporate websites, previous studies, and other related sources (e.g., recommendations and suggestions from the panel of experts, the securities law of the People's Republic of China, the Companies Act of the People's

Republic of China, and the accounting regulations of the People's Republic of China) to develop qualitative criteria for each index item.

The last step was to evaluate the effectiveness of the index. To do so, two rounds of pilot tests were conducted. The pilot tests involved two participants: the author as one assessor and a second assessor. The two assessors evaluated the results of the first pilot test, and some minor amendments were made. These amendments slightly reduced the number of index items by 14, and a total of 71 items were finalised. The results of the second round pilot test showed that the amendments to the qualitative index improved the overall consistency of the results. This process indicated that the index was valid and reliable in practice and ready for use.

8.2.2 Extent and Quality of Chinese CIR Practices

Once the index was constructed, it was then used to assess the extent and quality of CIR practice by Chinese listed corporations – the second research objective. The data gathered were then quantified and various analyses were conducted. These include item by item and information asymmetry analysis, the application of the CIR theoretical framework to the current Chinese CIR level, category and final scores by listing status and industry sectors, and significance tests.

Based on the results of the item by item and information asymmetry analysis, many items rated as important or very important by the stakeholders were clearly not adequately disclosed. These items are presented in Table 8.1. The table shows that numerous items deemed important or very important by the stakeholders were either not disclosed or had a disclosure rate of 50% or below. In the case of the disclosure quality, only a small number of firms in the three share groups fully met the qualitative criteria suggested by the stakeholders. Moreover, the gap rank indicates that the higher the rank, the wider the gap between the actual reporting and the expectation of stakeholders, and thus the greater the urgency for corporations to improve the extent and quality of such an item. This finding indicates that the current level of CIR practices by Chinese corporations is poor, although several positive aspects such as the improvements on several items' disclosure rate and disclosure timeliness were evident.

Table 8.1 Inadequately Disclosed Important and Very Important Items

Items	Gap Rank	Disclosure Rate (%)	Level of Importance
Explanations of Technical Terms	1	28%	Very Important
XBRL	2	0%	Important
Forward Looking Statements	3	3%	Important
Donations to Medical Foundations	4	3%	Important
Microsoft Office Documents	5	8%	Important
Link to Top of the Page	6	16%	Important
Contact to the Webmaster	7	19%	Important
Hyperlink Inside the Digitised Annual Report	8	20%	Important
Historical Share Prices Disclosed	9	27%	Important
Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	10	28%	Important
Multimedia Technologies - Video and Audio	11	33%	Important
Instant Feedback Posting Feature	12	36%	Important
Help/FAQs	13	41%	Important
Historical Dividend Figures Disclosed	14	43%	Important
Health and Safety Report	15	45%	Important
Site Search Features	16	47%	Important
Environmental Reporting	17	47%	Important
Donations to Areas Hit by Natural Disasters	18	49%	Important

Furthermore, the constructed theoretical framework suggests that an organisation can adopt CIR practice to minimise information asymmetry by promoting two-way communication and to gain and maintain a positive relationship between itself and stakeholders. Based on this view, several factors were identified as having contributed to the current level of Chinese CIR practices. The effect of the agent-principal relationship model has contributed positively to the level of disclosure by Chinese corporations. However, other factors, such as low recognition of the relationship between the organisation and stakeholders and maintaining a one-way communication style, have negatively influenced the current level of Chinese CIR practices.

In order to further interpret the results, the category and final scores by listing status and industry sectors were examined, and significance tests conducted. The analysis showed that A and A+H shares groups achieve similar final average CIR qualitative scores, and that the A+B shares group has the lowest final average score. This result was supported by the significance test as it revealed that A and

A+H shares groups report significantly more than the A+B shares group. However, no significant difference was found in the reporting level between A and A+H shares group. This finding is consistent with the constructed CIR theoretical framework as it recognises the possibility of similar CIR practices between organisations (or groups of organisations).

For the disclosure performance amongst the industries, the real estate and construction, and electricity, gas, and water sectors were the best performers, with the “others” group being the worst. As the number of companies in each industry group was very uneven, and so, in order to test the significance of reporting level by industries, the groups in each business sector were rearranged into three industry groupings: manufacturing, finance and insurance, and others. The results indicated a significant difference in the reporting level between the three industry groups (financial and insurance, manufacturing, and others). This result is also consistent with the constructed framework. The framework suggests that firms within the same industry are likely to have similar levels of disclosure because failure to do so can be interpreted as a negative signal (e.g., being non-transparent or trying to hide bad news) by the public. As organisations need to signal positively to the public in order to survive, it is likely that companies tend to have a similar reporting level in their own business sector and differ from firms in other industries.

8.2.3 Qualitative Determinants of Chinese CIR Practices

The third research objective was to explore the factors which may determine the extent and quality of CIR practice by Chinese listed companies. Five commonly tested determinant factors were identified. These factors were tested using empirical evidence in regard to the CIR practices of Chinese firms through the use of statistical techniques such as Spearman Correlation analysis.

The results show that factors such as firm size, profitability-PAT and institutional ownership, and profitability-ROE have a significant effect on CIR practices of Chinese firms. More specifically, a significant positive correlation was found between firm size and the extent and quality of Content of Corporate Websites in the A and A+H shares groups. This finding is consistent with various studies as they too have found that companies of greater size are likely to disclose more

information either on paper or via the Internet (e.g., Bonsón & Escobar, 2002; Debreceeny et al., 2002; Marston & Polei, 2004; Celik et al., 2006; Desoky & Mousa, 2009; Dâmaso & Lourenço, 2011; Joshi & Al-Bastaki, 2011). There are several explanations for this result. First, corporations of larger size tend to possess more resources and necessary knowledge that allow them to better utilise the Internet for reporting purposes (Boubaker et al., 2012). Second, additional disclosures allow shareholders of large sized firms to use fewer monitoring measures to supervise the management teams. Third, companies of larger size are subject to public and regulatory scrutiny; thus, they tend to have higher political costs and are likely to disclose more information to legitimise their status in society to gain public support for reducing such costs (Xiao et al., 2004).

All three share groups are significantly positively correlated to the Content of Corporate Websites for profitability-PAT. Studies such as Ashbaugh et al. (1999), Pervan (2006), Al-Shammari (2007), Amilia (2009), Agyei-Mensah (2011), and Boubaker et al. (2012) also found similar results and stated that profitable companies are more likely to disclose additional information to signal their high performance to differentiate themselves from low performance firms. Aly et al. (2010) also indicated that the management of a profitable firm is more likely to disclose additional information (especially positive news) to the public to ensure the continuation of its position as well as increasing the levels of its compensation.

Furthermore, profitability-PAT is only significantly positively correlated to Total Scores and Timeliness of the Information on Corporate Websites in the A+B shares group. As suggested by signalling theory, more profitable firms tend to signal their high performance to investors and differentiate themselves from low performance competitors (Craven & Marston, 1999; Marston & Polei, 2004; Aly et al., 2010). Since A+B shares firms tend to be smaller in size compared to A and A+H shares companies, they have less advantage when competing in the Chinese sharemarket. Therefore, consistent with the assumption of signalling theory, high profitability A+B shares firms are likely to signal their performance to differentiate themselves from low earning A+B companies to attract potential investors (domestic and foreign) in the market.

The result also indicated that profitability-PAT and profitability-ROE were significantly negatively associated with several index categories such as Total Score, and Timeliness of the Information on Corporate Websites in A and A+H shares. A few studies (e.g., Trabelsi et al., 2008 and Uyar, 2012) have also found similar results in this determinant factor. There are two possible causes for such findings. First, profitable companies may use accounting information to explain bad news rather than to promote good news (Uyar, 2012). Therefore, these firms are likely to delay the disclosure of such information to the public to minimise the damage from bad news. Second, spreading the news about high profitability may attract more competitors into the market, which can result in higher competitive costs and reduce profit in the future (Sánchez et al., 2011). This possibility may de-motivate profitable firms from disclosing rich and timely information on their website.

Institutional ownership was significantly positively correlated to the category of Timeliness of the Information on Corporate Websites in A+B shares. Xiao et al. (2004) and Lin et al. (2005) also found similar results in this determinant factor. A factor that perhaps accounts for this finding is that some institutions may be partly owned by the government, and, as many institutional investors are government officials or companies owned by local government agencies, they have the ability to direct the amount of information disclosed by corporations (Xiao et al., 2004; Lin et al., 2005). In addition, since the government is trying to develop a transparent image for listed companies, these institutional investors are likely to pressure firms to disclose more information (Wang et al., 2008).

Lastly, no significant relationship was identified for the other two determinants (state ownership and public ownership). To be more specific, no significant correlation was found between the state ownership and Total Score and each of the item categories. A possible cause of this outcome may be that as state shareholders already have access to private information, they may be less likely to pay attention to, and intervene in, the online reporting practice of a firm. This result is in contrast to the findings of Xiao et al. (2004), as they found a negative correlation between state ownership and CIR practice. Moreover, it is interesting that this research has arrived at similar findings to Xiao et al. (2004) in determinant public ownership (no significant relationship). As the proportion of

public ownership in the majority of the sampled companies is all higher than 60%, and some even up to 80% or 100%, it was assumed that Chinese corporations would be more inclined to disclose information according to the demands of the public. However, no significant relationship could be found.

The research findings above can have several implications for various stakeholders such as managers, website audiences, government officials, investors, and academics. Some may be short-term implications and others may be long-term. These are presented in the following section.

8.2.4 Implication of the Results

Short-term Implications

1. The findings of this study may call the attention to managers of Chinese corporations to their level of online reporting. In light of the findings, they may include more information and user support features to improve the extent and quality of Internet reporting in the short term, so as to better meet the expectations of various stakeholder groups.
2. The results can be utilised as a blueprint for Chinese regulators, as well as for the Chinese stock exchanges, to compile a general practice guideline for Chinese companies. This blueprint can help in improving the provision and quality of corporate websites in the short term. In addition, regulators can prioritise raising the quality of several specific items. For instance, the inadequately disclosed very important and important items on Table 8.1 should be the first priority as they were deemed important by Chinese stakeholders, but were poorly disclosed by the sampled corporations.
3. For website users, especially foreign audiences, the findings can provide a general guide for them to enhance their understanding about using Chinese corporate websites. The structure and layout of company websites in China can often differ from those of foreign companies, and this difference may create confusion for website users, particularly foreign users. To improve this situation, the outcome of this research can

provide a roadmap to help a wide range of users in navigating Chinese websites.

4. The results of this research offer information users valuable insights regarding the location of information (e.g., annual reports, separate online disclosed financial information, and corporate social responsibility information) on Chinese companies' websites. This knowledge would allow users to save time when searching on corporate websites for the information they require for decision making.
5. This research contributes to the extant literature in the area and also provides a better understanding of CIR in the Chinese context, as this is the first time that both the extent and quality of CIR practices by Chinese corporations have been examined, and the information gap between the expectations of Chinese stakeholders and actual CIR practices has been identified.

Long-term Implications

1. Government officials can develop formal regulations based on the findings, the index items, and the notions in the CIR theoretical model in this research. For instance, the idea of the organisation-stakeholder relationship in the theoretical model can provide an alternative view and encourage regulators to consider the information demands of a wide range of stakeholders rather than focusing solely on the needs of shareholders and potential investors. As Chinese listed firms become more willing to comply with reporting regulations, well-constructed standards can ensure the expectations of stakeholders are met and the quality of corporate websites is maintained in the future.
2. The design of this study can be treated as a research guide by government officials for updating the CIR general practice guide and regulations in the future. As stakeholders' information demands and expectations change over time, Chinese officials can use this study as a foundation to continue with CIR investigations to ensure the regulations

and the CIR practice guides are consistent with the expectations of the general public in the future.

3. Managers of Chinese corporations can utilise the findings of this research to design their corporate websites in terms of layouts, structure, and location of items, and alter their online reporting strategies to further enhance the quality, accessibility, and usability of their websites in future.
4. It is probable that the findings of this study may help in reducing the information gap between the actual CIR practices and expectations of stakeholders in the near future.

8.3 RECOMMENDATIONS

Based upon the findings in this research, some recommendations can be made in regard to the improvement of Chinese CIR practice. These recommendations offer several suggestions to enable Chinese firms to reduce the information gap between their CIR practice and the expectations of stakeholders, and to assist government officials in the development of comprehensive and applicable CIR guidelines and a framework in the future.

First, there are a number of information items where there is an extensive gap between the stakeholders' demand and the actual CIR level (Please refer to Table 8.1). These items were rated as important or very important by the stakeholders, but the level of their extent and quality was not great. It is recommended that the items above be adequately provided in order to meet the needs of stakeholders. "Adequately provided" means the information disclosed must be comprehensive, timely and accessible, and the user support and technological features offered need to be accessible and usable.

Second, two-way communication channels must be established. The current study indicates that the reluctance to provide a platform for stakeholders to express their opinions about the types of information they desired or their concerns on corporate issues is the main cause of a problematic extensive information gap between the stakeholders' needs and actual Chinese CIR practices. Instant feedback features, online communities, and chat rooms are some of the features

that can be incorporated into corporate websites to create a communication bridge between a company and its stakeholders. By creating this open communication firms can better understand the needs and wants of their stakeholders, and hence reduce the information asymmetry between both parties.

Third, there is a need to minimise the differences in the content and layouts between Chinese and English versions of corporate websites. The English version of a corporate website normally includes less information and simpler website layout than its Chinese counterpart. As Chinese companies now have operations and subsidiaries worldwide, and many of them are also listed on foreign stock exchanges, a high quality English version of their corporate website can assist Chinese firms in maintaining a good relationship with their stakeholders as well as attracting capital and customers from abroad.

Fourth, Chinese firms should improve the quality of the English information on their corporate websites. It was found that some of the English information provided reads like a direct translation from the Chinese information. The material is, consequently, hard to understand and does not flow well. This current study recommends that if Chinese corporations wish to provide information in foreign languages, it is important that the quality of the translated information is maintained.

Lastly, the CIR practice guidelines may be developed in order to encourage listed companies to improve the extent and quality of their corporate websites. These practice guidelines can consist of the following recommendations:

1. The improvements of provision and quality in items shown on Table 8.1 are the first priority. These items are deemed important and very important by stakeholders; however, the extent and quality of these items are extremely low. To alter this situation, these items should be included in the CIR practice guidelines.
2. A list of user support features and web technologies can also be included in the guidelines. This list would serve as a blueprint for companies to follow. Listed companies are also welcome to include any features that are not included on the list.

3. Inclusion of two-way communication channels is required in corporate websites. The channels can take various forms such as chat rooms, simple posting features (e.g., posting queries in text form), and advanced posting features (e.g., allowing for uploading multimedia files, pictures, and text). It is recommended that any non-functioning features should be removed, and if complaints are made, improvements should be made as soon as possible.
4. Any written English (or other languages) in corporate websites must be refined and any direct translation from Chinese, or as some may call it “Chinglish”, should be avoided. As the Internet is open to the public all around the world, such careless wording can pose difficulties for website users, and send a negative message of cultural insensitivity to the public as language itself is a representation of culture.
5. The amount of information included on a Chinese version website should be equal to that offered on an English or other languages version of the website. Otherwise, this lack of information can be unfair to foreign website users.
6. Items, features and technologies included in the regulations should be reviewed and updated once a year. It is recommended that investigations of stakeholders’ information expectations to be conducted once every two to three years to ensure that the regulated items are up-to-date.
7. Lastly, a CIR practice award can be set up to provide positive encouragement to outstanding corporations. Acknowledgement and recognition of high quality CIR practices can motivate others to follow the CIR regulations and to go beyond the minimum requirements. Companies that receive the award should be rewarded, and public acknowledgement should be made of their CIR achievements. These firms can be treated as a role model to encourage and motivate other corporations to reach similar results or beyond.

8.4 CHINESE CIR IN THE INTERNATIONAL LEVEL AND ITS FUTURE

In this research, various prior Chinese CIR studies such as Xiao et al. (2004) and Lin et al. (2005) are reviewed. Many of these investigations have evidenced and identified several deficiencies (e.g., untimely information, lack of voluntary reporting, and poor information quality) in the Chinese CIR practice in which these shortcomings are also believed to be one of the main causes for the low extent and quality of Chinese online reporting. In accordance with the findings of those studies, it is noted that there is a major difference in the extent and quality of online reporting between China and countries such as U.S., U.K., and France. However, this research has found that the practice of CIR in China has changed. When the disclosure rate of various items is compared with the outcomes of studies from other national contexts (e.g., France, Turkey, U.S, U.K, and Indonesia), the disclosure level of Chinese CIR is similar or higher than the level of online reporting practice in several of its counterparts of the world. This comparison can be found in Appendix J.

Among many of the disclosed items, *quarterly report*, *interim report*, *press releases*, *share prices update during trading hours*, and *industry information* are of particular note, as the disclosure rate of Chinese corporations in these items are all above 85%. The reporting level between nations in several items also has a wide variation. For instance, 95% of Chinese companies have disclosed *industry information* on their website, as for firms in France and Iran, only 9.4% and 28.8% respectively release such information online. Another item with the similar state is *segmental reporting by region* as 88% of Chinese companies provide this item on the Internet, but only 14% Jordanian and 18.1% French organisations disclose this piece of information on their website. Interestingly, China is found to have the highest disclosure rate in item *environmental reporting* with 47%, where the next best provider is Turkey with 41.8%, and Argentina and Iran with 18.1% and 13.5% respectively.

Though Chinese corporations are seemed to have higher level of disclosure in many of the items, they also neglect to provide several types of information and user support features online. For instance, the disclosure rate for items *site search*

features, hyperlink inside the digitised annual report, and historical dividend figures disclosed are still not up to the standard of U.S. corporations (47% vs. 54.2%, 20% vs. 50%, 43% vs. 52.8%). Another item that requires attention is *managers'/directors' background*. The level of reporting in this item is only 59%, which is much lower than the disclosure rate of Bahrain (82.4%).

Overall, the level of online reporting in China is improving, and it has surpassed its counterparts in many items. Although improvements are still needed, it is clear that Chinese corporations are aware of the importance of CIR, and they are continuously advancing the extent and quality of the information disclosed. In light of this, if Chinese corporations follow the recommendations of this research and make necessary enhancements on the extent and quality of their online reporting, the future of Chinese CIR is very optimal, and it would not be a surprise to see China becomes one of the leading nations in CIR in the near future.

8.5 CONTRIBUTION OF THE RESEARCH

Several contributions from this research have been identified. First, the recommendations provided by this research could assist in the improvement of current Chinese CIR as well as the development of CIR practice guidelines and regulations applicable to the Chinese context. Second, this research is the first study to employ a pragmatic approach to examine CIR practices in the Chinese context. Since this approach allows the use of both qualitative and quantitative methods in a single piece of research, the outcome produced in this study is comprehensive and provides a greater insight into and understanding of CIR practices in Chinese listed companies. Third, this research contributes to the very limited CIR literature in the Chinese context. Particularly, the results from the examination of the extent and quality of Chinese CIR practice can add depth to the existing Chinese CIR literature as well as create opportunities for future research. Fourth, the CIR theoretical framework developed could be used as a foundation to interpret the level of CIR practices in companies, to interview or survey various stakeholder groups' CIR preferences, and to test the determinant factors of CIR. Lastly, the constructed CIR qualitative disclosure index in this research can be applied or replicated to investigate the status of CIR practices in other contexts, especially for other developing countries.

8.6 OPPORTUNITIES FOR FUTURE RESEARCH

Several opportunities for future research of CIR practice are offered. First, this study employed a mixed methods approach for the research; however, other methods could also be implemented in the future. For instance, interviews could be used to investigate the perceptions and attitudes of stakeholders (e.g., managers, academics, policy makers, and investors) towards CIR practice. Surveys could be implemented to obtain information regarding the preferences for and importance of CIR items for various stakeholder groups, and comparison could also be made between the survey results of different stakeholder groups. Also, case studies could be used to examine the level of CIR in a particular company or industry. Second, this research could be extended to include a larger sample size of firms (e.g., 100 companies for each A, A+B, and A+H shares groups) or stakeholders (e.g., 200-500 participants). Third, a comparative study of the Chinese CIR level in different listing statuses (e.g., A shares versus B shares or A shares versus London listed shares or A shares versus New York listed shares) could be undertaken. Lastly, there is an opportunity to further explore the relationship between the quality of CIR practice and determinant factors that were not included in this research (e.g., director independence, Big 4 auditors, overseas listings, and CEO duality).

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Appendix A – The List of the 20 Largest Companies in the World

Rank (Market Capitalisation)	Company Name	Industry	Country
1	J.P Morgan Chase	Major Banks	United States
2	HSBC	Major Banks	United Kingdom
3	General Electric	Conglomerates	United States
4	Exxon Mobil	Oil & Gas Operation	United States
5	Royal Dutch Shell	Oil & Gas Operation	Netherlands
6	Petro China	Oil & Gas Operation	China
7	ICBC	Major Banks	China
8	Petrobras – Petroleo	Oil & Gas Operation	Brazil
9	Berkshire Hathaway	Investment Services	United States
10	Citigroup	Major Banks	United States
11	BNP Paribas	Major Banks	France
12	Wells Fargo	Major Banks	United States
13	Banco Santander	Major Banks	Spain
14	AT&T	Telecommunication Services	United States
15	Gazprom	Oil & Gas Operation	Russia
16	Chevron	Oil & Gas Operation	United States
17	China Construction Bank	Regional Banks	China
18	Wal-Mart Stores	Discount Store	United States
19	Total	Oil & Gas Operation	France
20	Allianz	Diversified Insurance	Germany

Source: Forbes, 2011.

Appendix B – Questionnaire

Improving Corporate Internet Reporting in China

This questionnaire provides a series of items identified from the literature on the use of disclosure indices in the area of Corporate Internet Reporting (CIR). Disclosure indices are used to examine the quality and extent of reporting by organisations. It can also be adapted to assess the quality of Chinese companies' CIR.

Purposes of the questionnaire:

- A. Identify what information should be disclosed in Chinese organisations' websites.
- B. Identify the opinions of stakeholders such as yourself about the importance of items that should be disclosed, and technology features that should be used.

INSTRUCTIONS:

Before beginning the questionnaire, please consider yourself as a **User** of a Chinese listed company's website (no particular industry, just a listed company in general), **NOT** a provider of the website, and think **what information you want** and **what technology features you wish to see**.

This questionnaire contains six sections namely: Background information, User Support Features on Corporate Websites, Timeliness of Information on Corporate Websites, Corporate Website Technologies, Content of Corporate Websites, and Weightings.

Please review the items provided in the questionnaire and indicate which ones you think should be important by **circling** a number **1-5** in the scale provided.

1	2	3	4	5
The item can either be included in companies' website or discarded as it is Very Unimportant	The item may still be disclosed but is Unimportant	The item has Neutral importance	The item should be disclosed and it is Important	The item is essential and is Very Important

If you have no opinion regarding an item, **tick** on the **blank spaces** provided under the heading **No Available** or write N/A on the writing spaces if it is a written question.

Any other items that you think should be disclosed by Chinese organizations please show in the blank spaces provided and indicate its importance on the scale 0-5. In the last section, Weightings, please assign a weighting of each of the four sections provided. Please remember, the **sum of the weightings** that you assigned should be **equal to 100%**.

**THANK YOU FOR YOUR
PARTICIPATION**

Glossary	
Forward Looking Statements	A forward-looking statement is to predict the possible outcomes of a business in the near future. Usually it will predict a number of percentages in sales or profit growth.
Plug-in Softwares	Plug-ins are commonly used in web browsers to display new file types. An common example of plug-in softwares are Adobe Acrobat Readers (for reading PDF formatted scan documents), and Quick Time (for playing digital videos).
Html Documents	It stands for HyperText Markup Language. Normally it is the predominant computer language that is used to design web pages.
PDF Documents	Portable Document Format (PDF) is an open standard of a file format for document exchange. Nowadays most of the online annual reports are formatted this way.
Hyperlinks inside the Digitised Annual Report	It allows the reader to follow a particular information by clicking on the hyperlinks inside the digitised annual reports.
Speaking Guiding System	It allows a website to guide the first time users by presenting the site map and website features in voice format.
Government Policies towards a Company's Industry	It refers to the policies of the Chinese Government towards an assessed company's industry.

(Continued)

1.0 Background Information		
Please tick one response below for each question that best describes you		
1.1 Your age is	25-35	<input type="checkbox"/>
	36-45	<input type="checkbox"/>
	46-55	<input type="checkbox"/>
	56 and above	<input type="checkbox"/>
1.2 Your gender is	Male	<input type="checkbox"/>
	Female	<input type="checkbox"/>
1.3 Your organization's market is:	National	<input type="checkbox"/>
	International	<input type="checkbox"/>
	Both	<input type="checkbox"/>
1.4 What is the highest level of your education?	Less than high school	<input type="checkbox"/>
	High school	<input type="checkbox"/>
	Bachelor	<input type="checkbox"/>
	Degrees above Bachelor	<input type="checkbox"/>
1.5 What is your position in your organization?		
1.6 In which sector does your organization operate?	Automotive	<input type="checkbox"/>
	Argncultural	<input type="checkbox"/>
	Banking and Finance	<input type="checkbox"/>
	Food (Processed), Beverages	<input type="checkbox"/>
	Information Technology	<input type="checkbox"/>
	Insurance	<input type="checkbox"/>
	Investment	<input type="checkbox"/>
	Manufacturing	<input type="checkbox"/>
	Oil, Gas, Electricity	<input type="checkbox"/>
	Retailers and Wholesalers	<input type="checkbox"/>
	Transport	<input type="checkbox"/>
	Other (Please state below)	
1.7 In which province do you work?		
1.8 Please state where the head office of your organization is located?		

(Continued)

2.0 User Support Features on Corporate Websites						
	Very Unimportant	Unimportant	Neutral	Important	Very Important	N/A
2.1 The Importance of Language Features						
1. How important is it for you to have an English version of website?	1	2	3	4	5	
2. How important is it for you to have a Chinese version of website?	1	2	3	4	5	
3. How important is it for you to have other language versions of website?	1	2	3	4	5	
2.2 The Importance of General User Support Features						
1. Help/FAQs	1	2	3	4	5	
2. Site Map	1	2	3	4	5	
3. Site Search Features	1	2	3	4	5	
4. Link to Home Page	1	2	3	4	5	
5. Link to Top of the Page	1	2	3	4	5	
2.3 The Importance of External Links						
1. Link to Chinese Securities Regulatory Commission Website	1	2	3	4	5	
2. Link to the Chinese Stock Exchange Website that the Company is Listed in	1	2	3	4	5	
2.4 The Importance of Contact Information						
1. Contact to the Webmaster	1	2	3	4	5	
2. Email Addresses of the Company	1	2	3	4	5	
3. Postal Addresses of the Company	1	2	3	4	5	
4. Phone Numbers of the Company	1	2	3	4	5	
2.5 The Importance of Other Additional User Support Features						
1. Links to Chinese Company's Investments	1	2	3	4	5	
2. Instant Feedback Posting Features	1	2	3	4	5	
3. Explanations of Technical Terms	1	2	3	4	5	
4. Access to Google Search Engine on a Company's Homepage	1	2	3	4	5	
Is there anything that you wish to add that is not adequately capture in the questions above?						

(Continued)

3.0 Timeliness of the Information on Corporate Websites						
	Very Unimportant	Unimportant	Neutral	Important	Very Important	N/A
3.1 The Importance of Information Timeliness - Reports						
1. How Important is it for you to have updated quarterly report available on a company's website?	1	2	3	4	5	
2. How Important is it for you to have updated interim report available on a company's website?	1	2	3	4	5	
3. How Important is it for you to have latest annual reporting available on a company's website?	1	2	3	4	5	
3.2 The Importance of Information Timeliness - Other Information						
1. How important is it for you to have updated press releases available on company website?	1	2	3	4	5	
2. How Important is it for you to have updated share prices available on company's websites?	1	2	3	4	5	
3. How Important is it for you to have updated Forward Looking Statement (e.g. Future Sales, Profits, Productions) available on company website?	1	2	3	4	5	
How frequently should a company update its share price information on its website?						
Is there any other information that you think companies should update frequently and disclose on their websites?						

(Continued)

4.0 Corporate Website Technologies						
4.1 The Importance of Downloadable Options - Software	Very Unimportant	Unimportant	Neutral	Important	Very Important	N/A
1. Plug-in Software (e.g. Acrobat Readers)	1	2	3	4	5	
2. Antivirus Checking System	1	2	3	4	5	
3. Video/Audio Playing Software	1	2	3	4	5	
4.2 The Importance of Downloadable Options - Documents						
1. Excel/Word Documents	1	2	3	4	5	
2. Powerpoint Documents	1	2	3	4	5	
3. Html Documents	1	2	3	4	5	
4. PDF Documents	1	2	3	4	5	
5. Multimedia Technology - Audio	1	2	3	4	5	
6. Multimedia Technology - Video	1	2	3	4	5	
4.2 The Importance of Other Available Technologies						
1. Hyperlinks inside the Digitised Annual Report	1	2	3	4	5	
2. Speaking Guiding System	1	2	3	4	5	
3. XBRL	1	2	3	4	5	
Is there anything that you wish to add that is not adequately capture in the questions above?						

(Continued)

5.0 Content of Corporate Website						
5.1 The Importance of Financial Information Items on Corporate Websites	Very				Very	N/A
	Unimportant	Unimportant	Neutral	Important	Important	
1. Historical Share Prices Disclosed	1	2	3	4	5	
2. Historical Dividend Figures Disclosed	1	2	3	4	5	
3. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	1	2	3	4	5	
4. Access to Financial Information on a Company's Homepage	1	2	3	4	5	
5.2 The Importance of Nonfinancial Information Items on Corporate Websites	1	2	3	4	5	
1. Staff Training Programmes	1	2	3	4	5	
2. Company Background	1	2	3	4	5	
3. Managers/Directors' Background	1	2	3	4	5	
4. Industry Information	1	2	3	4	5	
5. Research and Development Information	1	2	3	4	5	
6. Government Policies towards a Company's Industry	1	2	3	4	5	
7. Access to Press Releases on a Company's Homepage	1	2	3	4	5	
8. Access to Investor Relations Information on a Company's Homepage	1	2	3	4	5	
9. Shareholding Structure and Percentages of top 10 Shareholders	1	2	3	4	5	
5.3 The Importance of Online Annual Report Items - Financial Information Items	1	2	3	4	5	
1. Annual Report for the Current Year (Summary)	1	2	3	4	5	
2. Annual Report for the Past Years (Summary)	1	2	3	4	5	
3. Annual Report for the Current Year (Full)	1	2	3	4	5	
4. Annual Report for the Past Years (Full)	1	2	3	4	5	
5. Audit Report for the Current Year	1	2	3	4	5	
6. Audit Report for the Past Years	1	2	3	4	5	
7. Statement of Financial Performance for the Current Year	1	2	3	4	5	
8. Statement of Financial Performance for the Past Years	1	2	3	4	5	
9. Statement of Financial Position for the Current Year	1	2	3	4	5	
10. Statement of Financial Position for the Past Years	1	2	3	4	5	
11. Statement of Cash Flow for the Current Year	1	2	3	4	5	
12. Statement of Cash Flow for the Past Years	1	2	3	4	5	
13. Notes of Financial Statements for the Current Year	1	2	3	4	5	
14. Management Report and Analysis	1	2	3	4	5	
15. Segmental Reporting by the Line of Business	1	2	3	4	5	
16. Segmental Reporting by Region	1	2	3	4	5	
17. Summary of Key Ratios over a Period of at least 3 Years	1	2	3	4	5	
18. Summary of Financial Data over a Period of at least 3 Years	1	2	3	4	5	
19. How many years' of previous Quarterly, Interim, and Annual Reports do you wish to see in an organisation's website?						

(Continued)

5.4 The Importance of Online Annual Report Items - Nonfinancial Information Items	Very					N/A
	Unimportant	Unimportant	Neutral	Important	Very Important	
1. Report of the Board of Directors	1	2	3	4	5	
2. Report of the Governance Board	1	2	3	4	5	
3. Resolutions of Shareholders Meetings in Current Year	1	2	3	4	5	
4. Top 10 Stockholders	1	2	3	4	5	
5. Accounting Policies	1	2	3	4	5	
6. Material Events	1	2	3	4	5	
7. Changes in Stockholders' Equity	1	2	3	4	5	
8. Material Events in Past Years	1	2	3	4	5	
9. Material Changes to Accounting Policies	1	2	3	4	5	
10. Company's Charter	1	2	3	4	5	
5.5 The Importance of Social Responsibility Reporting						
1. Environmental Reporting	1	2	3	4	5	
2. Sports Sponsorship	1	2	3	4	5	
3. Technology Trade Show Sponsorship	1	2	3	4	5	
4. Donations to Underdeveloped and Deprived Communities	1	2	3	4	5	
5. Donations to Areas Hit by Natural Disasters	1	2	3	4	5	
6. Donations to Schools in Deprived Areas	1	2	3	4	5	
7. Donations to Medical Foundations	1	2	3	4	5	
8. Health and Safety Report	1	2	3	4	5	
Is there anything that you wish to add that is not adequately capture in the questions above?						

(Continued)

6.0 Weightings	
Can you assign a weighting for each of the four categories? The more important you think of a category, the higher the weightings.	
User Support Features on Corporate Websites	
Timeliness of the Information on Corporate Websites	
Corporate Website Technologies	
Content of Corporate Websites	
Total	100%

Appendix C – First Draft of the CIR Qualitative Disclosure Index

1.0 User Support Features on Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. <u>Version of Languages available on Chinese Corporate Websites</u>			
a. English Version of Website		2.9	
b. Chinese Version of Website		4.7	
c. Other Language Versions of Website		2.4	
2. <u>General User Support Features on Chinese Corporate Websites</u>			
a. Help/FAQs		3.7	
b. Site Map		3.7	
c. Site Search Features		4.1	
d. Link to Homepage		4.3	
e. Link to Top of the Page		3.6	
3. <u>External Links on Chinese Corporate Websites</u>			
a. Link to Chinese Securities Regulatory Commission Website		3.3	
b. Link to the Chinese Stock Exchange Website that the Company is Listed in		3.3	
4. <u>Contact Information on Chinese Corporate Websites</u>			
a. Contact to the Webmaster		4.2	
b. Email Addresses of the Company		4.2	
c. Postal Addresses of the Company		4.0	
d. Phone Numbers of the Company		4.3	
5. <u>Other Additional User Support Features</u>			
a. Links to Chinese Company's Investments		5.0	
b. Instant Feedback Posting Feature		4.1	
c. Explanations of Technical Terms		5.0	
d. Access to Google Search Engine on a Company's Homepage		3.3	
Total User Support Score & in %			
User Support Features Category Weighting Score			

(Continued)

2.0 Timeliness of the Information on Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. Information Timeliness – Reports			
a. Quarterly Report		4.3	
b. Interim Report		4.4	
c. Annual Report		4.5	
2. Information Timeliness – Other Information			
a. Press Releases		4.5	
b. Share Prices Update During Trading Hours		4.2	
c. Forward Looking Statements		4.2	
Total Timeliness Score & in %			
Timeliness Category Weighting Score			
3.0 Corporate Website Technologies			
	1-5 Scores or N/A (0)	Weightings	Total
1. Downloadable Options on Chinese Corporate Websites - Software			
a. Plug - in Software		3.4	
b. Video/Audio Playing Software		2.9	
c. Antivirus Checking System		2.6	
2. Downloadable Options on Chinese Corporate Websites – Documents			
a. Excel/Word Documents		4.0	
b. Power Point Documents		3.5	
c. Html Documents		3.2	
d. PDF Files		3.8	
e. Multimedia Technologies – Audio		3.7	
f. Multimedia Technologies – Video		3.5	
3. Other Available Technologies on Companies' Website			
a. Hyperlink Inside the Digitised Annual Report		3.7	
b. Speaking Guiding System		3.0	
c. XBRL		3.9	
Total Technologies Score & in %			
Technologies Category Weighting Score			

(Continued)

4.0 Content of Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. Financial Information Items on Corporate Websites			
a. Historical Share Prices Disclosed		3.9	
b. Historical Dividend Figures Disclosed		4.1	
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report		3.8	
d. Access to Financial Information on a Company's Homepage		3.6	
2. Nonfinancial Information Items on Corporate Websites			
a. Staff Training Programmes		3.3	
b. Company Background		4.2	
c. Managers/Directors' Background		4.0	
d. Industry Information		4.3	
e. Research and Development Information		4.3	
f. Government Policies towards a Company's Industry		4.5	
g. Access to Press Releases on a Company's Homepage		3.9	
h. Access to Investor Relations Information on a Company's Homepage		4.0	
i. Shareholding Structure and Percentages of top 10 Shareholders		3.0	
3. Online Annual Report Items – Financial Information Items			
a. Annual Report for the Current Year (Summary)		4.0	
b. Annual Report for the Past 6 Years (Summary)		3.8	
c. Annual Report for the Current Year (Full)		4.9	
d. Annual Report for the Past 6 Years (Full)		4.1	
e. Audit Report for the Current Year		4.4	
f. Audit Report for the Past 6 Years		4.2	
g. Statement of Financial Performance for the Current Year		4.3	
h. Statement of Financial Performance for the Past 6 Years		4.3	
i. Statement of Financial Position for the Current Year		4.4	
j. Statement of Financial Position for the Past 6 Years		4.4	
k. Statement of Cash Flow for the Current Year		4.2	
l. Statement of Cash Flow for the Past 6 Years		4.2	
m. Notes of Financial Statements for the Current Year		4.1	
n. Management Report and Analysis		3.9	
o. Segmental Reporting by the Line of Business		4.1	
p. Segmental Reporting by Region		3.9	
q. Summary of Key Ratios over a Period of at least 3 Years		4.0	
r. Summary of Financial Data over a Period of at least 3 Years		4.0	
4. Online Annual Report Items – Nonfinancial Information Items			
a. Report of the Board of Directors		4.1	
b. Report of the Governance Board		4.0	
c. Resolutions of Shareholders Meetings in Current Year		4.0	
d. Top 10 Stockholders		4.0	
e. Accounting Policies		3.7	
f. Material Events		4.0	
g. Changes in Stockholders' Equity		4.1	
h. Material Events in Past Years		4.1	
i. Material Changes to Accounting Policies		4.1	
j. Company's Charter		4.0	
5. Online Corporate Social Responsibility Information Items			
a. Environmental Reporting		3.6	
b. Sports Sponsorship		3.3	
c. Technology Trade Show Sponsorship		3.1	
d. Donations to Underdeveloped and Deprived Communities		3.3	
e. Donations to Areas Hit by Natural Disasters		3.5	
f. Donations to Schools in Deprived Areas		3.6	
g. Donations to Medical Foundations		3.7	
h. Health and Safety Report		4.1	
Total Content Score & in %			
Content Category Weighting Score			
Total Score			

Appendix D – First Round Pilot Test Results

			A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
<u>1.0 User Support Features on Corporate Websites</u>	Available Min. Score	Available Max. Score	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
1. <u>Version of Languages available on Chinese Corporate Websites</u>														
a. English Version of Website	2.9	14.5	11.6	14.3	2.9	2.9	2.9	2.9	2.9	14.3	14.3	14.3	11.5	14.3
b. Chinese Version of Website	4.7	23.5	18.8	18.8	23.5	23.5	4.7	4.7	4.7	4.7	18.8	18.8	18.8	23.5
c. Other Language Versions of Website	2.4	12.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2. <u>General User Support Features on Chinese Corporate Websites</u>														
a. Help/FAQs	3.7	18.5	11.1	18.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	18.5	3.7	14.8
b. Site Map	3.7	18.5	18.5	18.5	3.7	3.7	3.7	3.7	14.8	18.5	18.5	18.5	18.5	18.5
c. Site Search Features	4.1	20.5	20.5	20.5	8.2	4.1	4.1	4.1	4.1	4.1	16.4	20.5	4.1	20.5
d. Link to Homepage	4.3	21.5	21.5	21.5	21.5	21.5	21.5	21.5	17.4	21.5	21.5	21.5	21.5	21.5
e. Link to Top of the Page	3.6	18.0	3.6	18.0	3.6	18.0	3.6	18.0	3.6	3.6	3.6	18.0	3.6	18.0
3. <u>External Links on Chinese Corporate Websites</u>														
a. Link to Chinese Securities Regulatory Commission Website	3.3	16.5	16.5	16.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	16.5	16.5
b. Link to the Chinese Stock Exchange Website that the Company is Listed in	3.3	16.5	3.3	3.3	16.5	16.5	3.3	3.3	3.3	3.3	3.3	3.3	16.5	16.5
4. <u>Contact Information on Chinese Corporate Websites</u>														
a. Contact to the Webmaster	4.2	21.0	4.2	21.2	12.7	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	17.0
b. Email Addresses of the Company	4.2	21.0	12.6	21.0	16.8	21.0	8.4	21.0	8.4	8.4	16.8	21.0	16.8	21.0
c. Postal Addresses of the Company	4.0	20.0	20.0	20.0	4.0	4.0	8.0	20.0	4.0	8.0	16.0	20.0	16.0	20.0
d. Phone Numbers of the Company	4.3	21.5	21.5	21.5	21.5	21.5	8.6	21.5	4.3	8.6	17.2	21.5	17.2	21.5
5. <u>Other Additional User Support Features</u>														
a. Links to Chinese Company's Investments	5.0	25.0	5.0	25.0	5.0	25.0	5.0	5.0	5.0	25.0	15.0	25.0	5.0	25.0
b. Instant Feedback Posting Feature	4.1	20.5	8.3	20.7	4.1	4.1	4.1	4.1	4.1	12.4	4.1	20.7	12.4	20.7
c. Explanations of Technical Terms	5.0	25.0	25.0	25.0	5.0	5.0	5.0	5.0	5.0	25.0	20.0	25.0	5.0	5.0
d. Access to Google Search Engine on a Company's Homepage	3.3	16.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
User Support Features Category Weighting Score	-	17.5	11.4	15.5	8.1	9.4	5.0	7.6	4.9	8.7	10.1	14.0	9.8	15.0

(Continued)

2.0 Timeliness of the Information on Corporate Websites			A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
1. Information Timeliness – Reports	Available Min. Score	Available Max. Score	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
a. Quarterly Report	4.3	21.5	17.2	21.5	4.3	4.3	4.3	4.3	4.3	4.3	17.0	21.5	17.0	21.5
b. Interim Report	4.4	22.0	17.6	22.0	4.4	4.4	4.4	4.4	4.4	4.4	17.7	22.0	8.8	22.0
c. Annual Report	4.5	22.5	22.5	22.5	4.5	4.5	4.5	4.5	4.5	4.5	13.4	22.5	13.4	22.5
2. Information Timeliness – Other Information														
a. Press Releases	4.5	22.5	22.5	22.5	13.5	22.5	4.5	4.5	22.5	9.0	22.5	22.5	22.5	22.5
b. Share Prices Update During Trading Hours	4.2	21.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	21.0	4.2	12.6
c. Forward Looking Statements	4.2	21.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	21.0	4.2	21.0
Timeliness Category Weighting Score	-	27.7	18.7	20.6	7.5	9.3	5.5	5.5	9.4	6.5	16.8	27.7	14.9	25.9
3.0 Corporate Website Technologies			A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
1. Downloadable Options on Chinese Corporate Websites - Software	Available Min. Score	Available Max. Score	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
a. Plug - in Software	3.4	17.0	3.4	17.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	17.0
b. Video/Audio Playing Software	2.9	14.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
c. Antivirus Checking System	2.6	13.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
2. Downloadable Options on Chinese Corporate Websites – Documents														
a. Excel/Word Documents	4.0	20.0	4.0	4.0	4.0	4.0	12.0	20.0	4.0	4.0	4.0	4.0	4.0	4.0
b. Power Point Documents	3.5	17.5	14.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
c. Html Documents	3.2	16.0	3.2	16.0	3.2	16.0	3.2	16.0	3.2	16.0	3.2	16.0	3.2	16.0
d. PDF Files	3.8	19.0	15.2	19.0	3.8	3.8	3.8	3.8	15.2	19.0	15.2	19.0	15.2	19.0
e. Multimedia Technologies – Audio	3.7	18.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
f. Multimedia Technologies – Video	3.5	17.5	3.5	17.5	3.5	17.5	3.5	3.5	3.5	10.5	3.5	17.5	14.1	17.5
3. Other Available Technologies on Companies' Website														
a. Hyperlink Inside the Digitised Annual Report	3.7	18.5	18.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	14.8	3.7	18.5	11.1
b. Speaking Guiding System	3.0	15.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
c. XBRL	3.9	19.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Technologies Category Weighting Score	-	17.0	6.4	8.0	3.4	5.6	4.1	5.8	4.3	6.3	5.3	6.9	6.4	8.6

(Continued)

4.0 Content of Corporate Websites			A - Shares				A+B - Shares				A+H - Shares			
	Available Min. Score	Available Max. Score	Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
1. Financial Information Items on Corporate Websites														
a. Historical Share Prices Disclosed	3.9	19.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	15.6
b. Historical Dividend Figures Disclosed	4.1	20.5	4.1	16.4	4.1	4.1	4.1	4.1	20.5	4.1	4.1	4.1	4.1	4.1
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	3.8	19.0	15.2	3.8	3.8	3.8	3.8	3.8	11.3	3.8	3.8	3.8	15.2	3.8
d. Access to Financial Information on a Company's Homepage	3.6	18.0	3.6	18.0	3.6	14.4	3.6	10.8	10.8	18.0	3.6	18.0	3.6	18.0
2. Nonfinancial Information Items on Corporate Websites														
a. Staff Training Programmes	3.3	16.5	3.3	3.3	3.3	13.2	3.3	3.3	3.3	3.3	3.3	3.3	9.9	16.5
b. Company Background	4.2	21.0	16.8	21.0	16.8	21.0	12.6	16.8	16.8	16.8	12.6	21.0	16.8	21.0
c. Managers'/Directors' Background	4.0	20.0	16.0	20.0	4.0	20.0	16.0	20.0	12.0	4.0	12.0	20.0	12.0	20.0
d. Industry Information	4.3	21.5	4.3	17.2	4.3	17.2	4.3	8.6	4.3	4.3	4.3	17.2	4.3	17.2
e. Research and Development Information	4.3	21.5	4.3	21.5	4.3	12.9	4.3	17.2	4.3	4.3	4.3	17.2	4.3	12.9
f. Government Policies towards a Company's Industry	4.5	22.5	4.5	4.5	4.5	22.5	4.5	4.5	4.5	4.5	4.5	18.0	4.5	22.5
g. Access to Press Releases on a Company's Homepage	3.9	19.5	19.5	19.5	15.6	19.5	15.6	19.5	19.5	11.7	19.5	19.5	19.5	19.5
h. Access to Investor Relations Information on a Company's Homepage	4.0	20.0	20.0	20.0	16.0	12.0	8.0	20.0	16.0	20.0	20.0	20.0	20.0	20.0
i. Shareholding Structure and Percentages of top 10 Shareholders	3.0	15.0	9.0	15.0	3.0	3.0	3.0	3.0	9.0	3.0	3.0	3.0	6.0	3.0
3. Online Annual Report Items – Financial Information Items														
a. Annual Report for the Current Year (Summary)	4.0	20.0	20.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	20.0	20.0
b. Annual Report for the Past 6 Years (Summary)	3.8	19.0	19.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	7.6	3.8
c. Annual Report for the Current Year (Full)	4.9	24.5	24.5	24.5	4.9	4.9	4.9	4.9	24.5	24.5	24.5	24.5	24.5	24.5
d. Annual Report for the Past 6 Years (Full)	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	8.2	12.3	8.2	4.1
e. Audit Report for the Current Year	4.4	22.0	22.0	22.0	4.4	4.4	4.4	4.4	22.0	22.0	2.0	22.0	22.0	2.0
f. Audit Report for the Past 6 Years	4.2	21.0	21.0	21.0	4.2	4.2	4.2	4.2	21.0	21.0	8.4	12.6	8.4	4.2
g. Statement of Financial Performance for the Current Year	4.3	21.5	21.5	21.5	4.3	4.3	4.3	4.3	21.5	21.5	21.5	21.5	21.5	21.5
h. Statement of Financial Performance for the Past 6 Years	4.3	21.5	21.5	21.5	4.3	4.3	4.3	4.3	21.5	21.5	8.6	12.9	8.6	21.5
i. Statement of Financial Position for the Current Year	4.4	22.0	22.0	22.0	4.4	4.4	4.4	4.4	22.0	22.0	22.0	22.0	22.0	22.0
j. Statement of Financial Position for the Past 6 Years	4.4	22.0	22.0	22.0	4.4	4.4	4.4	4.4	22.0	22.0	8.8	13.2	8.8	22.0
k. Statement of Cash Flow for the Current Year	4.2	21.0	21.0	21.0	4.2	4.2	4.2	4.2	21.0	21.0	21.0	21.0	21.0	21.0
l. Statement of Cash Flow for the Past 6 Years	4.2	21.0	21.0	21.0	4.2	4.2	4.2	4.2	21.0	21.0	8.4	12.6	8.4	4.2
m. Notes of Financial Statements for the Current Year	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
n. Management Report and Analysis	3.9	19.5	11.7	19.5	3.9	3.9	3.9	3.9	11.7	19.5	11.7	19.5	11.7	19.5
o. Segmental Reporting by the Line of Business	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
p. Segmental Reporting by Region	3.9	19.5	19.5	19.5	3.9	3.9	3.9	3.9	19.5	19.5	19.5	19.5	19.5	19.5
q. Summary of Key Ratios over a Period of at least 3 Years	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	4.0	20.0	20.0
r. Summary of Financial Data over a Period of at least 3 Years	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	4.0	20.0	20.0

(Continued)

			A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
4. Online Annual Report Items – Nonfinancial Information Items	Available	Available												
a. Report of the Board of Directors	4.1	20.5	20.5	20.5	4.1	8.2	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
b. Report of the Governance Board	4.0	20.0	20.0	20.0	4.0	8.0	4.0	4.0	20.0	20.0	16.0	20.0	20.0	20.0
c. Resolutions of Shareholders Meetings in Current Year	4.0	20.0	12.0	20.0	4.0	4.0	4.0	4.0	8.0	20.0	8.0	20.0	8.0	16.0
d. Top 10 Stockholders	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	20.0	20.0	20.0
e. Accounting Policies	3.7	18.5	3.7	18.5	3.7	3.7	3.7	3.7	14.8	18.5	7.4	18.5	11.1	18.5
f. Material Events	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	20.0	20.0	20.0
g. Changes in Stockholders' Equity	4.1	20.5	4.1	20.5	4.1	4.1	4.1	4.1	4.1	20.5	4.1	20.5	4.1	20.5
h. Material Events in Past Years	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
i. Material Changes to Accounting Policies	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	16.4
j. Company's Charter	4.0	20.0	20.0	20.0	4.0	12.0	20.0	4.0	20.0	4.0	12.0	4.0	20.0	12.0
5. Online Corporate Social Responsibility Information Items														
a. Environmental Reporting	3.6	18.0	14.4	18.0	3.6	7.2	7.2	3.6	3.6	3.6	18.0	18.0	10.8	18.0
b. Sports Sponsorship	3.3	16.5	3.3	3.3	3.3	16.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
c. Technology Trade Show Sponsorship	3.1	15.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
d. Donations to Underdeveloped and Deprived Communities	3.3	16.5	13.2	16.5	3.3	16.5	3.3	3.3	3.3	3.3	6.6	3.3	6.5	3.3
e. Donations to Areas Hit by Natural Disasters	3.5	17.5	14.0	17.5	3.5	17.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
f. Donations to Schools in Deprived Areas	3.6	18.0	14.4	18.0	3.6	18.0	3.6	3.6	3.6	3.6	3.6	3.6	7.2	10.8
g. Donations to Medical Foundations	3.7	18.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
h. Health and Safety Report	4.1	20.5	16.4	20.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	16.4	8.2	20.5
Content Category Weighting Score	-	37.8	28.6	32.3	9.0	15.0	9.8	10.9	26.1	25.7	21.3	26.4	24.4	28.6
Total		100.0	65.2	76.3	27.9	39.4	24.3	29.8	44.7	47.2	53.5	75.0	55.6	78.1

Appendix E – Second Round Pilot Test Results

			A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
<u>1.0 User Support Features on Corporate Websites</u>	Available Min. Score	Available Max. Score	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
1. Version of Languages available on Chinese Corporate Websites														
a. English Version of Website	2.9	14.5	11.6	11.6	2.9	2.9	2.9	2.9	2.9	2.9	14.5	14.5	14.5	14.5
b. Chinese Version of Website	4.7	23.5	18.8	18.8	4.7	4.7	4.7	4.7	4.7	4.7	23.5	23.5	23.5	23.5
c. Other Language Versions of Website	2.4	12.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
2. General User Support Features on Chinese Corporate Websites														
a. Help/FAQs	3.7	18.5	14.8	18.5	3.7	3.7	3.7	3.7	3.7	11.1	14.8	18.5	11.1	11.1
b. Site Map	3.7	18.5	18.5	18.5	3.7	3.7	3.7	3.7	18.5	18.5	18.5	18.5	18.5	18.5
c. Site Search Features	4.1	20.5	16.4	20.5	8.2	4.1	4.1	4.1	4.1	4.1	20.5	20.5	4.1	4.1
d. Link to Homepage	4.3	21.5	17.2	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
e. Link to Top of the Page	3.6	18.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
3. External Links on Chinese Corporate Websites														
a. Link to Chinese Securities Regulatory Commission Website	3.3	16.5	13.2	9.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	16.5	16.5
b. Link to the Chinese Stock Exchange Website that the Company is Listed in	3.3	16.5	3.3	3.3	16.5	16.5	3.3	3.3	3.3	3.3	3.3	3.3	16.5	16.5
4. Contact Information on Chinese Corporate Websites														
a. Contact to the Webmaster	4.2	21.0	12.6	16.8	8.4	8.4	4.2	4.2	4.2	12.6	4.2	4.2	8.4	8.4
b. Email Addresses of the Company	4.2	21.0	12.6	16.8	8.4	8.4	8.4	8.4	12.6	12.6	12.6	12.6	8.4	8.4
c. Postal Addresses of the Company	4.0	20.0	20.0	20.0	16.0	12.0	16.0	16.0	4.0	8.0	16.0	20.0	16.0	20.0
d. Phone Numbers of the Company	4.3	21.5	12.9	17.2	12.9	21.5	12.9	17.2	4.3	8.6	12.6	21.5	12.6	21.5
5. Other Additional User Support Features														
a. Links to Chinese Company's Investments	5.0	25.0	20.0	25.0	20.0	25.0	5.0	5.0	10.0	25.0	15.0	25.0	15.0	25.0
b. Instant Feedback Posting Feature	4.1	20.5	12.3	16.4	4.1	4.1	4.1	4.1	4.1	12.3	12.3	12.3	12.3	12.3
c. Explanations of Technical Terms	5.0	25.0	25.0	25.0	5.0	5.0	5.0	5.0	5.0	25.0	20.0	25.0	5.0	5.0
d. Access to Google Search Engine on a Company's Homepage	3.3	16.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
User Support Features Category Weighting Score	-	17.5	11.9	13.4	7.4	7.7	5.6	5.8	5.8	9.1	11.1	12.7	10.6	11.8

(Continued)

2.0 Timeliness of the Information on Corporate Websites	Available Min. Score		A - Shares		A + B - Shares				A + H - Shares					
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
1. Information Timeliness – Reports														
a. Quarterly Report	4.3	21.5	17.2	21.5	4.3	4.3	0.0	0.0	4.3	4.3	17.2	17.2	17.2	17.2
b. Interim Report	4.4	22.0	17.6	22.0	4.4	4.4	0.0	0.0	4.4	4.4	17.6	17.6	8.8	8.8
c. Annual Report	4.5	22.5	22.5	22.5	4.5	4.5	0.0	0.0	4.5	4.5	22.5	22.5	22.5	22.5
2. Information Timeliness – Other Information														
a. Press Releases	4.5	22.5	22.5	22.5	22.5	22.5	0.0	0.0	22.5	9.0	22.5	22.5	22.5	22.5
b. Share Prices Update During Trading Hours	4.2	21.0	4.2	4.2	4.2	4.2	0.0	0.0	21.0	4.2	21.0	21.0	4.2	4.2
c. Forward Looking Statements	4.2	21.0	12.6	4.2	4.2	4.2	0.0	0.0	8.4	4.2	12.6	21.0	8.4	12.6
Timeliness Category Weighting Score	-	27.7	20.5	20.6	9.3	9.3	0.0	0.0	13.8	6.5	24.1	25.9	17.8	18.6
3.0 Corporate Website Technologies	Available Min. Score		A - Shares		A + B - Shares				A + H - Shares					
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
1. Downloadable Options on Chinese Corporate Websites - Software														
a. Plug - in Software	3.4	17.0	13.6	17.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	17.0
b. Video/Audio Playing Software	2.9	14.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
2. Downloadable Options on Chinese Corporate Websites – Documents														
a. Microsoft Office Documents	3.8	19.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
b. Multimedia Technologies - Video and Audio	3.6	18.0	14.4	18.0	14.4	18.0	3.8	3.8	3.6	3.6	3.6	3.6	14.4	18.0
c. Html Documents	3.2	16.0	12.8	16.0	12.8	16.0	3.6	3.6	12.8	16.0	9.6	12.8	16.0	16.0
d. PDF Files	3.8	19.0	11.4	14.4	3.8	3.8	7.6	7.6	11.4	11.4	14.4	14.4	11.4	11.4
3. Other Available Technologies on Companies' Website														
a. Hyperlink Inside the Digitised Annual Report	3.7	18.5	14.8	14.8	0.0	7.4	0.0	0.0	3.7	3.7	14.8	14.8	14.8	3.7
c. XBRL	3.9	19.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Technologies Category Weighting Score	-	17.0	9.3	10.9	5.4	7.1	3.5	3.5	5.5	5.9	6.8	7.2	8.5	9.2

(Continued)

4.0 Content of Corporate Websites			A - Shares				A + B - Shares				A + H - Shares				
	Available Min. Score	Available Max. Score	Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation		
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	
1. Financial Information Items on Corporate Websites															
a. Historical Share Prices Disclosed	3.9	19.5	3.9	3.9	11.7	3.9	3.9	3.9	3.9	11.7	3.9	3.9	7.8	11.7	7.8
b. Historical Dividend Figures Disclosed	4.1	20.5	4.1	8.2	12.3	4.1	4.1	4.1	4.1	12.3	4.1	4.1	8.2	12.3	4.1
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report	3.8	19.0	19.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	14.4	11.4	7.6	3.8
d. Access to Financial Information on a Company's Homepage	3.6	18.0	10.8	14.4	3.6	10.8	3.6	3.6	3.6	7.2	14.4	18.0	10.8	18.0	
2. Nonfinancial Information Items on Corporate Websites															
a. Staff Training Programmes	3.3	16.5	3.3	3.3	3.3	9.9	3.3	3.3	3.3	3.3	3.3	3.3	9.9	16.5	
b. Company Background	4.2	21.0	21.0	21.0	16.8	21.0	8.4	16.8	8.4	16.8	16.8	21.0	16.8	21.0	
c. Managers'/Directors' Background	4.0	20.0	12.0	16.0	12.0	20.0	4.0	4.0	16.0	12.0	16.0	20.0	16.0	20.0	
d. Industry Information	4.3	21.5	12.9	12.9	17.2	12.9	4.3	8.6	4.3	4.3	8.6	17.2	8.6	17.2	
e. Research and Development Information	4.3	21.5	4.3	8.6	12.9	8.6	4.3	17.2	4.3	4.3	8.6	17.2	12.9	12.9	
f. Government Policies towards a Company's Industry	4.5	22.5	9.0	4.5	13.5	22.5	4.5	4.5	4.5	4.5	22.5	18.0	9.0	22.5	
g. Access to Press Releases on a Company's Homepage	3.9	19.5	19.5	19.5	19.5	19.5	3.9	11.7	19.5	11.7	19.5	19.5	19.5	19.5	
h. Access to Investor Relations Information on a Company's Homepage	4.0	20.0	16.0	20.0	4.0	12.0	4.0	4.0	20.0	20.0	20.0	20.0	20.0	20.0	
i. Shareholding Structure and Percentages of top 10 Shareholders	3.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
j. Company's charter	4.0	20.0	20.0	16.0	4.0	4.0	4.0	4.0	20.0	4.0	20.0	4.0	12.0	12.0	
3. Online Annual Report Items – Financial Information Items															
a. Annual Report for the Current Year	4.5	22.5	13.5	18.0	4.5	4.5	4.5	4.5	13.5	22.5	13.5	22.5	22.5	22.5	
b. Annual Report for the Past 6 Years	4.0	20.0	12.0	20.0	4.0	4.0	4.0	4.0	12.0	20.0	4.0	4.0	4.0	4.0	
c. Audit Report	4.3	21.5	21.5	21.5	4.3	4.3	4.3	4.3	21.5	21.5	12.9	12.9	12.9	8.6	
d. Financial Statements	4.3	21.5	21.5	21.5	4.3	4.3	4.3	4.3	21.5	21.5	12.9	12.9	12.9	8.6	
e. Notes of Financial Statements	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	12.3	12.3	12.3	8.2	
f. Management Report and Analysis	3.9	19.5	15.6	19.5	3.9	3.9	3.9	3.9	15.6	19.5	15.6	11.7	15.6	7.8	
g. Segmental Reporting by the Line of Business	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	12.3	20.5	8.2	
h. Segmental Reporting by Region	3.9	19.5	19.5	19.5	3.9	3.9	3.9	3.9	19.5	19.5	19.5	11.7	19.5	7.8	
i. Summary of Key Ratios over a Period of at least 3 Years	4.0	20.0	16.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	4.0	4.0	16.0	20.0	
j. Summary of Financial Data over a Period of at least 3 Years	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	12.0	4.0	20.0	20.0	

(Continued)

4. Online Annual Report Items – Nonfinancial Information Items	Available		A - Shares				A + B - Shares				A + H - Shares			
			Shenzhen Development Bank		Xinjiang Guanghui Industry Investment Group		Shanghai Chlor Alkali Chemical		Jin Jiang Hotels		Shanghai Electric		Datang International Power Generation	
			Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2	Assessor 1	Assessor 2
a. Report of the Board of Directors	4.1	20.5	16.4	20.5	4.1	8.2	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
b. Report of the Governance Board	4.0	20.0	16.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	20.0	20.0	20.0
c. Resolutions of Shareholders Meetings in Current Year	4.0	20.0	16.0	20.0	4.0	4.0	4.0	4.0	8.0	20.0	4.0	20.0	4.0	16.0
d. Top 10 Stockholders	4.0	20.0	20.0	20.0	4.0	4.0	4.0	4.0	20.0	20.0	20.0	20.0	20.0	20.0
e. Material Events	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
f. Changes in Stockholders' Equity	4.1	20.5	20.5	20.5	4.1	4.1	4.1	4.1	20.5	20.5	20.5	20.5	20.5	20.5
g. Accounting Policies	3.9	19.5	11.7	14.4	3.9	3.9	3.9	3.9	7.8	19.5	11.7	19.5	11.7	19.5
5. Online Corporate Social Responsibility Information Items														
a. Environmental Reporting	3.6	18.0	14.4	14.4	3.6	3.6	3.6	3.6	3.6	3.6	18.0	18.0	10.8	18.0
b. Sports Sponsorship	3.3	16.5	3.3	3.3	3.3	9.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
c. Technology Trade Show Sponsorship	3.1	15.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
d. Donations to Underdeveloped and Deprived Communities	3.3	16.5	13.2	13.2	13.2	16.5	3.3	3.3	3.3	3.3	6.7	3.3	9.9	3.3
e. Donations to Areas Hit by Natural Disasters	3.5	17.5	14.0	14.0	14.0	17.5	3.5	3.5	3.5	3.5	3.5	3.5	10.5	3.5
f. Donations to Schools in Deprived Areas	3.6	18.0	14.4	14.4	14.4	18.0	3.6	3.6	3.6	3.6	3.6	3.6	10.8	10.8
g. Donations to Medical Foundations	3.7	18.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
h. Health and Safety Report	4.1	20.5	12.3	12.3	4.1	4.1	4.1	4.1	4.1	4.1	20.5	12.3	16.4	20.5
Content Category Weighting Score	-	37.8	27.3	28.9	13.3	15.3	7.9	9.5	23.2	23.8	24.0	24.3	25.5	25.8
Total		100.0	69.1	73.8	35.5	39.4	16.9	18.8	48.2	45.3	65.9	70.0	62.4	65.4

Appendix F – Final Draft of the CIR Qualitative Disclosure Index

1.0 User Support Features on Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. <u>Version of Languages available on Chinese Corporate Websites</u>			
a. English Version of Website		2.9	
b. Chinese Version of Website		4.7	
c. Other Language Versions of Website		2.4	
2. <u>General User Support Features on Chinese Corporate Websites</u>			
a. Help/FAQs		3.7	
b. Site Map		3.7	
c. Site Search Features		4.1	
d. Link to Homepage		4.3	
e. Link to Top of the Page		3.6	
3. <u>External Links on Chinese Corporate Websites</u>			
a. Link to Chinese Securities Regulatory Commission Website		3.3	
b. Link to the Chinese Stock Exchange Website that the Company is Listed in		3.3	
4. <u>Contact Information on Chinese Corporate Websites</u>			
a. Contact to the Webmaster		4.2	
b. Email Addresses of the Company		4.2	
c. Postal Addresses of the Company		4	
d. Phone Numbers of the Company		4.3	
5. <u>Other Additional User Support Features</u>			
a. Links to Chinese Company's Investments		5	
b. Instant Feedback Posting Feature		4.1	
c. Explanations of Technical Terms		5	
d. Access to Google Search Engine on a Company's Homepage		3.3	
Total User Support Score & in %			
User Support Features Category Weighting Score			

(Continued)

2.0 Timeliness of the Information on Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. Information Timeliness – Reports			
a. Quarterly Report		4.3	
b. Interim Report		4.4	
c. Annual Report		4.5	
2. Information Timeliness – Other Information			
a. Press Releases		4.5	
b. Share Prices Update During Trading Hours		4.2	
c. Forward Looking Statements		4.2	
Total Timeliness Score & in %			
Timeliness Category Weighting Score			
3.0 Corporate Website Technologies			
	1-5 Scores or N/A (0)	Weightings	Total
1. Downloadable Options on Chinese Corporate Websites - Software			
a. Plug - in Software		3.4	
b. Video/Audio Playing Software		2.9	
2. Downloadable Options on Chinese Corporate Websites – Documents			
a. Microsoft Office Documents		3.8	
b. Multimedia Technologies - Video and Audio		3.6	
c. Html Documents		3.2	
d. PDF Files		3.8	
3. Other Available Technologies on Companies' Website			
a. Hyperlink Inside the Digitised Annual Report		3.7	
c. XBRL		3.9	
Total Technologies Score & in %			
Technologies Category Weighting Score			

(Continued)

4.0 Content of Corporate Websites			
	1-5 Scores or N/A (0)	Weightings	Total
1. Financial Information Items on Corporate Websites			
a. Historical Share Prices Disclosed		3.9	
b. Historical Dividend Figures Disclosed		4.1	
c. Key Information at a Glance on Current Year's Financial Statements in a Company's Annual Report		3.8	
d. Access to Financial Information on a Company's Homepage		3.6	
2. Nonfinancial Information Items on Corporate Websites			
a. Staff Training Programmes		3.3	
b. Company Background		4.2	
c. Managers/Directors' Background		4	
d. Industry Information		4.3	
e. Research and Development Information		4.3	
f. Government Policies towards a Company's Industry		4.5	
g. Access to Press Releases on a Company's Homepage		3.9	
h. Access to Investor Relations Information on a Company's Homepage		4	
i. Shareholding Structure and Percentages of top 10 Shareholders		5	
j. Company's charter		4	
3. Online Annual Report Items – Financial Information Items			
a. Annual Report for the Current Year		4.5	
b. Annual Report for the Past 6 Years		4	
c. Audit Report		4.3	
d. Financial Statements		4.3	
e. Notes of Financial Statements		4.1	
f. Management Report and Analysis		3.9	
g. Segmental Reporting by the Line of Business		4.1	
h. Segmental Reporting by Region		3.9	
i. Summary of Key Ratios over a Period of at least 3 Years		4	
j. Summary of Financial Data over a Period of at least 3 Years		4	
4. Online Annual Report Items – Nonfinancial Information Items			
a. Report of the Board of Directors		4.1	
b. Report of the Governance Board		4	
c. Resolutions of Shareholders Meetings in Current Year		4	
d. Top 10 Stockholders		4	
e. Material Events		4.1	
f. Changes in Stockholders' Equity		4.1	
g. Accounting Policies		3.9	
5. Online Corporate Social Responsibility Information Items			
a. Environmental Reporting		3.6	
b. Sports Sponsorship		3.3	
c. Technology Trade Show Sponsorship		3.1	
d. Donations to Underdeveloped and Deprived Communities		3.3	
e. Donations to Areas Hit by Natural Disasters		3.5	
f. Donations to Schools in Deprived Areas		3.6	
g. Donations to Medical Foundations		3.7	
h. Health and Safety Report		4.1	
Total Content Score & in %			
Content Category Weighting Score			
Total Score			

Appendix G – Qualitative Criteria for CIR Index Items

Category 1: User Support Features on Corporate Websites

1. Version of Languages available on Chinese Companies' Website

a) English Version of Website

<i>Scores</i>	<i>Description</i>
5	The amount of information provided and website layout and features on an English version of website are no different from its Chinese version of website.
4	The amount of information provided on an English version website is no different to its Chinese version website The website layout and the features provided on an English version of website are slightly different to its Chinese version of website (e.g. some webpage options or features may not be included).
3	The amount of information provided on a company's English version of website is less than its Chinese version of website (e.g. company background is shortened, and no press releases and/or no annual reports available). The website layout and the features provided are slightly different from its Chinese version of website.
2	The amount of information provided on a company's English version of website is less than its Chinese version of website The website layout and the features provided are completely different from its Chinese version of website (e.g. the design, webpage options, and features provided are all different).
1	A company's English version of website is completely different from its Chinese version of website in terms of the layout, features used, and information content. Or no English version of website is available.

b) Chinese Version of Website

<i>Scores</i>	<i>Description</i>
5	The amount of information provided and website layout and features on a Chinese version of website are no different from its English and other language versions of website.
4	The amount of information provided on an Chinese version of website is no different to its English and other language versions of website The website layout and the features provided on a Chinese version of website are slightly different to its English and other language versions of website (e.g. some webpage options or features may not be included).
3	The amount of information provided on a company's Chinese version of website is less than its English and other language version of website (e.g. company background is shortened, and no press releases and/or no annual reports available). The website layout and the features provided are slightly different from its English and other language version of website.
2	The amount of information provided on a company's Chinese version of website is less than its English and other language version of website The website layout and the features provided are completely different from its English and other language versions of website (e.g. the design, webpage options, and features provided are all different).
1	A company's Chinese version of website is completely different from its English and other language versions of website in terms of the layout, features used, and information content. Or no English version of website is available.

1. Version of Languages available on Chinese Companies' Website*c) Other Language Versions of Website*

<i>Scores</i>	<i>Description</i>
5	The amount of information provided and website layout and features on other language versions of website are no different from its Chinese version of website.
4	The amount of information provided on other language versions of website is no different to its Chinese version of website The website layout and the features provided on other language versions of website are slightly different to its Chinese version of website (e.g. some webpage options or features may not be included).
3	The amount of information and the website layout and features provided are slightly different from its Chinese version of website (e.g. some webpage options are missing; company background is shortened, and no press releases and/or no annual reports available).
2	The amount of information provided on other language versions of website is slightly different to its Chinese version of website, but the website layout and the features provided are completely different (e.g. different in the design, webpage options, and features provided).
1	A company's other language versions of website is completely different from its Chinese version of website in terms of the layout, features used, and information content. If there is no other languages version of website is available, a score of 1 is also awarded.

2. General User Support Features

a) *Help/FAQs*

<i>Scores</i>	<i>Description</i>
5	Help/FAQs page can be found within two mouse clicks. The page also allows users to post their queries on the spot or has instant interactions features such as real-time messaging and replying functions. This feature is also available on company's Chinese and English versions of website.
4	It takes more than two mouse clicks to find the Help/FAQs page. The page also allows users to post their queries on the spot or has instant interactions features such as real-time messaging and replying functions. This feature is also available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find the Help/FAQs page. Although the page allows users to post their queries on the spot, but it has no instant interactions features such as real-time messaging and replying functions. Help/FAQs can be found on either Chinese or English versions of website, or both.
2	It takes more than two mouse clicks to find the Help/FAQs page. The page does not allow users to post their queries nor does it have instant interactions features available. Help/FAQs are provided on either of Chinese or English versions of corporate website, or both.
1	It takes more than two mouse clicks to find the Help/FAQs page. The information provided is difficult to understand. The page does not allow users to post their queries nor does it have instant interactions features available, This feature is only available on either, on both, or neither of Chinese or English versions of corporate website.

b) *Sitemap*

<i>Scores</i>	<i>Description</i>
5	A company's sitemap can be found within two mouse clicks. Hyperlinks can take users to the content by clicking on them without any errors. A sitemap is available on company's Chinese and English versions of website.
4	It takes more than two mouse clicks to find the sitemap feature Hyperlinks can take users to the content by clicking on them without any errors. This feature is also available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find the sitemap feature. Hyperlinks provided have some problems but they can still take users to the selected content (e.g. take users to the wrong webpage). This feature is also available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find the sitemap feature. Hyperlinks provided in the sitemap are problematic and are not working. This feature is also available on either of Chinese or English versions of corporate website, or both.
1	Sitemap is not provided on a company's website.

2. General User Support Features

c) *Site Search Features*

<i>Scores</i>	<i>Description</i>
5	Site search feature is only one mouse click away or is on a company's homepage. It has advance search functions (e.g. by date or related topics) It has sorting abilities (e.g. by relevance, date, topic, or in categories). The search results are relevant to the key words inputted. This feature is available on company's Chinese and English versions of website.
4	It takes more than two mouse clicks to find this feature. It has advance search functions. It has sorting abilities. The search results are relevant to the key words inputted. This feature is also available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find this feature. It has advance search functions, but no sorting ability, or vice versa. The search results are relevant to the key words inputted. This feature is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find this feature. It has neither advance search functions nor sorting abilities. The search results are relevant to the key words inputted. This feature is available on either of Chinese or English versions of corporate website, or both.
1	It takes more than two mouse clicks to find this feature. It has neither advance search functions nor sorting abilities. The results from the search are irrelevant to the key words inputted. This feature is available on either, on both, or neither of Chinese or English versions of corporate website.

d) *Link to Homepage*

<i>Scores</i>	<i>Description</i>
5	The link to homepage can be found within one mouse click. This link is available on each webpage that can take users back to the homepage instantly without errors. This feature should be available on company's Chinese and English versions of website.
4	It takes more than a mouse click to find the link to homepage feature. This link is available on each webpage that can take users back to the homepage instantly without errors. This feature is also available on either of Chinese or English versions of corporate website, or both.
3	It takes more than a mouse click to find the link to homepage feature. This link is only available on certain webpages, but it can take users to the homepage without errors. This feature is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than a mouse click to find the link to homepage feature. This link is available but it is problematic (e.g. takes users to other pages or shows a blank page). This feature is available on either of Chinese or English versions of corporate website, or both.
1	Link to homepage is not provided on a company's website.

2. General User Support Features*e) Link to Top of the Page*

<i>Scores</i>	<i>Description</i>
5	The link to top of the page can be found within one mouse click. An icon is available on every webpage of company's website that can take users back to page top instantly without any errors by clicking on it. This feature is available on company's Chinese and English versions of website.
4	It takes more than one mouse click to find this feature. An icon is available on most webpages of company's website that can take users back to page top instantly without any errors by clicking on it. This feature is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than one mouse click to find this feature. An icon is available on most webpages of company's website but it does not work properly. This feature is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than one mouse click to find this feature. An icon is not available on webpages of company's website. This feature is available on either of Chinese or English versions of corporate website, or both.
1	This feature is not available on a company's website.

3. External Links

a) *Link to Chinese Securities Regulatory Commission's (CSRC) Website*

<i>Scores</i>	<i>Description</i>
5	The link to CSRC website can be found on the investor relations webpage of a corporate website, and it is within three mouse clicks away. The link can take users to CSRC website without errors (e.g. shows a blank page or server error, or to other websites). This feature is available on company's Chinese and English versions of website.
4	The link to CSRC website is not on the investor relations webpage of a corporate website, but it is still within three mouse clicks away. The link can take users to CSRC website without errors. This feature is available on either of Chinese or English versions of corporate website, or both.
3	The link to CSRC website is not on the investor relations webpage of a corporate website, and it takes more than three mouse clicks to be found. The link can take users to CSRC website without errors. This feature is available on either of Chinese or English versions of corporate website, or both.
2	The link to CSRC website is not on the investor relations webpage of a corporate website, and it takes more than three mouse clicks to be found. The link is problematic and does not work properly. This feature is available on either of Chinese or English versions of corporate website, or both.
1	This feature is not available on a company's website.

b) *Links to Chinese Stock Exchange Websites that the Company is Listed in*

<i>Scores</i>	<i>Description</i>
5	The link(s) to Chinese Stock Exchanges' website is (are) on the investor relations webpage or homepage of the corporate website. The link(s) can be found within three mouse clicks. It can take users to Chinese Stock Exchanges' website without errors (e.g. shows a blank page or server error, or to other websites). The link(s) is available on company's Chinese and English versions of website.
4	The link(s) to Chinese Stock Exchanges' website is (are) not on the investor relations webpage or homepage of the corporate website. The link(s) can still be found within three mouse clicks. The link(s) provided can take users to Chinese Stock Exchanges' website without errors. The link(s) is available on either of Chinese or English versions of corporate website, or both.
3	The link(s) to Chinese Stock Exchanges' website is (are) on the investor relations webpage or homepage of the corporate website. It takes more than three mouse clicks to find the link(s). The link(s) provided can take users to Chinese Stock Exchanges' website without errors. The link(s) is available on either of Chinese or English versions of corporate website, or both.
2	The link(s) to Chinese Stock Exchanges' website is (are) not on the investor relations webpage or homepage of the corporate website. It takes more than three mouse clicks to be found. The link(s) provided is (are) problematic and does not properly. The link(s) is available on either of Chinese or English versions of corporate website, or both.
1	This feature is not available on a company's website.

4. Contact Information

a) *Contact to the Webmaster*

<i>Scores</i>	<i>Description</i>
5	Contacts of the webmaster can be found within two mouse clicks. The contact information provided includes phone numbers, email addresses, and/or a link that can redirect users to webmaster's company website. Additional feature such as allowing users to post feedbacks to webmaster on corporate website is also provided. Contact information about webmaster is available on a company's Chinese and English versions of website.
4	It takes more than two mouse clicks to find this feature on a corporate website. The contact information provided includes phone numbers, email addresses, and/or a link that can redirect users to webmaster's company website. Additional feature is not provided. Contact information about webmaster is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find this feature on a corporate website. The contact information provided includes phone numbers and email addresses. Contact information about webmaster is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find this feature on a corporate website. The contact information provided only includes email addresses or postal addresses. Contact information about webmaster is available on either of Chinese or English versions of corporate website, or both.
1	This feature is not available on a company's website.

b) *Email Addresses of the Company*

<i>Scores</i>	<i>Description</i>
5	Corporate email addresses or an email hyperlink can be found within two mouse clicks. The instruction of a company's built-in emailing system is easy to understand and to follow. The email hyperlink provided to allow users to start an email can work properly. The email addresses features are available on both Chinese and English version of corporate websites.
4	It takes more than two mouse clicks to find email addresses or an email hyperlink. The instruction in a company's website has a built-in emailing system is easy to understand and to follow. The email hyperlink provided to allow users to start an email can work properly. The email addresses features are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find email addresses or an email hyperlink. Built-in emailing system is not available. The email hyperlink provided to allow users to start an email can work properly. The email hyperlink is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find email addresses or an email hyperlink. The email hyperlink provided is problematic and cannot start an email properly; or the email addresses are not hyperlinked. The email hyperlink is available on either of Chinese or English versions of corporate website, or both.
1	This feature is not available on a company's website.

4. Contact Information

c) *Postal Addresses of the Company*

<i>Scores</i>	<i>Description</i>
5	Company's postal address (es) includes both its headquarter and branch addresses. This information can be found by either using the website internal search engine or is within two mouse clicks by searching on corporate webpages. The presentation of the postal address (es) is easy to understand. Postal addresses of the company are available on a company's Chinese and English versions of website.
4	Company's postal address (es) only includes its headquarter's addresses. This information can be found by either using the website internal search engine or is within two mouse clicks by searching on corporate webpages. The presentation of the postal address (es) is easy to understand. Postal addresses of the company are available on either of Chinese or English versions of corporate website, or both.
3	Company's postal address (es) only includes its headquarter's addresses. It takes more than two mouse clicks to find the addresses. The presentation of the postal address (es) is easy to understand. Postal addresses of the company are available on either of Chinese or English versions of corporate website, or both.
2	Company's postal address (es) only includes its headquarter's addresses. It takes more than two mouse clicks to find the addresses. The presentation of the postal address (es) is difficult to understand. Postal addresses of the company are available on either of Chinese or English versions of corporate website, or both.
1	Postal addresses are not available on a company's website.

d) *Phone Numbers of the Company*

<i>Scores</i>	<i>Description</i>
5	Company's phone number(s) includes both its headquarter and branch numbers. This information can be found by using internal search engine or within two mouse clicks by searching on corporate webpage. National and/or area codes and free call numbers are also provided. This information is available on companies' English and Chinese versions of website.
4	Company's phone number(s) includes only includes its headquarter's numbers. This information can be found by using internal search engine or within two mouse clicks by searching on corporate webpage. National and/or area codes and free call numbers are also provided. This information is available on companies' English and Chinese versions of website.
3	Company's phone number(s) includes only includes its headquarter's numbers. It takes more than two mouse clicks to find the phone number(s). National and/or area codes are provided, but free call number sare not available. This information is available on companies' English and Chinese versions of website.
2	Company's phone number(s) includes only includes its headquarter's numbers. It takes more than two mouse clicks to find the phone number(s). National and/or area codes and free call numbers are not available. This information is available on companies' English and Chinese versions of website.
1	Phone numbers of the company is not available on a company's website.

5. Other Additional User Support Features

a) *Links to Chinese Company's Investments*

<i>Scores</i>	<i>Description</i>
5	This information can be found within three mouse clicks. Detailed information is provided (e.g. the name of the investment, types of investment, the market value of the investments, and other related information). Links are also provided that can redirect users to external investment websites. The information on company investments and external links are available on company's Chinese and English versions of website.
4	It takes more than three mouse clicks to find the information. Detailed information is provided. Links are also provided that can redirect users to external investment websites. The information on company investments and external links are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than three mouse clicks to find the information. Detailed information is provided but external links are not available, or vice versa. The information on company investments or external links is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than three mouse clicks to find the information. Brief information is provided but external links are not available, or vice versa. The information on company investments or external links is available on either of Chinese or English versions of corporate website, or both.
1	Chinese company's investment information is not available on a company's website.

b) *Instant Feedback Posting Feature*

<i>Scores</i>	<i>Description</i>
5	The instant feedback posting feature can be found within two mouse clicks. This feature allows users to post comments on the website, and also can have audiences to upload multimedia files (e.g. audio and video files). The instruction information provided is easy to understand. The instant feedback feature and the instruction information are available on company's English and Chinese versions of website.
4	It takes more than two mouse clicks to find the feature and its instruction information. This feature allows users to post comments on the website, and it also allows them to upload multimedia files. The instruction information provided is easy to understand. The instant feedback feature and the instruction information are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find the feature and its instruction information. This feature only allows users to post comments on the website. The instruction information provided is easy to understand. The instant feedback feature and the instruction information are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find the feature and its instruction information. This feature only allows users to post comments on the website. The instruction information provided is difficult to understand. The instant feedback feature and the instruction information are available on either of Chinese or English versions of corporate website, or both.
1	Instant feedback posting feature is not available on a company's website.

c) *Explanations of Technical Terms*

Scores	Description
5	The information can be found within three mouse clicks. The explanations of technical terms are clear, concise, and easy to understand. Users are able to leave queries on the current webpage to seek further information. Links that can redirect users to external websites for more detailed explanations on technical terms are provided. This information is available on company's English and Chinese versions of website.
4	It takes more than three mouse clicks to find the information. The explanations of technical terms are clear, concise, and easy to understand. Users are able to leave queries on the current webpage to seek further information. Links that can redirect users to external websites for more detailed explanations on technical terms are provided. This information is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than three mouse clicks to find the information. The explanations of technical terms are clear, concise, and easy to understand. Users are able to leave queries on the current webpage to seek further information. This information is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than three mouse clicks to find the information. The explanations of technical terms are clear, concise, and easy to understand. This information is available on either of Chinese or English versions of corporate website, or both.
1	It takes more than three mouse clicks to find the information. The explanations of technical terms provided are not clear. This information is available on either, on both, or neither of Chinese or English versions of corporate website.

d) *Access to Google Search Engine on a Company's Homepage*

Scores	Description
5	Google search engine is available on company's homepage, or it can be found within one mouse click. Search results can be displayed on the corporate website. This feature is available on company's English and Chinese versions of website.
4	Google search engine is not available on company's homepage, or it can be found within one mouse click. Search results can be displayed on the corporate website. This feature is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than one mouse click to find the Google search engine on companies' website Search results can be displayed on the corporate website. This feature is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than one mouse click to find the Google search engine on companies' website It would redirect users to the main page of Google search to display the results. This feature is available on either of Chinese or English versions of corporate website, or both.
1	Google search engine is not available on company's website.

Category 2: Timeliness of the Information on Corporate Websites**1. Information Timeliness – Reports**a) *Quarterly Report*

<i>Scores</i>	<i>Days</i>
5	The report was disclosed on companies' website within 15 days following the end of the first three months and 9 months of an accounting period.
4	The report was disclosed on companies' website between 16-30 days following the end of the first three months and 9 months of an accounting period.
3	The report was disclosed on companies' website between 31-45 days following the end of the first three months and 9 months of accounting period.
2	The report was disclosed on companies' website between 46-60 days following the end of the first three months and 9 months of an accounting period.
1	The report took more than 60 days following the end of the first three months and 9 months of an accounting period to be disclosed on a company's website, or no disclosure.

b) *Interim Report*

<i>Scores</i>	<i>Days</i>
5	The report was disclosed on companies' website within 45 days following the end of the first half of an accounting period.
4	The report was disclosed on companies' website between 46-60 days following the end of the first half of an accounting period.
3	The report was disclosed on companies' website between 61-75 days following the end of the first half of an accounting period.
2	The report was disclosed on companies' website between 76-90 days following the end of the first half of an accounting period.
1	The report took more than 90 days following the end of the first half of an accounting period to be disclosed on a company's website, or no disclosure

c) *Annual Report*

<i>Scores</i>	<i>Days</i>
5	The report was disclosed on a company's website within 100 days following the end of an accounting period.
4	The report was disclosed on a company's website between 101-120 days following the end of an accounting period.
3	The report was disclosed on a company's website between 121-150 days following the end of an accounting period.
2	The report was disclosed on a company's website between 151-180 days following the end of an accounting period.
1	The report took more than 6 months following the end of an accounting period to be disclosed on a company's website, or no disclosure

2. **Information Timeliness – Other Information**a) *Press Releases*

<i>Scores</i>	<i>Updated Time</i>
5	The information was updated one month before the assessment.
4	The information was updated two months before the assessment.
3	The information was updated three months before the assessment.
2	The information was updated four months before the assessment.
1	The information was updated for more than four months before the assessment, or no disclosure

b) *Share Prices Update During Trading Hours*

<i>Scores</i>	<i>Frequency of refreshing the information</i>
5	5 - 59 seconds
3	1 – 3 minutes
1	More than 3 minutes, or no disclosure

c) Forward Looking Statements

Scores	Description
5	<p>Forward looking information can be found within three mouse clicks.</p> <p>The information is updated quarterly, semi-annually, and annually with narrations and/or numbers and graphs.</p> <p>The forward looking statement information includes strategic goals, profit estimations, market shares estimations, financial ratios (e.g. ROA, ROE, and EPS), and futures about the company.</p> <p>Forward looking information is in both English and Chinese, and is available on company's English and Chinese versions of website.</p>
4	<p>It takes more than three mouse clicks to find the forward looking information.</p> <p>The information is updated quarterly, semi-annually, or annually with narrations and/or numbers and graphs.</p> <p>The forward looking statement information includes strategic goals, profit estimations, market shares estimations, financial ratios, and futures about the company.</p> <p>Forward looking information is in both English and Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
3	<p>It takes more than three mouse clicks to find the forward looking information.</p> <p>The information is updated quarterly, semi-annually, or annually with narrations and/or numbers and graphs.</p> <p>The forward looking statement information only includes strategic goals and futures about the company.</p> <p>Forward looking information is in either English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
2	<p>It takes more than three mouse clicks to find the forward looking information.</p> <p>The information is updated quarterly, semi-annually, or annually with narrations and/or numbers and graphs.</p> <p>The forward looking statement information includes strategic goals and futures about the company.</p> <p>Forward looking information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
1	<p>It takes more than three mouse clicks to find the forward looking information.</p> <p>The information updates irregularly with the use of only narrations.</p> <p>The forward looking statement information only includes minimum information.</p> <p>Forward looking information is in English or Chinese, and is available on either, or on both, or no disclosure at all.</p>

Category 3: Corporate Website Technologies**1. Downloadable Options on Chinese Corporate Websites - Software**a) *Plug-in Software*

<i>Scores</i>	<i>Description</i>
5	A plug-in software download option is available on the spot. Software descriptions are provided. The instruction is easy to understand. The instruction and descriptions are in both English and Chinese. Software can be downloaded without errors (e.g. download cannot start). Both the download feature and the instruction are available on company's English and Chinese versions of website.
4	External software download links are available on the spot. Software descriptions are provided. The descriptions are either in Chinese or English. The external download links are available on either of Chinese or English versions of corporate website, or both.
3	External software download links are available on the spot, but no software descriptions are provided. The external download links are available on either of Chinese or English versions of corporate website, or both.
2	A plug-in software download option is available on the spot but the download option does not work. Both the download feature and the instruction are available on either of Chinese or English versions of corporate website, or both.
1	Plug-in software option is not available on company's website.

b) *Video/Audio Playing Software*

<i>Scores</i>	<i>Description</i>
5	A video/audio playing software download option is available on the spot. Descriptions of the available software and their download instructions are provided. Software can be downloaded without errors (e.g. download cannot be started). The descriptions and instructions are in both Chinese and English. The download option is available on company's Chinese and English versions of website.
4	External software download links are available on the spot. Software descriptions are provided. The descriptions are either in Chinese or English. The external download links available on either of Chinese or English versions of corporate website, or both.
3	External software download links are available on the spot, but no software descriptions provided. The external download links are available on either of Chinese or English versions of corporate website, or both.
2	A video/audio playing software download option is available on the spot, but the download option does not work. The download option is available on either of Chinese or English versions of corporate website, or both.
1	The download option is not available on company's website.

2. Downloadable Options on Chinese Corporate Websites– Documents

a) Microsoft Office Documents

<i>Scores</i>	<i>Description</i>
5	An abstract of each available document is provided. A description that specify which version of Excel or/and Word (e.g. Office XP, Office 2003, or Office 2010) documents are formatted in is available. Documents are not read-only formatted. Microsoft office documents are in both English and Chinese and are available on both English and Chinese versions of a company's website.
4	A description on which version of Excel or/and Word (e.g. Office XP, Office 2003, or Office 2010) documents are formatted in is provided. Documents are not read-only formatted. Microsoft office documents are in English or Chinese and are available on either of Chinese or English versions of corporate website, or both.
3	Documents are not read-only formatted. Microsoft office documents are in English or Chinese and are available on either of Chinese or English versions of corporate website, or both.
2	Documents are read-only formatted. Microsoft office documents are
1	Microsoft office documents are not available on a company's website.

b) Multimedia Technologies – Video and Audio

<i>Scores</i>	<i>Description</i>
5	Both video and audio files are available for download. A brief description on each file's information content is provided. Files can be downloaded without errors (e.g. download cannot start, or an error page will show up). The type of video files is specified (e.g. MP4, MP3, WMV, or RM). Multimedia files are provided on a company's English and Chinese versions of website.
4	Video or audio files are available for download. Files can be downloaded without errors. The type of video files is specified. Multimedia files are provided on either of Chinese or English versions of corporate website, or both.
3	Video or Audio files are available. Files can be downloaded without errors. Multimedia files are provided on either of Chinese or English versions of corporate website, or both.
2	Video or Audio files are available. Files cannot be properly downloaded. Multimedia files are provided on either of Chinese or English versions of corporate website, or both.
1	No multimedia files are available on a company's website.

3. Downloadable Options on Chinese Corporate Websites– Documents*c) Html Documents*

<i>Scores</i>	<i>Description</i>
5	Html formatted documents are available for users to download and they can be opened on users' Internet browsers. Content description on each of the documents is provided. Html documents can be opened on multiple web browsers (e.g. Internet Explorer, Google Chrome, and Firefox). The documents are in both English and Chinese, and they are available on both English and Chinese versions of a company's website.
4	Html formatted documents are available for users to download or can be opened on users' Internet browsers. Content description on each of the documents is provided. Html documents can be opened on multiple web browsers. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
3	Html formatted documents can be opened on users' Internet browsers. Html documents can be opened on multiple web browsers. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
2	Html formatted documents can be opened on users' Internet browser. Html documents can only be opened on one type of web browser. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
1	Html documents are not available on a company's website.

d) PDF Files

<i>Scores</i>	<i>Description</i>
5	A notice is provided to remind users that PDF documents require plug-in software to open. An abstract of each document is provided. Users can download the PDF software and documents from the company's website without errors (e.g. download cannot start, or an error page will show up). PDF documents allow users transferred the content to a word document. The documents are in both English and Chinese, and they are available on both English and Chinese versions of a company's website.
4	Content description on each of the documents is provided. Users can download the PDF software and/or documents from the company's website without errors. PDF documents allow users transferred the content to a word document. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
3	Users can download the PDF software and/or documents from the company's website without errors. PDF documents are read-only files. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
2	The download option does not work. The documents are in both English and Chinese, and they are available on either of Chinese or English versions of corporate website, or both.
1	No PDF documents are available on a company's website.

3. Other Available Technologies on Chinese Corporate Websites

a) *Hyperlinks inside the Digitised Annual Reports*

<i>Scores</i>	<i>Description</i>
5	Hyperlinks can be easily spotted on a digitised annual report. Hyperlinks can take users to the selected content without any errors (e.g. go to the wrong content or still stay at the same page after clicking the links).
4	Hyperlinks are difficult to be spotted on a digitised annual report. Hyperlinks can take users to the selected content without any errors.
3	Hyperlinks are easy to be spotted on a digitised annual report. Hyperlinks do not work properly.
2	Hyperlinks are difficult to be spotted on a digitised annual report. Hyperlinks do not work properly.
1	No hyperlinks inside the digitised annual reports.

b) *XBRL*

<i>Scores</i>	<i>Description</i>
5	A link to XBRL documents on the Shanghai Stock Exchange website is provided or is available for download on the corporate website. A reminder is provided to notify users that XBRL software is required to open the file. A download option of XBRL software is provided. Descriptions of the content of XBRL files are provided. An explanation of what is XBRL is provided. The information provided is in English and Chinese and are available on both Chinese and English versions of corporate website.
4	Only a link to XBRL documents on the Shanghai Stock Exchange website is provided. A download option of XBRL software is provided. An explanation of what is XBRL is provided. The information provided is in English or Chinese and are available on either of Chinese and English versions of corporate website, or both.
3	Only a link to XBRL documents on the Shanghai Stock Exchange website is provided. An explanation of what is XBRL is provided. The information provided is in English or Chinese and are available on either of Chinese and English versions of corporate website, or both.
2	Only a link to XBRL documents on the Shanghai Stock Exchange website is provided. The link is available on either of Chinese and English versions of corporate website, or both.
1	No XBRL option available on a company's website.

Category 4: Content of Corporate Websites**1. Financial Information Items***a) Historical Share Prices Disclosed*

<i>Scores</i>	<i>Descriptions</i>
5	Links that can direct web users to the Shanghai, Shenzhen, Hong Kong Stock Exchange website, and/or other investment website are provided. Disclosed 4 years or more of historical share prices on a company's website.
4	The links are not provided. Disclosed 4 years of historical share prices on a company's website.
3	The links are available on a company's website. No disclosure or disclosed 3 years or less of historical share prices on a company's website.
2	The links are not provided. Disclosed 3 years or less of historical share prices on a company's website.
1	Neither a link nor historical share prices available on a company's website.

b) Historical Dividend Figures Disclosed

<i>Scores</i>	<i>Number of Years</i>
5	Links that can direct web users to the Shanghai, Shenzhen, Hong Kong Stock Exchange, and/or other investment website are provided. Disclosed 4 years or more of historical dividend figures on a company's website.
4	The links are not provided. Disclosed 4 years or more of historical dividend figures on a company's website.
3	The links are available on a company's website. No disclosure or disclosed 3 years or less of historical dividend figures on a company's website.
2	The links are not provided on a company's website. Disclosed 3 years or less of historical dividend figures on a company's website.
1	Neither a link nor historical share prices available on a company's website.

c) *Key Information at a glance on Current Year's Financial Statements in a Company's Annual Report*

<i>Scores</i>	<i>Description</i>
5	<p>This information can be found within two mouse clicks.</p> <p>Key information disclosed included company's expenses (e.g. operating expense, administration expenses, and other expenses), revenues (sales income, interest income, and other income), profits (net profits, EBIT, and profit after tax), assets, and shareholders equities.</p> <p>The key information disclosed is available in both Chinese and English, and is available on companies' Chinese and English versions of website.</p>
4	<p>It takes more than two mouse clicks to find the key information.</p> <p>Key information disclosed included company's expenses, revenues, profits, assets, and shareholders equities.</p> <p>The key information disclosed is available in both Chinese and English, and is available on companies' Chinese and English versions of website.</p>
3	<p>It takes more than two mouse clicks to find the key information.</p> <p>Key information disclosed included company's revenues, profits, and shareholders equities.</p> <p>The key information disclosed is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
2	<p>It takes more than two mouse clicks to find the key information.</p> <p>Key information disclosed only included company's shareholders equities.</p> <p>The key information disclosed is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
1	Key information is not available on a company's website.

d) *Access to Financial Information on a Company's Homepage*

<i>Scores</i>	<i>Description</i>
5	<p>Financial information can be found within two mouse clicks</p> <p>Financial information includes financial highlights, stock quotes, sales or profit forecast, and various ratios (e.g. net profit percentage, return on investment, and earning per shares).</p> <p>Narrations are provided to explain the financial numbers presented.</p> <p>The information disclosed is available in both Chinese and English, and on companies' Chinese and English versions of website.</p>
4	<p>It takes more than two mouse clicks to find the information.</p> <p>Financial information includes financial highlights, stock quotes, sales or profit forecast, and various ratios.</p> <p>Narrations are provided to explain the financial numbers presented.</p> <p>The information disclosed is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
3	<p>It takes more than two mouse clicks to find the information.</p> <p>Financial information includes financial highlights, sales and profit forecast, and stock quotes.</p> <p>Narrations are not provided to explain the financial numbers presented.</p> <p>The information disclosed is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
2	<p>It takes more than two mouse clicks to find the information.</p> <p>Financial information includes financial highlights and stock quotes.</p> <p>Narrations are not provided.</p> <p>The information disclosed is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.</p>
1	Key information is not available on a company's website.

2. Non- Financial Information Items on Corporate Websites*a) Staff Training Programmes*

Scores	Description
5	Staff training programmes can be found within 4 mouse clicks. Detailed information about staff training programmes is provided. The information is easy to understand. Staff training programmes are in both Chinese and English, and are available on both Chinese English versions of corporate website.
4	It takes more than 4 mouse clicks to locate staff training programmes. Detailed information about staff training programmes is provided. The information is easy to understand. Staff training programmes are either in English or Chinese, and are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 4 mouse clicks to locate staff training programmes. Brief information about staff training programmes is provided. The information is easy to understand. Staff training programmes are either in English or Chinese, and are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 4 mouse clicks to locate staff training programmes. Brief information about staff training programmes is provided. The information is difficult to understand. Staff training programmes are either in English or Chinese, and are available on either of Chinese or English versions of corporate website, or both.
1	Staff training programmes are not available on a company's website.

b) Company Background

Scores	Description
5	Company background can be found within 2 mouse clicks. Background information includes the history of the company, its product range, areas of business and company size (e.g. market capitalisation and total asset values). This information is in both Chinese and English, and is available on both Chinese and English versions of website.
4	It takes more than 2 mouse clicks to find the information. Background information includes the history of the company, its product range, areas of business and company size. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 2 mouse clicks to find the information. Background information includes the history of the company and its product range. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 2 mouse clicks to find the information. Background information only includes the history of the company. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Company background information is not available on a company's website.

c) *Managers/Directors' Background*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks. Managers/directors' background includes the names and detailed descriptions such as professional experiences, education level, interests/hobbies, and his/her personality and nationality are provided. Managers/directors background is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Managers/directors background includes names and detailed descriptions such as professional experiences, education level, interests/hobbies, and his/her personality and nationality are provided. Managers/directors background is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Managers/directors background includes the names and detailed descriptions such as professional experiences, education level, and his/her nationality are provided. Managers/directors background is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Managers/directors background includes the names and only brief descriptions about managers/directors are provided. Managers/directors background is either in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Managers/directors background information is not available on a company's website.

d) *Industry Information*

<i>Scores</i>	<i>Description</i>
5	Industry information can be found within 3 mouse clicks. Industry information includes an overview of assessed company's business sector, trends/growth, market size, current or future issues, challenges, and risks. Key industrial statistics such as financial numbers, benchmarks, and growth estimations are provided. Industry information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Industry information includes an overview of assessed company's business sector, trends/growth, market size, current or future issues, challenges, and risks. Key industrial statistics are provided. Industry information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Industry information includes an overview of assessed company's business sector, market size, current or future issues, challenges, and risks. Key industrial statistics are provided. Industry information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Industry information only includes an overview of assessed company's business sector, and no key industrial statistics are provided. Industry information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Industry information is not available on a company's website.

e) *Research and Development Information*

<i>Scores</i>	<i>Description</i>
5	Research and development information can be found within 3 mouse clicks. Detailed information such as the name of the programs, amount of investments in each program, the completion date, and possible outcomes from each program is disclosed. This information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Detailed information such as the name of the programs, amount of investments in each program, the completion date, and possible outcomes from each program is disclosed. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Brief information such as the name of the programs, amount of investments in each program, and the completion date is provided. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Brief information such as the name of the programs and amount of investments is provided. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Research and development information is not available on a company's website.

f) *Government Policies Towards a Company's Industry*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks. Government policies are disclosed in detailed. External links are provided (for re-directing users to Government official websites that can provide further details on the industry policies). This information is available in both Chinese and English, and both the information and the links are on a company's Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Government policies are disclosed in detailed. External links are provided. This information is in English or Chinese, and both the information and the links are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the external links. Government policies are not disclosed. External links are provided. The links are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Only minimum information on Government policies is disclosed. No external links are available. This information is in English or Chinese, and the links are available on either of Chinese or English versions of corporate website, or both.
1	Government policies towards company's industry are not available on a company's website.

g) Access to Press Releases on a Company's Homepage

<i>Scores</i>	<i>Description</i>
5	A link is provided on company's homepage that can take users directly to press releases information; if the link is not provided, the information can be found within two mouse clicks. Press release information can be opened properly without errors (e.g. the page cannot be displayed). Press releases information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	A link is not provided; however, the information can be found within two mouse clicks. Press release information can be opened properly without errors. Press releases information is available in both Chinese and English, and is also on both Chinese and English versions of website.
3	It takes more than two mouse clicks to find the information. Press release information can be opened properly. Press releases information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find the information. Press release information cannot be opened. Press releases information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Press releases are not available on a company's website.

h) Access to Investor Relations Information on a Company's Homepage

<i>Scores</i>	<i>Description</i>
5	Investor relations information link is available on company's homepage; if the link is not provided, the information can be found within two mouse clicks. Investor relation information includes annual reports, financial highlights, stock quotes, dividend information, and other non-financial information (e.g. intellectual capital disclosure and/or environmental information disclosure). Investor relations information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	The link is not available; but the information can be found within two mouse clicks. Investor relation information includes annual reports, financial highlights, stock quotes, dividend information, and other non-financial information. Investor relations information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than two mouse clicks to find the information. Investor relation information includes financial information such as annual reports, financial highlights, stock quotes, and dividend information. Investor relations information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than two mouse clicks to find the information. Investor relation information only includes stock quotes. Investor relations information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Investor relations information is not available on a company's website.

i) *Shareholding Structure and Percentages of Top 10 Shareholders*

<i>Scores</i>	<i>Description</i>
5	The information can be found within 3 mouse clicks. Names, operating industry, background information (e.g. top 10 shareholders' profile), shareholding percentages, and total number of shares held are provided. This information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Names, operating industry, background information (e.g. top 10 shareholders' profile), shareholding percentages, and total number of shares held are provided. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Names, operating industry, shareholding percentages, and total number of shares held are provided. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Only names, shareholding percentages, and total number of shares held are provided. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's website.

j) *Company's Charter*

<i>Scores</i>	<i>Description</i>
5	Company's charter can be found within 3 mouse clicks. Company's charter includes the name of the company, its registered address, shareholders rights, responsibilities a company has towards its shareholders, amount of company's registered capital, the operating industry (s), and directors and governance board's responsibilities. This information is available in both Chinese and English, and is also on both Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Company's charter includes the name of the company, its registered address, shareholders rights, responsibilities a company has towards its shareholders, amount of company's registered capital, the operating industry (s), and directors and governance board's responsibilities. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Company's charter includes the name of the company, its registered address, shareholders rights, and directors and governance board's responsibilities. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Company's charter only includes the name of the company, its registered address, and shareholders rights. This information is in English or Chinese, and is available on either of Chinese or English versions of corporate website, or both.
1	Company's charter is not available on a company's website.

3. Online Annual Report Items – Financial Information Items*a) Annual Report of Current Year*

<i>Scores</i>	<i>Description</i>
5	Both the summary and full versions of annual report are provided. The annual reports of current year can be found within 3 mouse clicks. Both versions of current year's annual report are available on both Chinese and English versions of website.
4	Both the summary and full versions of annual report are provided. It takes more than 3 mouse clicks to find the reports. Both versions of current year's annual report are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the report. Only the full version of current year annual report is provided. Both versions of current year's annual report are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the report. Only the summary version of current year annual report is provided. Both versions of current year's annual report are available on either of Chinese or English versions of corporate website, or both.
1	Annual report of current year (both full and summary versions) is not provided on a company's website.

b) Annual Report for the Past 6 Years

<i>Scores</i>	<i>Description</i>
5	Both the summary and full versions of annual report for the past 6 years are provided. The annual reports for the past 6 years can be found within 3 mouse clicks. Both versions of annual reports for the past 6 years are available on both Chinese and English versions of website.
4	Both the summary and full versions of annual report for the past 6 years are provided. It takes more than 3 mouse clicks to find the reports. Both versions of annual reports for the past 6 years are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the reports. Only the full version of past 6 years' annual reports is provided. Annual reports for the past 6 years (full version) are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the reports. Only the summary version of past 6 years' annual report is provided. Annual reports for the past 6 years (summary version) is available on either of Chinese or English versions of corporate website, or both.
1	Annual reports for the past 6 years (both full and summary versions) are not provided on a company's website.

c) *Audit Reports*

<i>Scores</i>	<i>Description</i>
5	Current year and the past 6 years of audit reports are provided. Auditors' name, signatures, unqualified opinions, and the name of audit agency are provided in the reports. Current year and past 6 years of audit reports are available on both Chinese and English versions of a company's website.
4	Current year and the past 6 years of audit reports are provided. Auditors' name, signatures, unqualified opinions, and the name of audit agency are provided in the reports. Current year and past 6 years of audit reports are available on either of Chinese or English versions of corporate website, or both.
3	Only current year of annual report(s) is (are) provided. Auditors' name, signatures, unqualified opinions, and the name of audit agency are provided in the reports. Audit report of current year is available on both Chinese and English versions of a company's website.
2	Only past 6 years of annual report(s) is (are) provided. Auditors' name, signatures, unqualified opinions, and the name of audit agency are provided in the reports. Audit reports for the past six years are available on either of Chinese or English versions of corporate website, or both.
1	Audit reports are not provided on a company's digitised annual report.

d) *Financial Statements*

<i>Scores</i>	<i>Description</i>
5	Current year and the past 6 years of financial statements are provided. Financial statements can be found within 3 mouse clicks. The current year and the past 6 years of financial statements are available on both Chinese and English versions of a company's website.
4	Current year and the past 6 years of financial statements are provided. It takes more than 3 mouse clicks to find the statements. The current year and the past six years of financial statements are available on either of Chinese or English versions of corporate website, or both.
3	Only current year of financial statements are provided. Financial statements can be found within 3 mouse clicks. The current year or the past six years of financial statements are available on both Chinese and English versions of a company's website.
2	Only past six years of financial statements are provided. It takes more than 3 mouse clicks to find the statements. The current year or the past six years of financial statements are available on either of Chinese or English versions of corporate website, or both.
1	Financial statements are not available on a company's digitised annual report.

e) *Notes to Financial Statements*

<i>Scores</i>	<i>Description</i>
5	The current year and the past six years' notes of financial statements are provided. Notes to financial statements can be found within 3 mouse clicks. The current year and the past six years' notes of financial statements are available on both Chinese and English versions of a company's website.
4	The current year and the past six years' notes of financial statements are provided. It takes more than 3 mouse clicks to find the information. The current year and the past six years' notes to financial statements are available on either of Chinese or English versions of corporate website, or both.
3	Only the current year or the past six years' notes of financial statements are provided. Notes to financial statements can be found within 3 mouse clicks. The current year or the past six years' notes of financial statements are available on both Chinese and English versions of a company's website.
2	Only the current year or the past six years of notes of financial statements are provided. It takes more than 3 mouse clicks to find the information. The current year or the past six years' notes to financial statements are available on both Chinese and English versions of a company's website.
1	Notes of financial statements are not provided on a company's digitised annual report.

f) *Management Report and Analysis*

<i>Scores</i>	<i>Description</i>
5	Management report and analysis have included visual aids (e.g. graphs and tables) and financial figures (i.e. revenues, profits, assets values, liabilities values). Detail narrations are provided to present an overall analysis of the financial figures. Other non-financial information such as intellectual capital, corporate environmental policies, and corporate social responsibilities are also included. Management report and analysis are available on both Chinese and English versions of a company's website.
4	Management report and analysis have included visual aids and/or financial figures. Detail narrations are provided to present an overall analysis of the financial figures. Management report and analysis are available on either of Chinese or English versions of corporate website, or both.
3	Management report and analysis have included visual aids and/or financial figures. Brief narrations are provided to present an overall analysis of the financial figures. Management report and analysis are available on either of Chinese or English versions of corporate website, or both.
2	Management report and analysis have no visual aids and financial figures. Only brief narrations are provided. Management report and analysis are available on either of Chinese or English versions of corporate website, or both.
1	Management report and analysis are not available on a company's digitised annual report.

g) *Segmental Reporting by the Line of Business*

Scores	Description
5	Financial figures and a detailed analysis of financial figures are disclosed. Narrations other than financial analysis are provided (e.g. the cause of unfavourable figures). The information is available on both Chinese and English versions of a company's website.
4	Financial figures and a detailed analysis of financial figures are disclosed. Narrations other than financial analysis are provided (e.g. the cause of unfavourable figures). The information is available on either of Chinese or English versions of corporate website, or both.
3	Financial figures and a brief analysis of financial figures are disclosed. Other narrations are not provided. The information is available on either of Chinese or English versions of corporate website, or both.
2	Only financial figures are disclosed. Other narrations are not provided. The information is available on either of Chinese or English versions of corporate website, or both.
1	Segmental reporting by the line of business is not available on a company's digitised annual report.

h) *Segmental Reporting by Region*

Scores	Description
5	Financial figures and a detailed analysis of financial figures are disclosed. Narrations other than financial analysis are provided (e.g. the cause of unfavourable figures). The information is available on both Chinese and English versions of a company's website.
4	Financial figures and a detailed analysis of financial figures are disclosed. Narrations other than financial analysis are provided (e.g. the cause of unfavourable figures). The information is available on either of Chinese or English versions of corporate website, or both.
3	Financial figures and a brief analysis of financial figures are disclosed. Other narrations are not provided. The information is available on either of Chinese or English versions of corporate website, or both.
2	Only financial figures are disclosed. Other narrations are not provided. The information is available on either of Chinese or English versions of corporate website, or both.
1	Segmental reporting by region is not available on a company's digitised annual report.

i) Summary of Key Ratios Over a Period of at Least 3 years

Scores	Description
5	A statement on which accounting standard was used to prepare the financial figures (i.e. Hong Kong GAAPs, IFRS or China GAAPs) is disclosed. Five or more ratios (e.g. ROA, ROE, EPS, NP% and P/E ratio) are included. An analysis on the changes of each ratio with narrations is provided. The information is available on both Chinese and English versions of a company's website.
4	A statement on which accounting standard was used to prepare the financial figures for calculating the ratios is disclosed. Four or less ratios are included. An analysis on the changes of each ratio with narrations is provided. The information is available on either of Chinese or English versions of corporate website, or both.
3	A statement on which accounting standard was used to prepare the financial figures for calculating the ratios is disclosed. Four or less ratios are included. An analysis on the changes of each ratio provided without narrations. The information is available on either of Chinese or English versions of corporate website, or both.
2	No statement disclosed. Four or less ratios are included. An analysis on the changes of each ratio provided without narrations. The information is available on either of Chinese or English versions of corporate website, or both.
1	Segmental reporting by the line of business is not available on a company's digitised annual report.

j) Summary of Financial Data Over a Period of at Least 3 years

Scores	Description
5	A statement on which accounting standard was used to prepare the financial statements (i.e. Hong Kong GAAPs, IFRS or China GAAPs) is disclosed. The summary of financial data includes the figures of 3 years or more. A detailed comparative analysis is provided with narrations. The information is available on both Chinese and English versions of a company's website.
4	A statement on which accounting standard was used to prepare the financial statements is disclosed. The summary of financial data includes the figures of 2 years or less. A detailed comparative analysis is provided without narrations. The information is available on either of Chinese or English versions of corporate website, or both.
3	No statement disclosed. The summary of financial data includes the figures of 3 years or more. A brief comparative analysis is provided with no narrations. The information is available on either of Chinese or English versions of corporate website, or both.
2	No statement disclosed. The summary of financial data includes the figures of 2 years or less. A brief comparative analysis is provided without narrations. The information is available on either of Chinese or English versions of corporate website, or both.
1	Summary of financial data is not available on a company's digitised annual report.

3. Online Annual Report Items – Non-Financial Information Itemsa) *Report of the Board of Directors*

<i>Scores</i>	<i>Description</i>
5	Names of the directors, review of operation results, and the business prospects of the company are included in the report. The number of board meetings held is disclosed. The information on resolutions made is provided in detailed (e.g. not only stated the resolutions made, narrations are also provided). The information is available on both Chinese and English versions of a company's website.
4	Names of the directors, review of operation results, and the business prospects of the company are included in the report. The number of board meetings held is disclosed. The information on resolutions made is provided in detailed. The information is available on either of Chinese or English versions of corporate website, or both.
3	Names of the directors and review of operation results are included in the report. The number of board meetings held is disclosed. The information on resolutions made is provided in detailed. The information is available on either of Chinese or English versions of corporate website, or both.
2	Only the names of the directors, the number of board meetings held, and resolutions made are included in the report. The information is available on either of Chinese or English versions of corporate website, or both.
1	Report of the board of directors is not available on a company's digitised annual report.

b) *Report of the Governance Board*

<i>Scores</i>	<i>Description</i>
5	Names of the governance board members and the number of meetings held are included. Resolutions made are provided in detailed with narrations. Independent opinions on important matters are included in detailed (e.g. clearly stated their views on the matters). The information is available on both Chinese and English versions of a company's website.
4	Names of the governance board members and the number of meetings held are included. Resolutions made only briefly disclosed with no narrations. Independent opinions on important matters are included in detailed. The information is available on either of Chinese or English versions of corporate website, or both.
3	Names of the governance board members and the number of meetings held are included. Resolutions made only briefly disclosed with no narrations. Independent opinions on important matters are briefly disclosed. The information is available on either of Chinese or English versions of corporate website, or both.
2	Names of the governance board members and the number of meetings held are included. Resolutions made only briefly disclosed and no independent opinions are provided. The information is available on either of Chinese or English versions of corporate website, or both.
1	The report is not available on a company's digitised annual report.

c) *Resolutions of Shareholders Meetings in Current Year*

Scores	Description
5	The information includes the number of shareholders meetings held during the year, and the locations of each shareholders meeting. Resolutions made are provided with detailed narrations. The information is available on both Chinese and English versions of a company's website.
4	The information includes the number of shareholders meetings held during the year. Resolutions made are provided with detailed narrations. The information is available on either of Chinese or English versions of corporate website, or both.
3	The information includes the number of shareholders meetings held during the year. Resolutions made are provided with brief narrations. The information is available on either of Chinese or English versions of corporate website, or both.
2	The information includes the number of shareholders meetings held during the year. Resolutions made are provided with no narrations. The information is available on either of Chinese or English versions of corporate website, or both.
1	Resolutions of shareholders meetings are not provided on a company's digitised annual report.

d) *Top 10 Stockholders*

Scores	Description
5	The information includes the names of the stockholders, the percentage and the actual amount of shares held, and types (e.g. A, B, or H shares) of shares held. The information is available on both Chinese and English versions of a company's website.
4	The information includes the names of the stockholders, the percentage and the actual amount of shares held. The information is available on either of Chinese or English versions of corporate website, or both.
3	The information includes the names of the stockholders and the percentage of or the actual amount of shares held. The information is available on either of Chinese or English versions of corporate website, or both.
2	The information only includes the names of the stockholders. The information is available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's digitised annual report.

e) *Material Events*

<i>Scores</i>	<i>Description</i>
5	Material events (e.g. significant law suit(s), notices on bankruptcy, restructuring, and notices on cease of trading) in the current year and past years are disclosed in detailed. Information on significant trading events (e.g. buying or selling assets in the amounts that are larger than 10% of its total asset value) and the actual trading values in current and past years is provided. Detailed descriptions on each of the events are also provided. The information is available on both Chinese and English versions of a company's website.
4	Material events in the current year or past years are disclosed in detailed. Information on significant trading events and the actual trading values in current and past years is provided. Detailed descriptions on each of the events are also provided. The information is available on either of Chinese or English versions of corporate website, or both.
3	Material events in the current year or past years are disclosed briefly on the current year annual report. Information on significant trading events is provided; actual trading values are not disclosed. Detailed descriptions on each of the events are also provided. The information is available on either of Chinese or English versions of corporate website, or both.
2	Material events in the current year or past years are disclosed briefly on the current year annual report. Information on significant trading events is provided; actual trading values are not disclosed. Brief descriptions on each of the events are provided. The information is available on either of Chinese or English versions of corporate website, or both.
1	Material events are not disclosed on a company's digitised annual report.

f) *Changes in Stockholders' Equity*

<i>Scores</i>	<i>Description</i>
5	This information includes the name of shareholders, changes in shareholding percentages, actual amount of shares held, and types of shares (e.g. A, B, or H shares). Reasons for changes in stockholders' equity are also provided. The information is available on both Chinese and English versions of a company's website.
4	This information includes the name of shareholders, changes in shareholding percentages, actual amount of shares held, and types of shares. Reasons for changes in stockholders' equity are also provided. The information is available on either of Chinese or English versions of corporate website, or both.
3	This information includes the name of shareholders, changes in shareholding percentages, and types of shares. The information is available on either of Chinese or English versions of corporate website, or both.
2	This information only includes the name of shareholders and changes in shareholding percentages. The information is available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's digitised annual report.

g) Accounting Policies

<i>Scores</i>	<i>Description</i>
5	Accounting policies include accounting regulations used to prepare the financial data (e.g. Chinese GAAPs, IFRS, or HK GAAPs), the start and end date of the current accounting period, exchange rate used, and exchange rate treatments. Any material changes to accounting policies are also provided in detailed (e.g. the reasons behind the changes and explanations on different accounting treatments adopted are clearly stated). The information is available on both Chinese and English versions of a company's website.
4	Accounting policies include accounting regulations used to prepare the financial data, the start and end date of the current accounting period, and exchange rate treatments. Any material changes to accounting policies are also provided in detailed. The information is available on either of Chinese or English versions of corporate website, or both.
3	Accounting policies include accounting regulations used to prepare the financial data and the start and end date of the current accounting period. Any material changes to accounting policies are briefly provided. The information is available on either of Chinese or English versions of corporate website, or both.
2	Accounting policies only include the information on accounting regulations used to prepare the financial data. Any material changes to accounting policies are briefly provided. The information is available on either of Chinese or English versions of corporate website, or both.
1	Accounting policies are not disclosed on a company's digitised annual report.

5. Online Corporate Social Responsibility Information Items

a) *Environmental Reporting*

<i>Scores</i>	<i>Description</i>
5	Environmental reports can be found within 3 mouse clicks. Environmental reports include company's environmental policies, visions and goals, strategies, and past achievements. Environmental reports are in both Chinese and English, and they are also available on Chinese and English versions of corporate website.
4	It takes more than 3 mouse clicks to find the environmental reports. Environmental reports include company's environmental policies, visions and goals, strategies, and past achievements. Environmental reports are in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the environmental reports. Environmental reports include company's environmental policies and past achievements. Environmental reports are in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the environmental reports. Environmental reports only include past achievements. Environmental reports are in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	Environmental reports are not available on a company's website.

b) *Sports Sponsorship*

<i>Scores</i>	<i>Description</i>
5	Sports sponsorship information can be found within 3 mouse clicks. Sports sponsorship information includes types of sports sponsored, types of tournaments sponsored, amount of money sponsored, and brief descriptions on past years' sponsorship. This information is available in both Chinese and English, and is disclosed on a company's Chinese and English versions of website.
4	It takes more than 3 mouse clicks to find the information. Sports sponsorship information includes types of sports sponsored, types of tournaments sponsored, and brief descriptions on past years' sponsorship. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Sports sponsorship information includes types of sports sponsored, and brief descriptions on past years' sponsorship. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Sports sponsorship information only includes brief descriptions on past years' sponsorship. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's website.

c) *Technology Trade Show Sponsorship*

Scores	Description
5	The information of technology research and technology trade show sponsorship can be found within 3 mouse clicks. The information includes types of technology trade show sponsored, amounts of money sponsored, and types of supplies sponsored. This information is in both Chinese and English and is available on a company's Chinese English versions of website.
4	It takes more than 3 mouse clicks to find the information. The information on types of technology research and technology trade show sponsored, amounts of money sponsored, and types of supplies sponsored is disclosed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. The information on types of technology research and technology trade show sponsored and amounts of money sponsored is disclosed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. The information only includes types of technology research and technology trade show sponsored is disclosed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	Technology trade show sponsorship information is not provided on a company's website.

d) *Donations to Underdeveloped and Deprived Communities*

Scores	Description
5	This information can be found within 3 mouse clicks. The information includes the amount of money donated, the actions taken, and future plans to aid these communities. Background information about the underdeveloped and deprived communities' is provided in detailed (e.g. the location, population, and economic situation). This information is in both Chinese and English, and is available on a company's English and Chinese versions of website.
4	It takes more than 3 mouse clicks to find the information. The information includes the amount of money donated and the actions taken. Background information about the underdeveloped and deprived communities' is provided in detailed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. The information only includes the actions taken in the past. Background information about the underdeveloped and deprived communities' is provided in detailed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. The information only includes the actions taken in the past. Background information about the underdeveloped and deprived communities' is only briefly provided. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's website.

e) *Donation to Areas Hit by Natural Disasters*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks. The information includes the amount of money donated, the actions taken in the past, and future plans to help the area(s). Background information about the area(s) is also provided in detailed (e.g. the location and situation, population, economic losses, and the type(s) of natural disaster). This information is disclosed in both Chinese and English, and it is available on a company's English and Chinese versions of website.
4	It takes more than 3 mouse clicks to find the information. The information includes the amount of money donated, the actions taken in the past, and future plans to help the area(s). Background information about the area(s) is also provided in detailed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. The information includes the amount of money donated and the actions taken in the past. Background information about the area(s) is only briefly provided. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. The information only includes the actions taken in the past. Background information about the area(s) is only briefly provided. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	The information is not provided on a company's website.

f) *Donation to Schools in Deprived Areas*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks. This information includes descriptions on the available scholarships (e.g. the names and the amount of the scholarships), the amount of money donated, detailed information about the schools (e.g. names, locations, number of students, and background information about the area the school is at), and future plans to help the schools. This information is disclosed in both Chinese and English, and it is available on a company's English and Chinese versions of website.
4	It takes more than 3 mouse clicks to find the information. This information includes descriptions on the available scholarships, the amount of money donated, and detailed information about the schools. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. This information includes descriptions on the available scholarships, and detailed information about the schools. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. This information only includes descriptions on the available scholarships, and brief information about the schools. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's website.

g) *Donation to Medical Foundations*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks The information includes the name of the foundations, amount of money donated, and future aiding plans. The information about the foundations is provided in detailed (e.g. the location, research focuses, research progress, and past achievements). This information is disclosed in both Chinese and English, and is available on a company's English and Chinese versions of website.
4	It takes more than 3 mouse clicks to find the information. The information includes the name of the foundations and amount of money donated. The information about the foundations is provided in detailed. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. The information includes the name of the foundations and amount of money donated. Information about the foundations is only briefly provided. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. The information only includes the name of the foundations. Information about the foundations is only briefly provided. This information is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	The information is not provided on a company's website.

h) *Health and Safety Report*

<i>Scores</i>	<i>Description</i>
5	This information can be found within 3 mouse clicks The official health and safety standards and any additional standards set by the company are provided in a health and safety report. Other information (e.g. targets and goals, actions taken, and past results from the actions taken) is also disclosed. This report is available in both Chinese and English, and is also provided on a company's English and Chinese versions of website.
4	It takes more than 3 mouse clicks to find the information. The official health and safety standards and any additional standards set by the company are provided in a health and safety report. Other information is also disclosed. This report is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
3	It takes more than 3 mouse clicks to find the information. Only the official health and safety standards are provided in a health and safety report; but other information is also disclosed. This report is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
2	It takes more than 3 mouse clicks to find the information. Only the official health and safety standards are provided in a health and safety report; other information is not provided. This report is in Chinese or English, and they are available on either of Chinese or English versions of corporate website, or both.
1	This information is not available on a company's website.

Appendix H – Category and Final CIR Qualitative Scores by Listing Status

Listing Status	Company Names	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
	<i>Available Maximum Scores:</i>	17.5	27.7	17	37.8	100
A - Shares (n = 25)	Kweichow Moutai Company	6.5	2.7	6.4	20.2	35.8
	SAIC Motor Corporation	7.9	8.3	6.9	26.8	49.8
	Shanghai Pudong Development Bank	7.7	18.7	6.1	20.1	52.5
	Industrial Bank	9.6	10.1	5.2	27.9	52.9
	Wuliangye Yibin Company	9.2	6.6	5.2	21.7	42.7
	China Everbright Bank	9.3	21.3	4.9	19.9	55.4
	China Yangtze Power Company	8.2	16.6	6.5	20.5	51.8
	Inner Mongolia Baotou Steel Rare-Earth Hi-Tech Company	8.2	22.2	5.2	20.6	56.3
	Daqin Railway	6.9	17.5	4.9	18.8	48.0
	SANY Heavy Industries	8.7	6.6	7.4	20.6	43.2
	China State Construction Engineering Corporation	8.8	21.3	5.2	23.1	58.5
	Baoshan Iron & Steel Company	8.3	8.3	6.1	26.8	49.5
	China United Network Communications	7.2	22.3	6.4	23.6	59.5
	China Shipbuilding Industry Company	7.1	19.5	5.2	19.0	50.9
	Poly Real Estate Group	5.3	19.5	6.4	22.8	54.0
	Bank of Beijing	8.2	17.7	5.2	18.6	49.7
	Jiangsu Yanghe Brewery	5.6	5.6	3.2	5.5	19.8
	Hua Xia Bank	9.3	21.4	6.9	23.0	60.7
	Gree Electric Appliances	8.4	6.6	6.0	20.8	41.8
	Huatai Securities Company	8.2	15.9	7.3	18.7	50.0
	Shanghai International Port	8.0	6.6	7.3	22.5	44.3
	China Merchants Securities Co., Ltd	8.2	17.7	6.9	18.9	51.8
	Shanxi Lu'an Environmental Energy Development Company	6.8	21.3	6.9	20.3	55.4
	Lu Zhou Lao Jiao	7.0	14.1	6.0	19.4	46.5
	Shandong Gold Mining Company	7.5	6.6	4.3	8.4	26.8
<i>Average</i>		7.8	14.2	5.9	20.3	48.3
<i>Standard Deviation</i>		1.1	6.6	1.0	4.8	9.6
					<i>No. of Companies with a Total Score over 50</i>	13
					<i>No. of Companies with a Total Score over 55</i>	6
					<i>No. of Companies with a Total Score over 60</i>	1

(Continued)

Listing Status	Company Names	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
A + B - Shares (n = 25)	<i>Available Maximum Scores:</i>	17.5	27.7	17.0	37.8	100
	China International Marine Containers Group	8.8	20.5	5.2	24.4	59.0
	China Vanke Company	8.4	14.9	6.0	23.4	52.7
	Yantai Zhangyu Pioneer Wine Company	7.6	10.1	6.8	7.2	31.8
	Jiangling Motors Corporation	7.1	7.4	5.2	19.9	39.6
	CSG Holdings	7.8	15.9	5.6	19.4	48.6
	Huaxin Cement Company	6.3	20.5	6.1	19.0	51.9
	Shanghai Lujiazui Finance & Trade Zone Development Company	5.8	5.6	5.2	18.0	34.6
	Anhui Gujing Distillery	5.4	8.3	3.5	6.1	23.3
	Chongqing Changan Automobile	6.4	16.8	5.6	17.0	45.9
	Guangdong Electric Power Development Company	8.1	14.9	5.2	17.3	45.5
	Inner Mongolia Eerduosi Resources Company	7.1	6.6	3.9	8.5	26.1
	Lu Thai Textile	5.9	6.6	4.8	8.3	25.6
	Weifu High-Technology Group	6.4	6.6	5.2	17.8	35.9
	Livzon Pharmaceutical Group	7.5	2.7	3.5	7.0	20.7
	Shanghai Zhenghua Heavy Industries	8.1	16.9	6.9	17.8	49.6
	Lao Feng Xiang	5.2	5.6	3.5	4.7	19.0
	China Merchants Property Development Company	7.0	22.3	5.2	20.2	54.6
	Shenzhen Chiwan Wharf Holdings	4.6	16.7	5.2	18.6	45.1
	Dazhong Transportation Group	4.5	4.6	7.2	17.9	34.3
	BOE Technology Group	7.1	5.5	6.5	16.0	35.0
	Foshan Electrical and Lighting	7.1	13.9	4.8	7.5	33.3
	Wuxi Little Swan	6.9	4.6	5.2	17.2	34.0
	Shanghai Friendship Group	5.2	17.7	5.2	14.4	42.5
	China National Accord Medicines Corporation	7.1	18.7	5.2	16.9	48.0
	Shanghai Mechanical & Electrical Industry	8.2	2.7	5.2	20.1	36.2
	<i>Average</i>	6.8	11.5	5.3	15.4	38.9
<i>Standard Deviation</i>	1.2	6.3	1.0	5.7	11.1	
				<i>No. of Companies with a Total Score over 50</i>	4	
				<i>No. of Companies with a Total Score over 55</i>	1	
				<i>No. of Companies with a Total Score over 60</i>	0	

(Continued)

Listing Status	Company Names	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
A + H - Shares (n = 25)	<i>Available Maximum Scores:</i>	17.5	27.7	17.0	37.8	100
	PetroChina	7.8	14.1	5.2	20.2	47.4
	Industrial and Commercial Bank of China	9.6	15.9	5.2	25.2	55.9
	Agricultural Bank of China	8.4	8.3	5.2	21.3	43.3
	Bank of China	8.2	15.9	5.6	19.8	49.5
	China Petrochemical Corporation	5.5	4.6	5.6	22.6	38.3
	China Shenhua Energy Company	8.0	18.7	5.2	21.7	53.6
	China Life Insurance	7.4	18.7	6.4	23.6	56.2
	China Merchants Bank	8.1	8.3	6.9	20.8	44.1
	Ping An Insurance Group of China., Ltd	8.6	6.6	6.0	22.0	43.2
	Bank of Communication	9.0	15.0	6.4	22.2	52.6
	China Minsheng Bank	7.3	17.8	6.9	20.2	52.1
	China CITIC Bank	8.3	10.4	6.0	19.9	44.6
	CITIC Securities Company	7.4	17.8	5.2	18.6	49.0
	China Pacific Insurance Group	8.3	8.3	5.2	19.8	41.7
	Haitong Securities Company	7.3	18.7	5.6	18.7	50.3
	China Coal Energy	6.8	20.5	5.2	18.6	51.2
	Zoomlion Heavy Industry Science and Technology	8.2	8.3	7.7	19.9	44.1
	Zijin Mining Group	6.9	19.7	5.6	21.9	54.0
	Anhui Conch Cement	8.3	19.7	5.2	19.6	52.7
	Huaneng Power International	8.0	17.7	7.7	20.1	53.6
	Aluminum Corporation of China	7.4	20.5	6.9	20.0	54.8
	Yanzhou Coal Mining Company	6.8	2.7	5.6	20.2	35.4
	New China Life Insurance	8.1	22.3	5.2	19.4	54.9
	China Communications Constructions	7.4	6.6	6.5	21.0	41.5
	CSR Corporation	7.9	18.7	5.2	19.3	51.1
	<i>Average</i>	7.8	14.2	5.9	20.7	48.6
<i>Standard Deviation</i>	0.8	5.9	0.8	1.6	5.9	
				<i>No. of Companies with a Total Score over 50</i>	13	
				<i>No. of Companies with a Total Score over 55</i>	2	
				<i>No. of Companies with a Total Score over 60</i>	0	

Appendix I – Category and Final CIR Qualitative Scores by Industry

Industry Type	Company	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score	
Manufacturing (n = 28)	Kweichow Moutai Company	6.5	2.7	6.4	20.2	35.8	
	SAIC Motor Corporation	7.9	8.3	6.9	26.8	49.8	
	Wuliangye Yibin Company	9.2	6.6	5.2	21.7	42.7	
	Inner Mongolia Baotou Steel Rare-Earth Hi-Tech Company	8.2	22.2	5.2	20.6	56.3	
	SANY Heavy Industries	8.7	6.6	7.4	20.6	43.2	
	Baoshan Iron & Steel Company	8.3	8.3	6.1	26.8	49.5	
	China Shipbuilding Industry Company	7.1	19.5	5.2	19.0	50.9	
	Jiangsu Yanghe Brewery	5.6	5.6	3.2	5.5	19.8	
	Gree Electric Appliances	8.4	6.6	6.0	20.8	41.8	
	Lu Zhou Lao Jiao	7.0	14.1	6.0	19.4	46.5	
	Yantai Zhangyu Pioneer Wine Company	7.6	10.1	6.8	7.2	31.8	
	Jiangling Motors Corporation	7.1	7.4	5.2	19.9	39.6	
	CSG Holdings	7.8	15.9	5.6	19.4	48.6	
	Huaxin Cement Company	6.3	20.5	6.1	19.0	51.9	
	Anhui Gujing Distillery	5.4	8.3	3.5	6.1	23.3	
	Chongqing Changan Automobile	6.4	16.8	5.6	17.0	45.9	
	Inner Mongolia Eerduosi Resources Company	7.1	6.6	3.9	8.5	26.1	
	Lu Thai Textile	5.9	6.6	4.8	8.3	25.6	
	Weifu High-Technology Group	6.4	6.6	5.2	17.8	35.9	
	Shanghai Zhenghua Heavy Industries	8.1	16.9	6.9	17.8	49.6	
	BOE Technology Group	7.1	5.5	6.5	16.0	35.0	
	Foshan Electrical and Lighting	7.1	13.9	4.8	7.5	33.3	
	Wuxi Little Swan	6.9	4.6	5.2	17.2	34.0	
	Shanghai Mechanical & Electrical Industry	8.2	2.7	5.2	20.1	36.2	
	Zoomlion Heavy Industry Science and Technology	8.2	8.3	7.7	19.9	44.1	
	Anhui Conch Cement	8.3	19.7	5.2	19.6	52.7	
	Aluminum Corporation of China	7.4	20.5	6.9	20.0	54.8	
	CSR Corporation	7.9	18.7	5.2	19.3	51.1	
	Average	7.4	11.1	5.6	17.2	41.3	
	Standard Deviation	1.0	6.2	1.1	5.8	10.1	
Mining & Quarrying (n = 8)	Shanxi Lu'an Environmental Energy Development Company	6.8	21.3	6.9	20.3	55.4	
	Shandong Gold Mining Company	7.5	6.6	4.3	8.4	26.8	
	PetroChina	7.8	14.1	5.2	20.2	47.4	
	China Petrochemical Corporation	5.5	4.6	5.6	22.6	38.3	
	China Shenhua Energy Company	8.0	18.7	5.2	21.7	53.6	
	China Coal Energy	6.8	20.5	5.2	18.6	51.2	
	Zijin Mining Group	6.9	19.7	5.6	21.9	54.0	
	Yanzhou Coal Mining Company	6.8	2.7	5.6	20.2	35.4	
		Average	7.0	13.5	5.5	19.2	45.3
		Standard Deviation	0.8	7.7	0.7	4.5	10.5

(Continued)

Industry Type	Company	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
Finance & Insurance (n = 21)	Shanghai Pudong Development Bank	7.7	18.7	6.1	20.1	52.5
	Industrial Bank	9.6	10.1	5.2	27.9	52.9
	China Everbright Bank	9.3	21.3	4.9	19.9	55.4
	Bank of Beijing	8.2	17.7	5.2	18.6	49.7
	Hua Xia Bank	9.3	21.4	6.9	23.0	60.7
	Huatai Securities Company	8.2	15.9	7.3	18.7	50.0
	China Merchants Securities Co., Ltd	8.2	17.7	6.9	18.9	51.8
	Shanghai Lujiazui Finance & Trade Zone Development Company	5.8	5.6	5.2	18.0	34.6
	Industrial and Commercial Bank of China	9.6	15.9	5.2	25.2	55.9
	Agricultural Bank of China	8.4	8.3	5.2	21.3	43.3
	Bank of China	8.2	15.9	5.6	19.8	49.5
	China Life Insurance	7.4	18.7	6.4	23.6	56.2
	China Merchants Bank	8.1	8.3	6.9	20.8	44.1
	Ping An Insurance Group of China, Ltd	8.6	6.6	6.0	22.0	43.2
	Bank of Communication	9.0	15.0	6.4	22.2	52.6
	China Minsheng Bank	7.3	17.8	6.9	20.2	52.1
	China CITIC Bank	8.3	10.4	6.0	19.9	44.6
	CITIC Securities Company	7.4	17.8	5.2	18.6	49.0
	China Pacific Insurance Group	8.3	8.3	5.2	19.8	41.7
	Haitong Securities Company	7.3	18.7	5.6	18.7	50.3
	New China Life Insurance	8.1	22.3	5.2	19.4	54.9
Average		8.2	14.9	5.9	20.8	49.8
Standard Deviation		0.9	5.2	0.8	2.5	6.0
Transportation & Storage (n = 5)	Daqing Railway	6.9	17.5	4.9	18.8	48.0
	Shanghai International Port	8.0	6.6	7.3	22.5	44.3
	China International Marine Containers Group	8.8	20.5	5.2	24.4	59.0
	Shenzhen Chiwan Wharf Holdings	4.6	16.7	5.2	18.6	45.1
	Dazhong Transportation Group	4.5	4.6	7.2	17.9	34.3
	Average		6.6	13.2	6.0	20.4
Standard Deviation		1.9	7.1	1.2	2.9	8.8
Real Estate & Construction (n = 5)	China State Construction Engineering Corporation	8.8	21.3	5.2	23.1	58.5
	Poly Real Estate Group	5.3	19.5	6.4	22.8	54.0
	China Vanke Company	8.4	14.9	6.0	23.4	52.7
	China Merchants Property Development Company	7.0	22.3	5.2	20.2	54.6
	China Communications Constructions	7.4	6.6	6.5	21.0	41.5
	Average		7.0	15.8	6.0	21.8
Standard Deviation		1.3	6.9	0.6	1.5	6.2

(Continued)

Industry Type	Company	User Support Features on Corporate Websites	Timeliness of the Information on Corporate Websites	Corporate Website Technologies	Content of Corporate Websites	Total Score
Electricity, Gas, & Water (n = 3)	China Yangtze Power Company	8.2	16.6	6.5	20.5	51.8
	Guangdong Electric Power Development Company	8.1	14.9	5.2	17.3	45.5
	Huaneng Power International	8.0	17.7	7.7	20.1	53.6
	Average	8.1	16.4	6.5	19.3	50.3
	Standard Deviation	0.1	1.4	1.2	1.7	4.2
Others (n = 5)	Livzon Pharmaceutical Group	7.5	2.7	3.5	7.0	20.7
	China National Accord Medicines Corporation	7.1	18.7	5.2	16.9	48.0
	Lao Feng Xiang	5.2	5.6	3.5	4.7	19.0
	Shanghai Friendship Group	5.2	17.7	5.2	14.4	42.5
	China United Network Communications	7.2	22.3	6.4	23.6	59.5
	Average	6.4	13.4	4.8	13.3	37.9
Standard Deviation	1.1	8.7	1.2	7.7	17.6	

Appendix J – International Comparison of the Disclosure Rates for Various Information Items

Items	The Current Research	Kelton & Yang (2008)	Almilia (2009)	Desoky & Mousa (2009)	Damaso & Lourenço (2011)	AbuGhazaleh, Qasim, & Roberts (2012)	Boubaker, Lakkal, & Nekhil (2012)	Uyar (2012)	Alali & Romero (2012)	Moradi, Sardasht, & Moradi (2012)
Country:	China	U.S	Indonesia	Bahrain	U.K	Jordan	France	Turkey	Argentina	Iran
Help/FAQs	41%	-	9.0%	-	51.6%	19.0%	14.2%	46.5%	4.2%	58.5%
Site Map	73%	-	54.0%	-	-	31.0%	63.4%	55.8%	36.1%	35.1%
Site Search Features	47%	54.2%	57.0%	-	-	30.0%	31.5%	34.9%	23.9%	64.9%
Link to Homepage	99%	-	91.0%	-	-	-	-	93.0%	-	-
Link to Top of the Page	16%	-	3.0%	-	-	-	-	-	-	-
Email Addresses of the Company	76%	70.8%	-	29.4%	79.1%	90.0%	54.9%	46.5%	80.6%	87.4%
Postal Addresses of the Company	91%	-	-		-	98.0%	-	27.9%	-	94.6%
Phone Numbers of the Company	93%	-	-		-	-	37.2%	53.5%	72.2%	94.6%
Instant Feedback Posting Feature	36%	-	3.0%	-	-	15.0%	-	-	-	-
Quarterly Report	87%	60.9%	-	-	-	-	9.6%	74.4%	47.2%	-
Interim Report	87%	-	-	70.6%	-	9.0%	55.3%	-	0.0%	-
Press Releases	100%	-	91.0%	88.2%	68.7%	51.0%	75.7%	55.8%	44.4%	82.0%
Share Prices Update During Trading Hours	100%	-	60.0%	-	-	5.0%	-	48.8%	-	27.0%
Plug - in Software	8%	-	0.0%	-	-	-	-	-	-	-
Microsoft Office Documents	8%	-	-	-	-	-	2.3%	-	1.4%	-
Hyperlink Inside the Digitised Annual Report	20%	50.0%	-	-	-	2.0%	-	-	-	-
Historical Dividend Figures Disclosed	43%	52.8%	-	-	-	-	-	-	-	-
Company Background	97%	-	-	94.1%	-	-	-	-	-	93.7%
Managers'/Directors' Background	59%	-	-	82.4%	-	21.0%	-	-	-	-
Industry Information	95%	-	-	-	-	-	9.4%	-	-	28.8%
Access to Press Releases on a Company's Homepage	93%	-	-	-	76.9%	-	-	-	-	-
Company's Charter	51%	-	-	-	-	-	6.8%	-	-	-
Annual Report for the Current Year	88%	92.6%	22.9%	91.2%	99.7%	-	69.0%	93.0%	47.2%	-
Annual Report for the Past Years	88%	-	-	94.1%	93.7%	-	61.7%	-	51.4%	-
Audit Report	92%	-	-	-	-	20.0%	68.5%	67.4%	47.2%	22.5%
Financial Statements	92%	-	71.4%	-	-	29.0%	70.4%	88.4%	25.0%	27.9%
Notes of Financial Statements	92%	-	-	-	-	22.0%	69.3%	86.1%	43.1%	20.7%
Management Report and Analysis	88%	-	-	35.3%	-	-	65.5%	-	-	-
Segmental Reporting by the Line of Business	88%	-	-	-	-	14.0%	25.3%	-	6.9%	-
Segmental Reporting by Region	88%	-	-	-	-	-	18.1%	-	-	-
Summary of Key Ratios over a Period of at least 3 Years	88%	-	-	-	-	19% (2006)/20% (2005)	-	-	4.2%	3.6%
Summary of Financial Data over a Period of at least 3 Years	88%	-	-	-	-	-	52.1%	-	-	-
Resolutions of Shareholders Meetings in Current Year	88%	-	-	-	-	-	33.8%	-	-	-
Material Events	88%	-	-	-	-	-	76.0%	-	-	-
Environmental Reporting	47%	-	-	44.1%	-	-	28.3%	41.9%	18.1%	13.5%
Sports Sponsorship	11%	-	-		-	-	-	18.6%	-	-
Technology Trade Show Sponsorship	17%	-	-		-	-	-	6.8%	-	-
Health and Safety Report	45%	-	-		-	-	-	20.8%	-	-

Appendix K – Capitalisation, PAT, ROE, and Total Scores of the Sampled Companies

Companies	Capitalisation (rmb/mil)	PAT (rmb/mil)	ROE	Total Score
PetroChina	\$ 1,510,733.00	\$ 145,959.00	0.14	47.4
Industrial and Commercial Bank of China	\$ 1,102,581.00	\$ 208,445.00	0.23	55.9
Agricultural Bank of China	\$ 776,306.00	\$ 121,956.00	0.20	43.3
Bank of China	\$ 590,486.00	\$ 130,319.00	0.18	49.5
China Petrochemical Corporation	\$ 455,258.00	\$ 76,864.00	0.16	38.3
China Shenhua Energy Company	\$ 412,936.00	\$ 51,507.00	0.20	53.6
China Life Insurance	\$ 353,167.00	\$ 18,491.00	0.09	56.2
Kweichow Moutai Company	\$ 245,613.00	\$ 9,250.32	0.40	35.8
China Merchants Bank	\$ 206,340.00	\$ 36,127.00	0.24	44.1
Ping An Insurance Group of China., Ltd	\$ 196,243.00	\$ 22,582.00	0.16	43.2
SAIC Motor Corporation	\$ 163,289.00	\$ 34,989.65	0.21	49.8
Shanghai Pudong Development Bank	\$ 160,793.00	\$ 27,355.11	0.20	52.5
Bank of Communication	\$ 150,462.00	\$ 50,817.00	0.20	52.6
China Minsheng Bank	\$ 142,076.00	\$ 28,443.00	0.24	52.1
Industrial Bank	\$ 142,057.00	\$ 25,597.00	0.25	52.9
China CITIC Bank	\$ 132,406.00	\$ 30,844.00	0.21	44.6
CITIC Securities Company	\$ 128,885.00	\$ 12,604.49	0.17	49.0
China Pacific Insurance Group	\$ 126,300.00	\$ 8,393.00	0.11	41.7
Wuliangye Yibin Company	\$ 123,202.00	\$ 6,394.38	0.30	42.7
China Everbright Bank	\$ 114,835.00	\$ 18,085.12	0.20	55.4
China Yangtze Power Company	\$ 111,870.00	\$ 7,700.83	0.12	51.8
Inner Mongolia Baotou Steel Rare-Earth HI-Tech Coompany	\$ 111,366.00	\$ 5,608.81	0.85	56.3
Daqin Railway	\$ 108,974.00	\$ 11,698.82	0.20	48.0
SANY Heavy Industries	\$ 107,451.00	\$ 4,631.25	0.56	43.2
China State Construction Engineering Corporation	\$ 99,000.00	\$ 19,238.54	0.14	58.5
Beoshan Iron & Steel Company	\$ 84,058.00	\$ 7,735.80	0.07	49.5
China United Network Communications	\$ 83,727.00	\$ 4,187.97	0.02	59.5
Haitong Securities Company	\$ 81,731.00	\$ 3,234.49	0.07	50.3
China Shipbuilding Industry Company	\$ 81,112.00	\$ 4,750.43	0.13	50.9
Poly Real Estate Group	\$ 80,421.00	\$ 7,367.20	0.20	54.0
China Coal Energy	\$ 79,805.00	\$ 10,305.37	0.12	51.2
Bank of Beijing	\$ 70,401.00	\$ 8,945.99	0.19	49.7
Jiangsu Yanghe Brewery	\$ 68,355.00	\$ 4,136.61	0.49	19.8
Zoomlion Heavy Industry Science and Technology	\$ 66,505.00	\$ 8,173.34	0.25	44.1
Hua Xia Bank	\$ 66,442.00	\$ 9,220.97	0.17	60.7
Zijin Mining Group	\$ 66,218.00	\$ 6,910.53	0.25	54.0
Anhui Conch Cement	\$ 65,955.00	\$ 11,824.34	0.29	52.7
Gree Electric Appliances	\$ 65,430.00	\$ 5,297.34	0.34	41.8
Huaneng Power International	\$ 64,575.00	\$ 1,364.26	0.02	53.6
Aluminum Corporation of China	\$ 63,902.00	\$ 690.50	0.00	54.8
Yanzhou Coal Mining Company	\$ 63,522.00	\$ 8,644.14	0.22	35.4
New China Life Insurance	\$ 63,356.00	\$ 2,800.00	0.17	54.9
Huatai Securities Company	\$ 62,216.00	\$ 1,820.74	0.06	50.0
Shanghai International Port	\$ 61,667.00	\$ 5,792.71	0.11	44.3
China Communications Constructions	\$ 61,086.00	\$ 11,794.16	0.17	41.5
China Merchants Securities Co., Ltd	\$ 59,056.00	\$ 2,008.29	0.08	51.8
CSR Corporation	\$ 56,304.00	\$ 4,743.24	0.17	51.1
Shanxi Lu'an Environmental Energy Development Company	\$ 55,433.00	\$ 3,339.62	0.29	55.4
Lu Zhou Lao Jiao	\$ 54,431.00	\$ 3,055.60	0.42	46.5
Shandong Gold Mining Company	\$ 54,077.00	\$ 1,982.69	0.40	26.8
China International Marine Containers Group	\$ 14,428.00	\$ 3,658.94	0.21	59.0
China Vanke Company	\$ 13,695.00	\$ 11,599.61	0.20	52.7
Yantai Zhangyu Pioneer Wine Company	\$ 13,586.00	\$ 1,907.21	0.43	31.8
Jiangling Motors Corporation	\$ 6,782.00	\$ 1,900.83	0.28	39.6
CSG Holdings	\$ 4,392.00	\$ 1,337.52	0.18	48.6
Huaxin Cement Company	\$ 3,611.00	\$ 1,220.05	0.19	51.9
Shanghai Lujiazui Finance & Trade ZoneDevelopment Company	\$ 3,413.00	\$ 983.99	0.09	34.6
Anhui Gujing Distillery	\$ 3,361.00	\$ 566.39	0.32	23.3
Chongqing Changan Automobile	\$ 3,205.00	\$ 925.65	0.07	45.9
Guangdong Electric Power Development Company	\$ 2,505.00	\$ 259.12	0.03	45.5
Inner Mongolia Eerduosi Resources Company	\$ 2,406.00	\$ 1,630.31	0.17	26.1
Lu Thai Textile	\$ 2,330.00	\$ 892.07	0.18	25.6
Weifu High-Technology Group	\$ 2,323.00	\$ 1,255.51	0.26	35.9
Livzon Pharmaceutical Group	\$ 2,304.00	\$ 387.80	0.13	20.7
Shanghai Zhenghua Heavy Industries	\$ 2,271.00	\$ 29.65	0.00	49.6
Lao Feng Xiang	\$ 2,168.00	\$ 682.67	0.28	19.0
China Merchants Property Development Company	\$ 2,143.00	\$ 3,312.95	0.13	54.6
Shenzhen Chiwan Wharf Holdings	\$ 1,897.00	\$ 327.82	0.28	45.1
Dazhong Transportation Group	\$ 1,849.00	\$ 667.78	0.15	34.3
BOE Technology Group	\$ 1,714.00	\$ 473.52	0.08	35.0
Foshan Electrical and Lighting	\$ 1,604.00	\$ 693.68	0.02	33.3
Wuxi Little Swan	\$ 1,471.00	\$ 297.27	0.11	34.0
Shanghai Friendship Group	\$ 1,463.00	\$ 538.56	0.14	42.5
China National Accord Medicines Corporation	\$ 1,462.00	\$ 1,946.59	0.14	48.0
Shanghai Mechanical & Electrical Industry	\$ 1,429.00	\$ 742.76	0.12	36.2