



**The Usefulness of Derivative Disclosures
by Chinese Listed Companies**

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Abstract

While the world has witnessed the growing use of derivative instruments and rapid expansion of derivatives markets over the past two decades, the extensive use of derivatives in developed markets, particularly of mortgage-related derivative products has been blamed for the recent global financial crisis. The supervisory bodies across the world have increasingly paid attention to the establishment of an effective governance system including the issuing of financial reporting rules for companies to disclose their derivative activities. By far derivatives research has predominately been based on western developed economies; little has been known about reporting and disclosing of derivatives from developing economies. The motivation of this study is to fill the research gap with the primary aim to assessing the usefulness of derivative related disclosures in China - the largest developing economy in the world.

The study is divided into two major stages. The first stage mainly intends to reveal the degree of derivative related disclosures provided by Chinese listed companies. Annual reports of 53 Chinese listed firms are considered as the sampling unit for observation and analysis. Using the content analysis approach this study compares the derivative related information disclosed in companies' annual reports with the developed disclosure index that is largely based upon IFRS and IAS provisions. The study has found: First, the level of the compliance with IFRS and IAS derivative regulations by Chinese quoted companies is generally low. Second, Chinese listed companies are likely to prefer the use of equity derivative products rather than other types of derivatives. Third, the corporate size seems not to significantly affect the amount of derivative related disclosures by Chinese quoted companies. Fourth, the amount of derivative disclosures about the significance of using derivatives for the company's financial position and performance is significantly greater than that of information in relation to potential risks arising from the use of derivative instruments.

The second phase primarily intends to examine the usefulness of derivative disclosures perceived by equity market participants. The study conducted in-depth interviews with 21 institutional investors including 10 investment managers and 11 professional analysts. The key findings include: First, the disclosed information about the use of derivative instruments by quoted firms is perceived to be useful and helpful in facilitating investment decisions. Second, the information related to the use of derivatives is generally thought to play a minor role in facilitating investment decisions. Third, the current provisions of derivative related information by Chinese quoted entities are generally unsatisfied by most of institutional investors. Fourth, the current accounting and reporting policies imposed by regulators seem to be very difficult for Chinese investors to understand.

The study, the first study of its kind, contributes to the understanding of the current status and usefulness of derivative related disclosures in China. It also provides the valuable insight to the development of derivative reporting standards by offering some policy implications particularly to developing economies.

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Chapter I Introduction

Chapter I Introduction

1.1 Introduction

The major objective of this chapter is to provide the context of the study. In the subsequent sections, the background of the research area is firstly presented, followed by the overall aims and objectives of the research and a discussion of the research design. Finally, the structure and summaries of individual chapters are outlined.

1.2 Background

Since the 1990s, the world has witnessed the growing use of derivative instruments and rapid expansion of derivatives markets. Prior studies have identified price discovery, risk shifting, hedging, market efficiency and operational advantages as the basic social and economic functions of the derivatives market (e.g., Powers and Castelino, 1991; Chance, 1995; Kolb, 1997; Perignon and Smith, 2010). For example, a futures market is an important means of achieving investors' expectations of future cash prices, which can help people make investment decisions more wisely (Kolb, 1997). The interest rate and foreign exchange derivatives markets enable those wishing to reduce their risk to transfer it to those wishing to increase it (Chance, 1995) and provide invaluable hedging tools against the risks. The derivatives market offers several operational advantages, such as lowering transaction costs and enhancing market liquidity (Chance, 1995). The literature also provides evidence that the use of derivatives can be value added to firms (e.g., Allayannis and Weston, 2001; Guay, 1999; Geczy, Minton and Schrand, 1997). For instance, Allayannis and Weston (2001) reveal a four per cent increase in the value of large firms that hedge their foreign currency exposures by using derivatives. Guay (1999) shows that firm risk is decreased for new users of derivative instruments.

As long as the widespread of trading of derivative instruments, there has been a rising intensive debate over the benefits and risk associated with the use of derivatives. Supporters believe derivatives are powerful in managing companies' exposures to risks. By contrast, critics describe derivative products as a 'double-edged swords' that are 'extremely useful for risk management but they also create a host of new risks that expose the entire economy to potential financial market disruptions' (Berry, 2003). Over the past decades many high profile derivative related losses occurred, including, for example, Barings, Metallgesellschaft, Orange County, Proctor and Gamble, and lately Societe Generale. Especially, the recent financial crisis worldwide has commonly been considered as the consequence of the extensive use of derivatives, particularly mortgage-related derivative products. The great number of hugely derivative related losses has undoubtedly promoted calls for improved reporting of information about derivative activities (McDonough, 1993; Grant and Marshall, 1997; Beresford, 1998; Bodnar et al., 1998; Blankley et al., 2002; Lopes and Rodrigues, 2008; Perignon and Smith, 2010).

In response to rising public concerns about the trading of derivatives and associated risks, the supervisory bodies all over the world have paid much attention, over past decades, to the establishment of effective governance systems including the release of financial reporting standards for companies to disclose their derivative activities.

For instance, the U.S. accounting standards setting body (i.e., Financial Accounting Standards Board, FASB) began the project on accounting and reporting for derivatives in 1986 (FASB, 1990) and a series of the Statements of Financial Accounting Standards, including SFAS Nos. 105, 107, 119 and 133, were enacted in the subsequent years. The International Accounting Standards Board (IASB), aiming to set up a single global accounting standard, also attempts to establish standards on accounting and reporting for financial instruments, including derivatives. In 1989, the International Accounting Standards Committee (IASC, the predecessor of the IASB) started a joint project with the Canadian Institute of Chartered Accountants (CICA) to

assess the issues related to accounting for financial instruments (Bradbury, 2003), which was an explicit beginning of the IASC to develop comprehensive and generally accepted international accounting standards for the disclosure, presentation, recognition and measurement of financial instruments including derivatives. Then the IASC promulgated the international guidance on accounting and reporting treatments for derivative instruments, International Accounting Standard (IAS) 32 and 39, in 1995 and 1999 respectively. By far the most complex and controversial accounting standard ever to be issued is IAS 39. IAS 39 which is the first unique and global international standard treating the financial instruments sets out requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. The main contribution of this standard is a wider application of fair value for financial instruments valuation. The standard has removed an important degree of flexibility, making it much more difficult for companies to allocate external derivatives against external assets or liabilities for hedging purposes. Consequently, IAS 39 has provoked the most critics. One of the key areas in which the proposals of the IASB provide a significant improvement over the previous accounting framework regime is the recognition on the balance sheet of business transactions that were formerly recorded only off-balance sheet, in particular derivatives transactions.

The usefulness of the compulsory accounting and reporting practice for derivatives has attracted considerable academic attention since they were issued.

In the accounting literature, the studies in relation to the assessment of derivative disclosures have developed into two branches. Firstly, some studies (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) have examined the quality of derivative disclosures by evaluating the response of listed companies to the mandated disclosure requirements for derivatives. These researchers intend to find out the answers about whether the mandated derivative

disclosure provisions actually achieve the expectation of accounting authorities, by demanding the listed companies to provide more information regarding derivative related activities in their annual reports. Generally speaking, these studies indicate that the quoted companies are able to prepare both qualitative and quantitative information about the derivative usage and associated market risk in accordance with the basic accounting and reporting rules in their annual reports. Nevertheless, they are unwilling to provide sufficient detailed information such as the assumptions of quantitative techniques and corporate risk management activities. Hence, it can be argued that although the implementation of the compulsory disclosure requirements improves the reported information about use of derivatives, the supervisory authorities still have a task to inspire the reporting companies to disclose more information with greater details.

Another strand of studies focuses on the effect of information disclosure on the behaviour of financial market aggregates such as stock price, stock returns and trading volume. These researches (e.g., McAnally, 1996; Nelson, 1996; Barth et al., 1996; Eccher Et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; AFP, 2001; Barton, 2001; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Koonce et al., 2005; Reynolds-Moehrle, 2005; Richie et al., 2005; Chipalkatti and Datar, 2006; Ahmed et al., 2006; Zhang, 2009; Ameer, 2009; Perignon and Smith, 2010) attempt to explain empirically observed phenomena in the association between the derivative related disclosures and market responses. Overall, the findings of these studies are mixed even contrary. Some researchers (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) provide the empirical evidence to prove the value relevance of compulsory derivative accounting and reporting regulations to investors' assessment of the corporate risk profile while some empirical studies (e.g., Nelson, 1996; Wang et al., 2005; Chipalkatti and Datar,

2006; Perignon and Smith, 2010) demonstrate that there is no relationship between the disclosed derivative information and the market response. Some (e.g., Lehn, 1997; AICPA, 1998; Hodder et al., 2001; Kawaller, 2004; Reinstein and Lander, 2000) argue that the complicated accounting and reporting treatments for derivatives have caused difficulties for investors in valuating corporate derivative activities, and even a few studies (e.g., Logan and Montgomery, 1997; Koonce et al., 2005) indicate that the disclosures following the mandated derivative related requirements have been misunderstood and adversely affected investors' assessments in a company's risk profile and associated derivative activities. In addition, the restrictive and complex derivative related standards, such as SFAS 133, have made the reporting entities hard to understand and caused a series of significant problems in the use of derivatives and smooth earnings volatility (e.g., Osterland, 2000; AFP, 2001; Barton, 2001; Leib, 2001; Richie et al., 2005). Such mixed and contrary results are coincident with the findings achieved by the first stream that the compliance with derivative related standards is mixed and the standard has not adequately achieved the desired level of financial transparency on the use of derivative financial instruments as expected (Bhamornsiri and Schroeder, 2004, p. 680).

Overall, the prior researches in relation to the impacts of compulsory derivative related accounting and reporting requirements were mostly based upon the sample from developed countries with mature financial derivative markets. In particular, most of the studies on risk management and disclosures have been directed to the U.S. setting with an emphasis on financial risk disclosures. However, by now, no study has been conducted so as to specifically address accounting and reporting for derivatives in China and examine the usefulness of derivative disclosures by Chinese listed companies. China as the largest developing economy has made remarkable progress in its economic development as well as its accounting reform over the last three decades. Especially, the recent convergence of Chinese Accounting Standards (CASs) with International Financial Reporting Standards (IFRSs) makes China an interesting case to examine the issues associated with the application of derivatives accounting

rules.

Thus, the intention of filling the research gap existed in the literature is the motivation for the present study. This thesis aims to assess the derivative disclosure practice in China with a view to particularly examining the usefulness of such disclosures in helping the facilitation of investment decisions. It is expected to contribute to the existent literature by enhancing the understanding of the usefulness of derivative related disclosures not only in developed economies but also developing countries.

1.3 Overall Aims and Objectives

The primary aim of the research is to assess the usefulness of derivative related disclosures by Chinese listed companies.

In order to achieve the overall aim, this study has four specific objectives as follows:

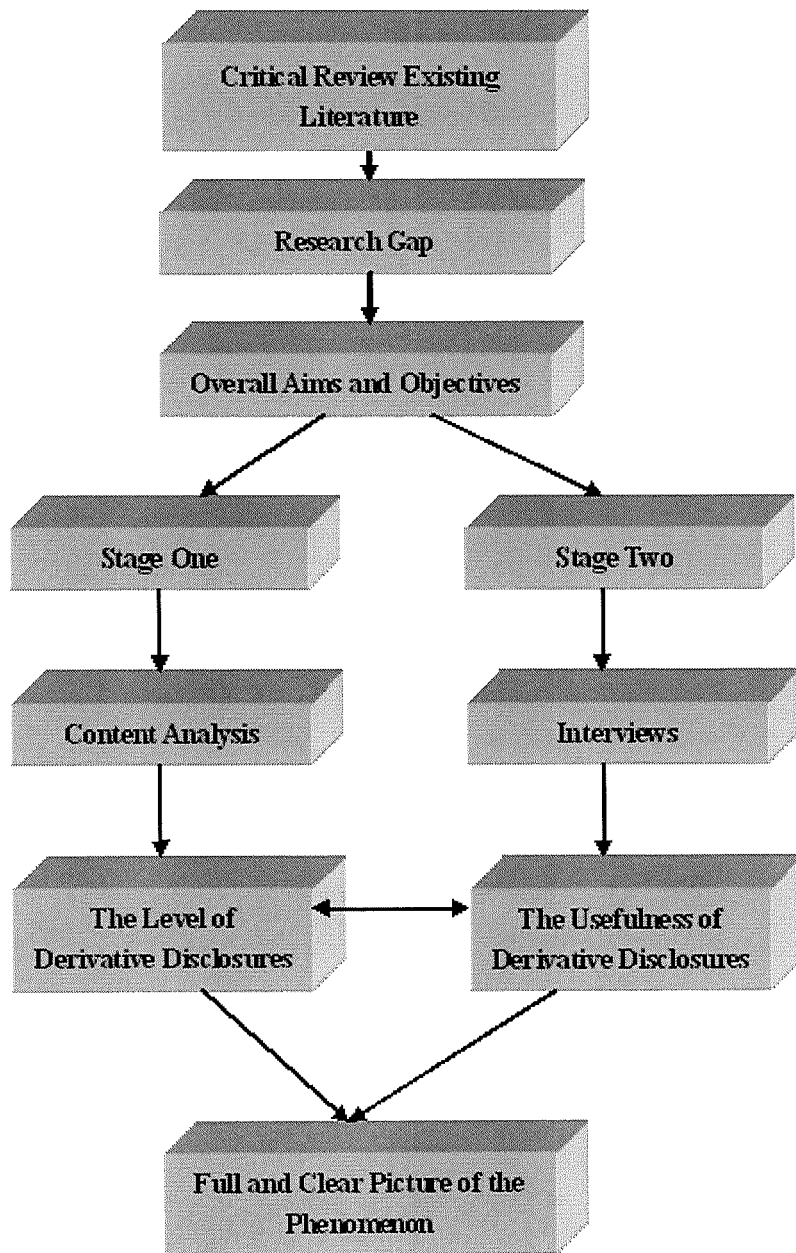
1. To reveal the level of derivative disclosures made by Chinese listed companies;
2. To identify information contents of derivative disclosures provided by Chinese listed companies;
3. To examine the response of equity market participants (e.g., institutional investors and professional analysts) to the derivative related disclosures with a view to assessing the usefulness of derivative disclosures in the case of China, an emerging market where derivatives are still new phenomena;
4. To suggest the future direction in the development of derivative reporting standards particularly for emerging economies.

1.4 Research Design

As shown in Figure 1.1, the present research is separated into two major stages and the following sections provide summaries about the specific purposes, research

methods and data selection of each stage. A detailed specification of the research methodology employed in both stages including the rationale for the selection of the research methods and sample collection is provided in Chapter IV.

Chart 1.1 Framework of the Research



1.4.1 Stage One

1.4.1.1 Purposes

In the first stage, the study has the primary aim to assess the degree of derivative related disclosures provided by Chinese listed companies.

1.4.1.2 Research Questions

Two major research questions have been addressed in the first phase:

- What is the level of derivative related disclosures made by Chinese listed companies?
- What is the information content of derivative related disclosures provided by Chinese listed companies?

1.4.1.3 Research Methods

To answer the above two questions, the content analysis approach is mainly adopted in Stage One owing to the wide use of this method in prior studies (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) so as to evaluate the information quality of derivative disclosures reported by listed companies. The corporate annual report is adopted as the sampling unit for observation and analysis as it is widely perceived to be the most dominant, reliable and significant source of information for users. In addition, the number of page is used as the unit of analysis. For each annual report of sampling company, the amount of disclosures regarding the use of derivatives will be firstly noted on a specialised record sheet and then the contents of this record sheet will be transferred to an Excel spreadsheet. With the consideration of the convergence with the international regulatory framework enhanced by Chinese regulators, the disclosure checklist –

Financial Derivatives Disclosures Index (FDDI) will be developed. FDDI is largely based upon IFRS and IAS provisions which are different from many indices used in the existing literature mainly on the basis of U.S. reporting requirements. The disclosure checklist is served as the benchmark to be compared with the corresponding disclosures in companies' annual reports. Besides, a pilot sample of reports were analysed and a number of procedures were followed to ensure the reliability and validity of the disclosure measurement.

1.4.1.4 Data Collection

At the beginning, financial institutions are excluded from the sample as the study only focuses on non-financial entities that use derivatives to manage their risks. Annual reports in 2006¹ are chosen as the sampling unit for observation and analysis. All sample companies are selected from the CSI 100 and 200 representing large and medium firms in Chinese domestic A-share market as evidence (e.g., Bodnar et al, 1996; Grant and Marshall, 1997; El-Masry, 2006) show that the large companies are more likely to use derivative products. The final sample comprises by 53 companies including 39 large firms and another 14 medium companies.

1.4.2 Stage Two

1.4.2.1 Purposes

¹ There are two important reasons for the study to focus on the year of 2006: Firstly, most listed companies finished their shareholding reform in 2006 and according to the statistics, 94 per cent of Chinese listed companies had completed the ownership conversion process by mid-year 2006 (People's Daily, 2006). Since some companies may issue warrants to pursue the privatisation reform, it is therefore expected to gather more sample companies using derivatives from their 2006's annual reports. Secondly, the use of derivative instruments is compulsorily disclosed after 1 January 2007 so the year of 2006 is an important year to analyse whether Chinese listed companies have sufficient preparations to be adapted with the forthcoming mandated derivative regulations.

In the second stage, the study mainly aims to examine the equity market participants' perceptions, views and opinions towards the usefulness of derivative disclosures provided by Chinese listed companies.

1.4.2.2 Research Questions

Four major research questions have been addressed in this stage:

- What is the response of equity market participants to derivative related disclosures?
- Do they treat disclosing more about derivatives' activities as useful information when making investment decisions?
- Are they satisfied with the current accounting and reporting treatment of derivative activities?
- What are their opinions on the future development in derivative related reporting standards?

1.4.2.3 Research Methods

The quantitative research approach (e.g., modelling) which was employed in previous studies is not applied in the current research due to the lack of large sample. In order to obtain some insight of market participants concerning derivative disclosures, this study has adopted semi-structured interview approach which is the most appropriate research method to gather information on people's perceptions and experience.

1.4.2.4 Data Collection

The study mainly emphasises on two equity market participants groups - institutional

investors and professional analysts as they are widely perceived to have a better understanding of the complex nature of derivatives and associated disclosures. A total of 21 interviewees including ten investment managers and another eleven professional analysts from a mutual funds management company as well as a securities firm are included in the final sample. There are twelve questions available for each interviewee and every interview lasted about 40 minutes. The details of interviews and interview questions are provided in Chapters IV and VI.

1.5 Outline of Findings and Contributions

In the first stage, the study has found the following findings concerning the level and information contents of the derivative disclosures reported by Chinese quoted companies:

- The amount of derivative disclosures provided by listed firms is generally low.
- Equity derivative products such as warrants and convertible bonds are of more use by listed companies.
- The corporate size has little influence on the amount of derivative disclosures made by Chinese quoted firms which is opposite to a quite number of western evidence (e.g., Firth, 1979; Verrecchia, 1983; Skinner, 1994; Wallace et al., 1994; Depoers, 2000; Latridis, 2008; Elsayed and Hoque, 2010).
- Chinese listed companies tend to report more information related to the importance of using derivatives for their financial status rather than those about the risks associated with the use of such instruments.

In the second stage, several key findings have been revealed as follows:

- The derivative related disclosures reported by listed companies contain useful and helpful information for investors to make investment decisions which is consistent with many studies conducted in mature economies (e.g., McAnally, 1996; Venkatachalam, 1996; Schrand, 1997; Seow and Tam, 2002;; Ahmed et al., 2004; Liu et al., 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009). However, they are generally believed to play a minor and supplementary role in facilitating investment decisions.
- The current derivative disclosure practices are not satisfied by the majority of investors.
- Overall, the present regulatory policies of accounting and reporting for derivative instruments that are largely based upon IFRS and IAS derivative related provisions are very difficult to understand for Chinese investors.

The thesis makes a number of contributions to the existing theories and literature which include:

- It provides evidence to challenge whether the voluntary disclosure theories such as agency theory, signalling theory, political process theory and proprietary costs can be capable to explain the corporate size has significant influence on derivative related disclosures reported by Chinese listed companies.
- It fills up the current research gap by offering an assessment of the usefulness of derivative reporting and accounting practices in China.
- It extends the understanding of the value relevance of derivative disclosures in the context of emerging economies.
- It provides evidence from Chinese equity market participants to support the

usefulness and helpfulness of derivative related disclosures undertaken by prior studies in developed countries (e.g., McAnally, 1996; Venkatachalam, 1996; Schrand, 1997; Seow and Tam, 2002;; Ahmed et al., 2004; Liu et al., 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009).

- It also contributes to the research methodology in two major ways: first, the disclosure checklist employed in the research is mainly on the basis of IFRS and IAS derivative regulations which is totally different to those used in the existent literature which are largely in line with U.S. based accounting and reporting provisions; second, the introduction of the interview approach is effective to directly examine the investors' response to derivative related disclosures reported by listed companies. The qualitative research method (i.e., interview) contributes to find out why market participants treat derivative disclosures as useful or otherwise information in facilitating their investment decisions.

1.6 Chapter Summaries

Chapter I provides a brief introduction to this thesis together with an outline of the key aims of the research.

Chapter II evaluates the prior studies about the usefulness of derivative related disclosures. This review provides a basis for the understanding of the impact of mandated derivative accounting and reporting regulations on listed companies and market participants. It starts with a discussion about the development of derivatives markets and relevant regulated standards, followed by a critical and deep review of existing literature conducted to assess the usefulness of derivative related disclosures and a summary of previous researches is presented at last.

Chapter III aims to discuss the evolution of China's derivatives market and associated accounting and reporting practice for derivatives with a view to assessing the current

changes in China's derivatives market and accounting and reporting for derivative instruments. The purpose of this chapter is twofold. Firstly, it provides insights into the development of derivatives market in China, highlighting major barriers to the development. The analysis has adopted Fratzscher (2006) theory. Secondly, it looks into the current accounting standards for derivatives disclosure and reporting, examining the impact of China's new accounting standards on the development of derivatives and the firms that have engaged with the use of derivatives. It begins with the review of the history of China's derivatives market. Then it presents an argument regarding the factors that may have impacts on the development of China's derivatives market. Next, the new developments in China's derivatives market are discussed. Further, it provides an evaluation about accounting and reporting practice for derivatives in China and finally, the main findings and discussions of this chapter is summarised in the end.

Chapter IV describes the research methods employed in this study. The chapter outlines the research objectives and research questions. A section devoted to describing the research methods chosen to carry out this study is followed and it then presents the sample selection procedures.

Chapter V reports the results and discussions of the content analysis. It primarily aims to complete the first phase of the research so as to draw a picture related to the degree and nature of disclosed information about the use of derivatives by Chinese listed companies. The chapter starts with the discussions about overall disclosure level, followed by evaluation of disclosures by companies in different sizes, information content of derivative disclosures, disclosures of different types of derivatives and a summary of the main findings and arguments is provided in the end.

Chapter VI reports the results and discussions of interviews. The overall objective of this chapter is to examine the equity market participants' perceptions, attitudes and opinions towards the usefulness of derivative related disclosures prepared by Chinese

quoted firms. It firstly evaluates interviewees' opinions about information contents of derivative disclosures and then their views on the usefulness of derivative disclosures are examined. Next, their perceptions about accounting and reporting policies for derivatives are addressed and the chapter ends up with a summary of key findings and discussions.

Chapter VII summaries the research major findings with a discussion on the contributions to existing literature as well as implications to Chinese policy makers. Limitations of the study are also described in this chapter along with the potential extensions of the study and areas for future research.

Chapter II Literature Review

Chapter II Literature Review

2.1 Introduction

This chapter mainly discusses the prior studies on the usefulness of derivative-related disclosures. The review provides a basis for understanding the effect of compulsory derivative disclosure requirements to listed companies and market participants. The chapter begins with an introduction of the development of derivatives markets and related supervisory standards, followed by a deep review of previous researches that seek to assess the usefulness of derivative related disclosures.

2.2 Background

A derivative instrument is 'a contract between two parties that specifies conditions – in particular, dates and the resulting values of underlying variables – under which payments, or payoffs, are to be made between the parties' (Rubinstein 1999, p1). In the real world, the forward contracts, futures, options and swaps are the most typical products in the derivatives market. The literature has identified the price discovery, risk shifting, hedging, market efficiency and operational advantages as the basic social and economic functions of the derivatives market (e.g., Powers and Castelino, 1991; Chance, 1995; Kolb, 1997). For instance, the futures market is an important means of obtaining investors' expectations of future cash prices, which can help people make investment decisions more wisely (Kolb, 1997). A futures market, where buyers and sellers meet readily, can also improve overall market efficiency by reducing search costs (Powers and Castelino, 1991). The interest rate and foreign exchange derivatives markets enable those wishing to reduce their risk to transfer it to those wishing to increase it (Chance, 1995) and provide valuable hedging tools to

participants against the interest rate or foreign exchange risks. In addition, the derivatives market offers several operational advantages, such as lowering transaction costs and enhancing market liquidity (Chance, 1995). In a word, the derivatives can help financial markets become more efficient and provide better opportunities for managing risks (Chance, 1995). The derivative instruments were firstly invented in the 1970s and worldwide, the use of derivative contracts has grown dramatically since the 1990s. Generally, the development of derivatives follows two tracks.

Firstly, the standardised equity and commodity products are traded in well-organised and transparent exchanges, starting in Chicago, London and Tokyo, which is the so-called exchange-traded derivatives (ETD) market. Chart 2.1 summarises the notional value² of global ETD market from the year end of 1991 to 2009. The international ETD market had been experiencing a remarkable development over the last two decades. Its notional amount was only \$3,519.30 billion dollars in 1991 and then increased with the annual rate of 21.47 per cent in the subsequent years. The notional value of global ETD market reached its peak of \$79,066.50 billion dollars in 2007. However, the market saw a global retreat in 2008 in the wake of recent financial crisis. With the expansion of the financial crisis, the global exchange-traded derivatives market seized up and was contracted at \$57,715.30 billion dollars by end of 2008 which was taking approximately 73 per cent of the previous year's value. As the global economy steadily recovered in late 2009, the international ETD market finally turned around in the year end, achieving \$73,137.00 billion dollars in notional value that was 26.72 per cent higher than previous year.

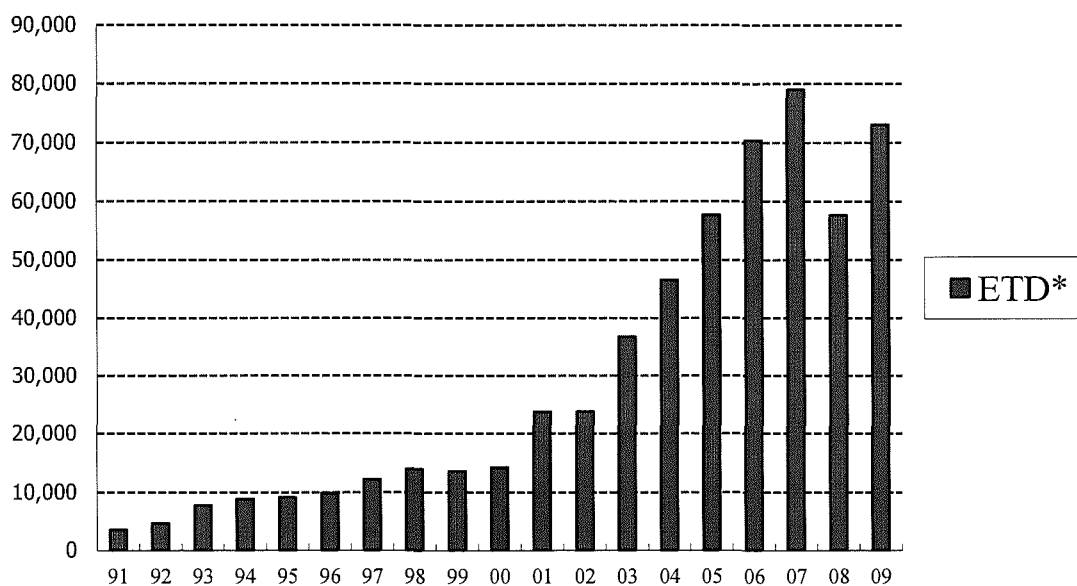
On the second track, highly customised interest rate and foreign exchange products were developed by leading financial institutions, which created the so-called over-the-counter (OTC) derivatives market. Charts 2.2 and 2.3 illustrate the notional value and gross market value of global OTC market from 1991 to 2009. The OTC

² The nominal or face amount that is used to calculate payments made on swaps and other risk management products. This amount generally does not change hands and is thus referred to as notional (Investor Dictionary.com, 2012).

derivatives market achieved a rapid expansion worldwide over the past two decades. Compared with the ETD market, the international OTC derivatives market developed faster, with an average annual growth rate of 35.81 per cent in terms of notional value since 1991 and achieved \$ 595,738 billion dollars by the end of 2007. While the notional amount of outstanding saw an 8 per cent decline at the end of 2008 compared with those of 2007 as a result of financial turbulence, it revived in 2009 with the notional value of \$614,674 billion dollars, 12.17 per cent above the end-2008 level. The gross market value, which measures the cost of replacing all outstanding contracts, is a better indicator to gauge the market risk than the notional amounts outstanding (BIS, 2007). The change of gross market value of global OTC derivatives market is slightly different with those of notional value. It reached its highest point with \$ 32,375 billion dollars at the end of 2008 in contrast to the decline in notional amount outstanding; this was mainly due to the increase of credit default swap contracts by 58 per cent in the wake of increases in credit and counterparty risk during the turmoil. Gross market values rose for both single and multi-name contracts (BIS, 2008). The gross market value of global OTC derivatives market fell by 33.33 per cent to \$21,583 billion dollars in the end of 2009 and the falling of gross credit exposures³ by 18 per cent from an end-2008 peak is the major factor (BIS, 2009).

Chart 2.1 Global ETD Market 1991 – 2009
(Notional amounts outstanding at end-year in billions of US dollars)

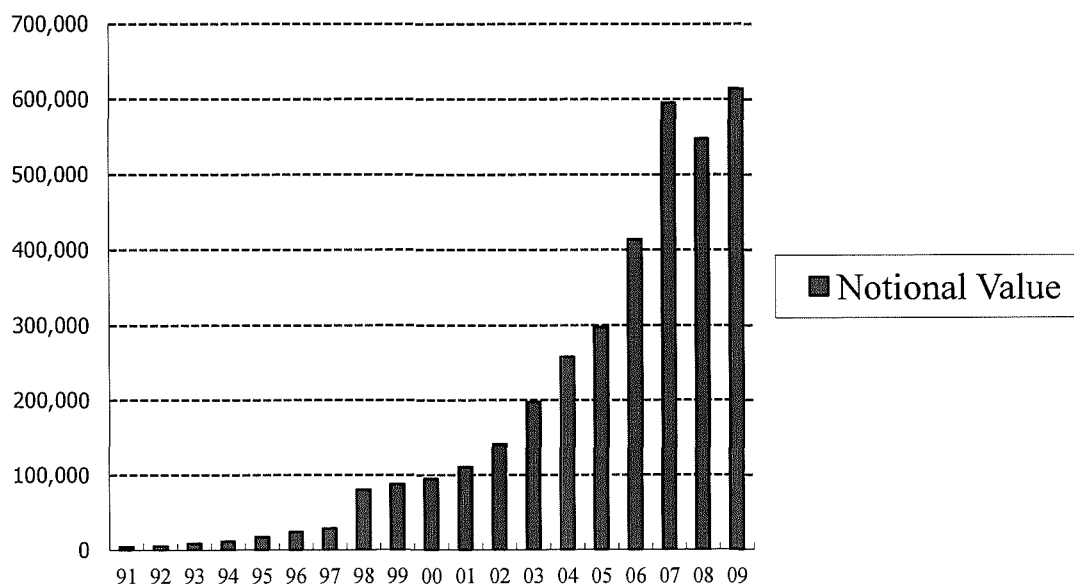
³ Gross credit exposure is the difference (taking into account legally enforceable bilateral netting agreements) between the gross value of contracts that have a positive market value and the gross value of contracts that have a negative market value (BIS, 2009).



Notes: * ETD includes the interest rate futures, interest rate options, currency futures, currency options, stock market index futures and stock market index options.

Source: BIS, 1998, March, June and December 2007, March 2010

Chart 2.2 Global OTC* Derivatives Market 1991 – 2009
 (Notional amounts outstanding at end-year in billions of US dollars)

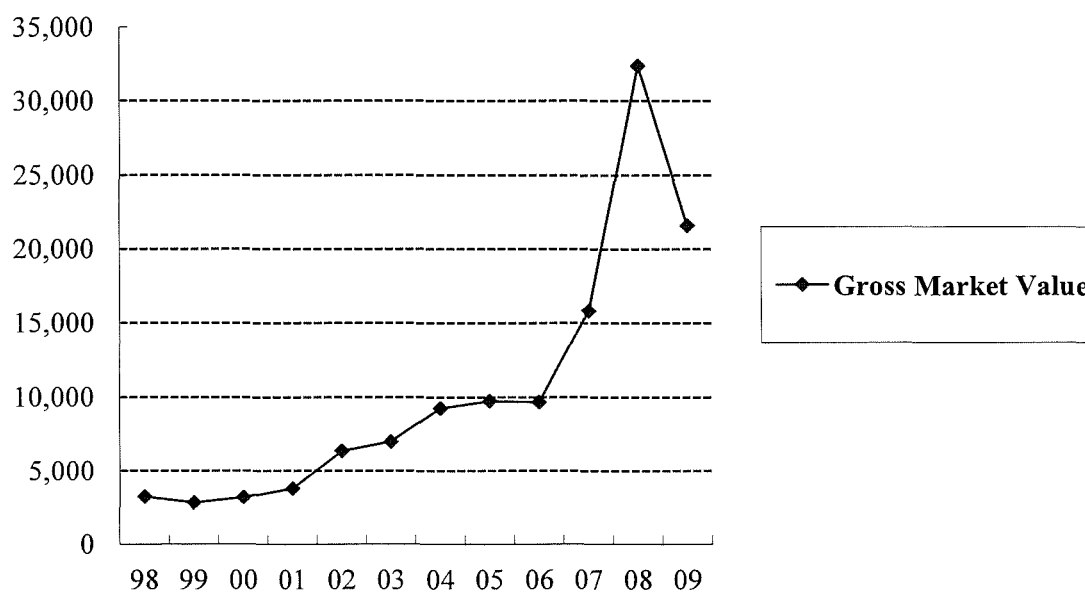


Notes: *OTC includes: foreign exchange contracts e.g., forwards and forex swaps, currency swaps and options;
 interest rate contracts e.g., forward rate agreements, interest rate swaps and options;
 equity-linked contracts e.g., forwards, swaps and options;
 commodity contracts e.g., gold and other commodities forwards, swaps and options;
 credit default swaps e.g., single-name instruments and multi-name instruments; and,

other unallocated instruments.

Source: BIS, 1998, March, June and December 2007, March 2010

**Chart 2.3 Global OTC* Derivatives Market 1998 – 2009
(Gross market value at end-year in billions of US dollars)**



Notes: *OTC includes: foreign exchange contracts e.g., forwards and forex swaps, currency swaps and options; interest rate contracts e.g., forward rate agreements, interest rate swaps and options; equity-linked contracts e.g., forwards, swaps and options; commodity contracts e.g., gold and other commodities forwards, swaps and options; credit default swaps e.g., single-name instruments and multi-name instruments; and, other unallocated instruments.

Source: BIS, 2000, 2001, 2003, 2005, 2007, 2008, 2009 and 2010

Indeed, there has been an intensive debate concerning the value and risk of using derivatives along with the widespread of derivatives' trading worldwide. On the one hand, the derivative instruments are powerful tools for companies in managing their exposure to risks. The US and UK studies (e.g., Bodnar et al, 1996; Grant and Marshall, 1997; El-Masry, 2006) have found that larger companies are the dominant users of derivative products, and the foreign exchange and interest rate risk are the most commonly managed risks. The former U.S. Federal Reserve Board Chairman Alan Greenspan believes that derivatives have contributed to the development of 'a far more flexible, efficient and resilient financial system than existed just a quarter-century ago' (Berry, 2003). In contrast, the U.S. billionaire investor Warren

Buffett considers derivatives as ‘time bombs for both the parties that deal in them and the economic system’ and Randall Dodd, the director of Derivatives Study Center, describes derivatives as a ‘double-edged swords’ that are ‘extremely useful for risk management but they also create a host of new risks that expose the entire economy to potential financial market disruptions’ (Berry, 2003). As the derivatives usage grows, there has been a dramatic rise in reported scandals due to the abuse of derivatives. Some major high profile derivative-related losses around the world are listed in Table 2.1 as follows:

Table 2.1 World’s Major Derivative Related Scandals

Barings PLC. \$1 billion loss resulted in the company’s bankruptcy. The loss resulted from unauthorised trading in Nikkei index futures.
Metallgesellschaft. \$1 billion loss related to the use of energy futures and other derivatives which were hedges of future fixed price sales commitments.
Orange County. \$1.7 billion loss in value of its \$7.4 billion investment portfolio due to rising interest rates.
Piper Jaffrey. \$700 million loss in mutual funds from investments in interest rate derivatives.
Kidder Peabody. \$350 million ‘phantom’ profit related to trading in government strips.
Proctor and Gamble. \$157 million loss on closeout of leveraged interest rate swaps.
Cargill. \$90 million loss in value of mortgage backed derivatives.
Investors Equity Life Insurance Company in Hawaii. \$90 million loss resulting from trading in treasury bond futures.
Air Products & Chemical. \$60 million loss in value of leveraged interest rate swaps due to increased interest rates.
Harris Trust & Savings Bank. \$51 million loss in investments in collateralized mortgage obligation derivatives.
Enron goes Bankrupt (2001). The 7th largest company in the US and the world’s largest energy trader made extensive use of energy and credit derivatives but becomes the biggest firm to go bankrupt in American history after systematically attempting to conceal huge losses.
AIB loses \$750 million (2002). John Rusnak uses fictitious options contracts to cover losses on spot and forward foreign exchange contracts.

Citigroup bear raid (2004). Citigroup traders led by Spiros Skordos made €15 million by suddenly selling €11 billion worth of European bonds and bond derivatives, and buying many of them back at a lower price.

Amaranth Advisors loses \$6 billion (2006). The US-based hedge fund suffered enormous losses trading in natural gas futures.

Société Générale loses €4.9 billion in unauthorised futures trading (2008). A rogue trader is blamed for the world's largest banking fraud up to that date.

A rogue trader causes havoc in the oil market (2009). Steve Perkins, a futures broker with PVM Oil, was blamed for unauthorised trades that could have cost the firm £400m if they had not been discovered and closed.

Source: Winograde, 1995; Davies, 2010.

Despite of the derivative-related scandals listed above, a certain type of derivatives which is called 'credit default swaps', is widely recognised as a key role in the recent financial crisis (e.g., Andrews, 2008; Goodman, 2008; Moshinsky, 2009; Krugman, 2010; Blinder, 2010; Galbraith, 2010). The unregulated multi-trillion dollar OTC credit default swaps market is universally treated as the catalyst to foment a mortgage crisis, then a credit crisis, and finally a systemic financial crisis that has led the world economy into a devastating depression in 2008. The number of scandals with huge derivative related losses has undoubtedly promoted calls for improved reporting of information about derivative activities (McDonough, 1993; Grant and Marshall, 1997; Beresford, 1998; Bodnar et al., 1998; Blankley et al., 2002), and the accurate and complete disclosures expect to more effective market discipline (Bies, 2002; Lopez, 2003). It is widely recognised that the accounting for financial instruments (which includes derivatives) is a major challenge to financial accounting practice and accounting authorities (e.g., Young, 1996; IASC, 1997; Bradbury, 2003). In response to rising public concerns about the trading of derivatives and associated risks, the supervisory bodies all over the world have paid much attention to the establishment of effective governance systems including the release of financial reporting standards for companies to disclose their derivative activities over past decades. For instance, the US accounting standards setters (i.e. Financial Accounting Standards Board, FASB) began the project on accounting and reporting for derivatives in 1986 (FASB, 1990) and a series of the Statements of Financial Accounting

Standards, including SFAS Nos. 105, 107 and 119, were enacted in the subsequent years. Compared to other accounting standards boards, the FASB is considered more advanced in regulating the accounting treatment for derivative instruments, even though the approach employed has been piecemeal (Blankley and Schroeder, 2000). Under the provisions of SFAS 105 (FASB, 1990), firms are required to report the face, contract or notional principal amount of financial instruments with off-balance-sheet risk. SFAS 107 (FASB, 1991) expands such derivative-related reporting to incorporate the fair value⁴ amounts of all financial instruments, both organised and off-balance-sheet, in notes to the financial statements. SFAS 119 (FASB, 1994) requires all US companies to provide disaggregated notional value disclosures (e.g., asset versus liability positions). The issuance and implementation of these new accounting requirements symbolise the shift of disclosure of derivatives' usage from a voluntary to a compulsory base. Apart from the FASB, some other market governing and standards-setting bodies, like the Securities and Exchange Commission (SEC) and Governmental Accounting Standards Board (GASB) also set up their own requirements to regulate activities regarding the use of derivatives. In 1997, the SEC issued the FRR No. 48 requiring two types information about derivatives and market risk: qualitative and quantitative information to be mandatorily reported by entities. The GASB, with the primary aim to establishing and improving standards of the state and local governmental accounting and reporting, published a final derivative instruments standards, Statement No. 53 in 2008, which rules governments, either the state or local, to measure most derivative instruments at fair value as assets or liabilities in their accrual-based government-wide, proprietary fund, and fiduciary fund financial statements (but not in the governmental fund financial statements).

In the UK, the Accounting Standards Board (ASB) issued a Discussion Paper '*Derivatives and other Financial Instruments*' in 1996 as the first step to develop accounting and reporting for derivatives. A number of issues related to derivatives

⁴ The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale (SFAS 107, paragraph 5).

including measurement, hedging accounting and disclosure were addressed. Then the Board continued to enhance the development of standards dealing with the use of derivatives and published an Exposure Draft (ED) FRED 13 in April 1997. The formal accounting standard FRS 13 *'Derivatives and other Financial Instruments: Disclosures'*, was finally promulgated in September 1998. All firms within the scope of the standard were required to comply with the provisions for accounting periods ending on or after 23 March 1999.

In Australia, the Australian Accounting Standards Board (AASB) issued AASB 1033 *'Presentation and Disclosure of Financial Instruments'* in 1996 and developed based on ED 65 *'Presentation and Disclosure of Financial Instruments'*. The predecessor of ED 65, ED 59 *'Financial Instruments'*, was released in March 1993. However, ED 59, which attempted to introduce recognition and measurement rules for financial instruments in addition to disclosure requirements, was withdrawn. Extensive lobbying against the recognition and measurement of financial instruments caused the Australian standard setters to defer the recognition and measurement issue until an equivalent international standard was issued. All publicly listed companies in Australia, which issue or hold financial instruments, should comply with the requirements of AASB 1033. The standard focuses only on the presentation and disclosure of financial instruments. AASB 1033 was subsequently amended in 1999 to include the requirement of converting financial instruments to achieve greater harmonisation with the international standard, *IAS 32 'Financial Instruments: Disclosure and Presentation'*.

The major derivative related accounting standards and disclosure rules are shown in Table 2.2.

Table 2.2 Major Derivative-Related Accounting Regulations

Country	Accounting Standards Setters	Accounting Requirements	Issue Year
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U.S.A	Financial Accounting Standards Board (FASB)	SFAS 80 'Accounting for Futures Contracts'	1984
		SFAS 105 'Disclosure of Information about Financial Instruments with Off-Balance sheet Risk and Financial Instruments with Concentrations of Credit Risk'	1990
		SFAS 107 'Disclosure about Fair Value of Financial Instruments'	1991
		SFAS 119 'Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments'	1994
		SFAS 133 'Accounting for Derivative Instruments and Hedging Activities'	1998
	Securities and Exchange Commission (SEC)	Financial Reporting Release No.48 'Disclosure of Accounting Policies for Derivative Financial Instruments and Derivative Commodity Instruments and Disclosure of Quantitative and Qualitative Information about Market Risk Inherent in Derivative Financial Instruments, Other Financial Instruments and Derivative Commodity Instruments'	1997
	Governmental Accounting Standards Board (GASB)	Statement No. 53 'Accounting and Financial Reporting for Derivative Instruments'	2008
	United States Congress	Dodd–Frank Wall Street Reform and Consumer Protection Act	2010
UK	Accounting Standards Board (ASB)	FRS 13 'Derivatives and Other Financial Instruments – Disclosures'	1998
Canada	Canadian Institute of Chartered Accountants (CICA)	CICA Handbook Section 3860 'Financial Instruments: Disclosure and Presentation'	1995
Australia	Australian Accounting Standards Board (AASB)	AASB 1033 and AAS 33 'Presentation and Disclosure of Financial Instruments'	1996
		AASB 132 'Financial Instruments: Disclosure and Presentation'	2005
		AASB 139 'Financial Instruments: Recognition and Measurements'	2005
International Accounting Standards Board (IASB)		IAS 32* 'Financial Instruments: Disclosure and Presentation'	1995
		IAS 39** 'Financial Instruments: Recognition and Measurement'	1999
		IFRS 7 'Financial Instruments: Disclosures'	2005
		IFRS 9 'Financial Instruments'	2009
Basel Committee on Banking Supervision (BCBS)		Basel III	2010

Notes: * IAS 32 currently is revised as IAS 32 'Financial Instruments: Presentation'. The disclosure provisions of IFRS 32 are superseded on the adoption of IFRS 7 'Financial Instruments: Disclosures', which is effective after 1 January 2007.

**The IASB plans that classification and measurement provisions of IAS 39 will be replaced by IFRS 9 effective 1 January 2013, with earlier application permitted. However, the IASB released a draft of proposals to adjust the effective date of 1 January 2015 instead of 1 January for IFRS 9 on 4 August 2011.

The International Accounting Standards Board (IASB) aims to set up a single global accounting standard for every country and it also has the task of establishing standards on accounting and reporting for financial instruments, including derivatives. In 1989, the International Accounting Standards Committee (IASC, the predecessor of the IASB) started a joint project with the Canadian Institute of Chartered Accountants (CICA) to assess the issues related to accounting for financial instruments (Bradbury, 2003). The project is an explicit beginning of the IASC to develop comprehensive and generally accepted international accounting regulations for the disclosure,

presentation, recognition and measurement of financial instruments which includes derivatives. In 1995, the IASC was firstly issued the international guidance on accounting treatment for financial instruments, International Accounting Standard (IAS) 32 '*Financial Instruments: Disclosure and Presentation*'. Basically, IAS 32 deals with the following issues:

- a) classification of financial instruments as liabilities or equity, by the issuers, and the classification of related interest, dividends and gain or loss,
- b) offsetting of financial assets and financial liabilities and,
- c) disclosure of information about financial instruments.

The standard requires firms to disclose:

- a) risk management policies, including the policy for hedging each major type of forecasted transactions (IAS 32, paragraph 43A),
- b) terms, conditions and accounting policies for each class of financial asset, financial liabilities and equity instruments, both recognised and unrecognised (paragraph 47),
- c) interest rate risk exposure (paragraph 56),
- d) credit risk exposure (paragraph 66),
- e) fair value of each class of financial assets and liabilities, recognised and unrecognised (paragraph 77) and
- f) financial assets carried at an amount in excess of fair value (paragraph 88).

It can be seen that the accounting standards setters, both national and international, apply themselves to regulate the use of derivatives by requiring companies to disclose much more information. In the recent years, the accounting standards setters continuously make their efforts to improve the requirements on accounting and reporting for derivatives and some new accounting regulations, such as SFAS 133 '*Accounting for Derivative Instruments and Hedging Activities*' (FASB, 1998) and

IAS 39 *Financial Instruments: Recognition and Measurement* (IASC, 1999) have been promulgated and implemented. The significant change of the two requirements is the adoption of the full-fair-value measurement that all entities must recognise all financial instruments, including derivatives, as assets or liabilities on the balance-sheet and measure those instruments at fair value, and changes in the derivatives fair value are to be recognised in the current earnings unless specific hedge accounting criteria are met. In a corporate annual report, the derivative instruments are treated as balance-sheet items instead of off-balance-sheet instruments.

Since 2008, the world has faced the most severe financial crisis post the Great Depression⁵. The financial crisis, starting with the collapse of the American housing industry then rapidly spreading across the world, forces most of nations be struggling with bankruptcy of financial institutions, unemployment, failing business, falling home prices, and declining savings. Governments and central banks all over the world have to implement unprecedented fiscal stimulus, monetary policy expansion, and institutional bailouts to stabilise and revive the economy. The causes of the current financial crisis all trace back to a certain type of derivatives - credit default swaps (CDS), which is widely recognised as a key role in the recent financial crisis (e.g., Andrews, 2008; Goodman, 2008; Moshinsky, 2009; Krugman, 2010; Blinder, 2010; Galbraith, 2010). The CDS contracts are sort of financial instruments giving insurance against a credit event that destroys value in an entity's (usually a corporation's) debt. The insurer of the credit event is paid a premium (usually quarterly) over a fixed time period to provide the insurance. And, the insured gets reimbursed for any losses in the value of the entity's debt, if a credit event occurs over the contract's life. CDS are customisable, OTC products and can be written to trigger in the event of bankruptcy, default, failure to pay, restructuring, or any other credit event of the reference entity. CDS can be physically settled or cash settled. If a physically-settled CDS is triggered,

⁵ The Great Depression was an economic slump in North America, Europe, and other industrialized areas of the world that began in 1929 and lasted until about 1939. It was the longest and most severe depression ever experienced by the industrialized Western world (Anari and Kolari, 1999).

the protection seller pays the face value of the debt (or another pre-specified amount) to the protection buyer in exchange for the debt itself, which would be worth less than face value given the recent credit event. Triggering a cash-settled CDS would require the protection seller to make a payment to the protection buyer of the difference between the original value of the debt (typically the face value) and the current value of the debt based on a specified valuation method. Unlike hedging with less risky bonds which requires a cash outlay upfront, CDS do not subject the buyer to interest rate risk or funding risk. CDS allow hedgers or speculators to take an unfunded position solely on credit risk (Berndt, Jarrow and Kang, 2007). In October 2008, the notional value of the unregulated OTC market was estimated to be in excess of \$ 600 trillion (Sheridan, 2008), including the estimated amount of CDS markets between \$35-65 trillion (BIS, 2008). The CDS contracts are described by Richard Christopher Whalen, senior vice president and managing director at Institutional Risk Analytics, as 'high-beta risk, that is, highly correlated with the broad financial markets. Unlike natural disasters and other low-beta risks, where the frequency of events is relatively low and uncorrelated to the financial markets, in CDS the high degree of market correlation ensures that most or all of a portfolio of single-name CDS contracts will deteriorate when economic conditions turn negative' (Whalen, 2009). The unregulated multi-trillion dollar OTC credit default swaps market is universally treated as the catalyst to foment a mortgage crisis, then a credit crisis, and finally a systemic financial crisis that has led the world economy into a devastating depression in 2008. The SEC Chairman Christopher Cox describes the credit default swaps market as a 'regulatory blackhole' and it is in need of 'immediate legislative action' (O'Harrow Jr. and Dennis, 2008). Former SEC Chairman Arthur Levitt and former Fed Chair Alan Greenspan, both of whom used to support the removal of OTC derivatives trading from the federal and state enforcement, have acknowledged that the deregulation of the credit default swaps derivatives market contributed to the fall 2008 economic recession (Goodman, 2008). Ayadi and Behr (2009) criticise that the current regulatory system on credit derivatives markets which is mainly based upon self-regulatory initiatives, is insufficient to ensure the market participants to use credit

derivatives prudently and responsibly. They argue that well-structured regulatory system should be combined self-regulatory initiatives together with mandatorily supervisory actions as to prevent market participants from misusing credit derivatives, therefore eliminating the dangers posed by such instruments to the stability of the financial system. The Commodity Futures Trading Commission Chairman Gary Gensler recommends that any firm intends to get involved in the swaps trading should be allowed to process such business in the clearinghouses for swaps transactions (Leising, 2010).

Recently, in response to the increasing calling for strong and effective oversight of the derivatives market, particularly the OTC trades, governments around the world have taken actions to overhaul the current derivative regulatory regime. In September 2008, the FASB issued the FASB Staff Position No. 133-01 and FIN 45-4, aiming at improving disclosures of credit derivatives, which amends No. 133, that requires greater disclosure of information about the potential adverse effects of changes in credit risk in the financial position, financial performance and cash flows of the sellers of credit derivatives. The U.S. Senate Agriculture Committee approved legislation to tighten regulation of derivatives trading sponsored by Senator Blanche Lincoln on 21st April 2010. The bill allows the limited exemption of derivatives for corporate hedgers from its proposed exchange trading. It will also force banks to split off their swaps business and push financial institutions into the stiff regulations (Wagner, 2010). On 21st July 2010, the U.S. Financial Regulatory Reform Act – The Dodd-Frank Wall Street Reform and Consumer Protection Act was signed into law by President Barack Obama. The key of Act is to provide robust supervision and regulation to financial firms and establish comprehensive regulation framework for financial markets. The Act stresses the necessity to create comprehensive regulation of OTC particularly CDS derivatives trading and requires that all OTC derivatives markets, including CDS markets should be subject to the comprehensive regulation system that symbolises the governing of OTC derivatives trades shifting from non-regulatory to mandatory supervision.

In the wake of the Greek debt crisis over the lack of disclosure to regulators of credit market activity, the European Commission is proposing a new regulation on the OTC derivatives market. The 'Proposal for a Regulation of the European Parliament and of the Council on OTC derivatives, central counterparties and trade repositories' was released on 15th September 2010 and expected to be enacted by the end of 2011. It requires the trading of OTC derivatives in the EU to be reported to central data centres (trade repositories) accessible to regulators. A new European Securities and Markets Authority would be responsible for registering and monitoring trade repositories, while standard OTC derivatives would have to be cleared through central counterparties.

The world banking supervisory institution – Basel Committee on Banking Supervision (BCBS), also updated their guidelines for capital and banking regulations, which is so-called the 'Basel III' on 20th September 2010. Regarding to eliminating risks arising from the trading of credit related derivatives, the regulations require banks to,

firstly, strengthen the capital requirements for counterparty credit exposures arising from banks' derivatives, repo and securities financing transactions;

secondly, raise the capital buffers to back these credit exposures;

thirdly, reduce procyclicality⁶;

fourthly, set up additional incentives to move OTC derivative contracts to central counterparties like clearing houses so as to strengthen the restriction and supervision of derivatives trade;

fifthly, provide incentives to strengthen the risk management of counterparty credit exposures.

⁶ It refers to any aspect of economic policy that could magnify economic or financial fluctuations (Basel III).

In summary, the evolution of accounting and reporting for the use of derivatives switches from the original voluntary to the current mandated base, shifting from off-balance-sheet to balance-sheet items, and emphasising from monitoring of ETD to OTC derivatives. Theoretically, from the views of regulators, these compulsory disclosure requirements have the benefits for both the listed companies and investors. Under the compulsory disclosure framework, the listed companies have to disclose much more information, either good or bad, about their use of derivatives and they have to improve their internal control system and risk management policy to avoid the losses from derivative usage. For investors, they can obtain much more useful information about the risk exposure of a quoted company to facilitate their investment decisions. Sapiro (2002), however, provides the critical views on the compulsory derivative disclosure framework. He insists that the greater transparency about companies' derivative activities is not a panacea for imprudent risk management strategies and such transparency actually includes firms taking excessive speculative position in the derivatives market. The author argues that the firm might choose the prudent risk management strategy in the absence of hedge disclosures but the implementation of prudent risk management strategy comes to costs and the company's production policy is distorted in the absence of hedge disclosure. Finally, he suggests that the regulators should carefully investigate the trade-off between the risk management distortions and production distortions when evaluating the effect of compulsory hedge disclosures for all companies. In the literature, the effectiveness of the mandated derivative-related disclosure requirements has attracted considerable academic attention.

2.3 Prior Literature

As discussed in the last section, voluntary disclosure about the use of derivative instruments was dominating at the initial stage. With the enforcement of regulatory

bodies in the recent decade, the derivative related information must be mandatorily disclosed following appropriate regulations by reporting entities. Voluntary disclosure means, except for compulsory disclosure, reporting companies disclose information voluntarily to the public. In this section, the study intends to provide a discussion of theories refer to voluntary information disclosure in general terms, followed by a review of previous studies specially related to the usefulness of derivative related disclosure.

2.3.1 Voluntary Disclosure Theories

Corporate voluntary disclosure has been the focus of an increasing amount of attention in recent years. Such disclosures can be defined as ‘disclosures in excess of requirements, representing free choices on the part of company managements to provide accounting and other information deemed relevant to the decision needs of users of their annual reports’ (Meek, Roberts, & Gray, 1995, p. 555). Studies in this area have mainly emphasised on the impact of company characteristics on the extent of voluntary disclosure. Understanding why firms disclose information voluntarily is useful to both the preparers and users of accounting information as well as to accounting policymakers (Meek et al., 1995).

Several theories explain the reasons for companies to reveal voluntary information (under the assumption that firms perceive benefits from disclosure), including agency theory, signalling theory and political process theory, among others. Proprietary costs as well as costs derived from the collection and preparation of information must also be considered from a theoretical perspective (Prencipe, 2004). To a lesser extent, other types of costs have been found as limitations to the disclosure of information, such as corporate governance and monitoring, capital needs, litigation costs, and audit firm reputation (Ahmed and Courtis, 1999). The theoretical arguments on the determinants

of voluntary information disclosure are summarised below.

Agency Theory

Agency theory defines an agency relationship as a contract under which one or more persons (principals) engage another person (agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent (Jensen and Meckling, 1976). It is expected that the agent will not always act in the best interest of the principal. Agency theory claims that conflicts are expected to arise when there is incomplete and asymmetric information between principal and agent in a company. Both parties may have different interests and this problem could be minimised by providing more information. Some determinants of voluntary information that have been commonly associated to the agency problem are size, leverage, profitability and listing status.

Firstly, given that larger firms carry out a greater number of contracts which are more complex than smaller firms, agency costs depend on company size (Rodríguez Perez, 2004). Larger firms are expected to reveal more voluntary information to reduce these costs.

Secondly, agency costs are higher when the proportion of debt increases. Agency theory predicts that a highly leveraged company has more of an obligation to satisfy the information needs of long-term and short-term creditors, and hence it may provide more detail to meet those needs than would a less leveraged firm (García-Meca et al., 2005).

Thirdly, higher margin and higher profitability lead to a greater level of disclosure in order to obtain and justify better contractual conditions. Managers will disclose

detailed information to improve their compensation arrangements (Giner, 1997). Finally, listed companies are expected to provide more information due to the higher information requirements they face, or due to agency costs (Giner, 1995). Specifically, international listing status is also expected to influence disclosure. Disclosure serves to control the agency costs that appear when ownership is more dispersed (García-Meca et al., 2005).

Signalling Theory

Signalling theory indicates that asymmetric information between a company and the investors causes adverse selection. To avoid this situation, companies disclose information voluntarily, providing signals to the market (Watts and Zimmerman, 1986). Size, profitability and growth are factors that influence the decision to disclose voluntary information to avoid adverse selection.

Information asymmetries will be larger for big companies, which justify more disclosure for mitigation purposes (Rodríguez Pérez, 2004). Moreover, firms with a high profitability will have a higher tendency to disclose more information to the markets, to increase investor confidence (Singhvi and Desai, 1971) and prevent undervaluation of their shares (Giner, 1997). Finally, growth and disclosure are expected to be positively related (Lev and Penman, 1990) since companies with high growth rates provide more information to be more attractive in the market.

Political Process Theory

Political process theory suggests that regulators make decisions based on the information disclosed by firms (Watts and Zimmerman, 1986). Companies disclose

voluntary information to minimise these political costs. Size and profitability are incentives for companies to reveal more information to reduce these costs. Larger firms are subject to higher political costs, leading to a greater level of disclosure (Watts and Zimmerman, 1986). Higher information disclosure is expected to justify a firm's large profits and thus avoid legal obligations (Lang and Lundholm, 1993) and as a justification of the company's profit level (Giner, 1997). Political costs and the competitive environment also influence the level of information disclosed in an industry (Mora and Rees, 1996).

Proprietary Costs

Proprietary costs are considered as one of the most important limitations to information disclosure. Competitive disadvantages influence the decision to provide private information. Smaller firms are sensitive, to a great extent, to the disadvantages that, in terms of competitive edge, are derived from a higher disclosure level (Singhvi and Desai, 1971; Giner, 1995). The previous literature has also considered the costs derived from the collection and preparation of information as an obstacle to revealing more voluntary information. Company size plays an important role to minimise these costs, which decrease for larger firms (Land and Lundholm, 1993).

In summary, under the framework of these theories, the prior research has employed variables, such as size, leverage, profitability, growth and listing status as determinants of voluntary information disclosure.

2.3.2 Prior Studies on the Usefulness of Derivative Disclosures

In the accounting literature, the researches in relation to the derivative disclosures

have developed into two branches. First, some studies (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) have examined the quality of derivative disclosures by analysing the response of listed companies to the compulsory derivative-related disclosure requirements. These researchers seek to answer the question about whether the mandated derivative disclosure provisions actually achieve the expectation of accounting authorities, by enhancing the listed companies to provide more information regarding derivative-related activities in their annual reports. Another strand of studies focuses on the effect of information disclosure on the behavior of financial market aggregates such as stock price, stock returns and trading volume. These researches (e.g., McAnally, 1996; Nelson, 1996; Barth et al., 1996; Eccher Et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; AFP, 2001; Barton, 2001; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Koonce et al., 2005; Reynolds-Moehrle, 2005; Richie et al., 2005; Chipalkatti and Datar, 2006; Ahmed et al., 2006; Zhang, 2009; Ameer, 2009; Perignon and Smith, 2010) attempt to empirically explain observed phenomena in the association between the derivative-related disclosures and market responses.

2.3.2.1 The Quality of Derivative Disclosures

Disclosure Quality: the Definition

The term of 'quality' has been commonly and interchangeably used with the term of 'transparency' as their definitions are elusive (Kothari, 2000). Different interpretations have been adopted to explain the meaning of high quality accounting information. Ball et al. (2000) interpret the meaning of quality of accounting information as the

combination of properties of timeliness and conservatism⁷. Pownall and Schipper (1999) define three attributes that are transparency, comparability and full disclosure as being high quality of financial statements. Transparency means that financial statements are mandated by standards to 'reveal the events, transactions, judgments and estimates underlying the statements and their implications' (Pownall and Schipper, 1999, p262). Transparent financial reports enable users to see the results and implications concerning operating, financing and investing decisions, the key judgments and estimates of preparers. Comparability is interpreted as similar events and transactions being accounted for in the same way in terms of both cross-sectionally among firms and over-time consistent for a given firm. Full disclosure is related to providing all necessary information so as to give reasonable assurance that investors are not misled.

Although the definition of disclosure quality by Pownall and Schipper (1999) focuses on the financial statement as a whole, it can also be adapted to individual disclosures like derivative disclosures within a financial report. Hence, this study defines the disclosure of being high quality when it possesses the attributes of transparency, full disclosure and comparability.

The annual report is one of vital channels for firms to report their financial performance. With the aim to improve the quality of financial reports, accounting standards setters are always endeavoring to produce accounting standards with high quality by requiring greater detail and more extensive information. Therefore, companies which produce financial reports complying with the accounting standards should be expected to provide high quality accounting information.

⁷ Ball et al. (2000) define the timeliness as the extent to which current-period financials incorporate current-period economic events, and conservatism as the greater speed with which financials reflect economic bad news than good news.

Disclosure Quality: Benefits to Investors and Firms

Investors require firms to disclose information with high quality as to making their economic decisions. Greater disclosure is to minimise the degree of information asymmetry between managers and investors and therefore, will attract more investments. Sengupta (1998) argues that firms with disclosing high quality information incur lower costs of debt and equity capital. In addition, high quality disclosures can reduce the uncertainties faced by investors and creditors (Miller and Bahnsen, 2002) and it helps to increase their confidence in financial statements produced by companies, finally leading to an increased investment in these firms. As a result firms will experience higher share prices. By contrast, if firms fail to present sufficient information, market participants like investors and creditors may take actions which are disadvantageous to companies such as increasing the cost of capital or withdrawing their investments. Lack of information disclosures may also force market participants to seek other investment opportunities which may reduce the firm's shareholders' value. Miller (2001) points out that even though investors could invest in companies with a low quality disclosure, they are likely to require comparatively higher rate of return leading to a higher cost of capital and lower share price. Consequently companies could be difficult to grow and develop.

Disclosure Quality: Prior Studies

In the U.S., Edwards and Eller (1996) conduct a study to analyse the derivative disclosures by top ten U.S. dealer banks in the year of 1995. They find that since the generally accepted accounting principles for the first time required the separation of the fair values of derivative contracts in a gain position (assets) from those in a loss position (liabilities), the detail and clarity of the information about the derivatives' usage is greatly improved by these ten banks. Compared with the 1994 annual reports,

the banks report more quantitative details on value-at-risk and the results of the trading activities. In particular of those banks whose trading revenues making up a large share of their income, they tend to disclose more information about the derivatives and trading. They conclude that the derivative-related disclosure approaches encouraged by accounting standards setters actually enhance the banks to present much more information about the derivative activities. However, the authors also point out that none of the reports could be singled out as the best and most of the banks adopt a novel approach to disclosing on the use of derivatives that is not used by the other.

Based upon the sample of 25 Securities and Exchange Commission (SEC) registrants, Roulstone (1999) compares the disclosures about derivatives and market risk in the years before 1996 and after the adoption of Financial Reporting Release No. 48 (FRR No.48, SEC 1997). The author illustrates that although FRR No.48 improves greatly the market risk disclosures which were encouraged but not required under SFAS 119, the details and clarity are varied widely within the SEC registrants. Further, certain required or strongly recommended contextual disclosures are almost completely absent and the major weaknesses of disclosure are the lack of detailed market's quantitative measures and the discussion regarding the firm's risk management activities. Companies appear to prefer the relatively complicated but more discreet disclosure techniques to simpler but more revealing disclosure formats and they are reluctant to present the assumptions, limitations and contextual related to those complicated methods like Value-At-Risk (VAR) and sensitivity analysis formats.

In 2000, Blankley, Lamb and Schroeder examined the disclosures concerning market risk for the first reporting period following the adoption of FRR No.48 based on the sample of 45 industrial firms, 45 banks or thrifts and 20 additional Dow 30 industrial companies and they get similar conclusions as Roulstone's (1999). They find that while the basic reporting requirements of FRR No.48 are met, many of the detailed disclosures for quantitative and qualitative items are not made. For the sample firms,

compliance with the qualitative requirements regarding the primary risk and its management is generally pretty high but the detailed disclosures about the allowable techniques are often incomplete or lacking. For companies using the sensitivity analysis and VAR techniques, they do not provide adequate disclosures about the models and their major assumptions used, nor disclose sufficient information about the types of instruments and offsetting position included in the analysis. The three authors demonstrate the same conclusions in their 2002 study based upon the sample of Dow 30 firms.

By examining the 2001 annual reports of the Dow 30 companies, Bhamornsiri and Schroeder (2004) illustrate that the compliance with the provisions of SFAS 133 is mixed. The sample companies comply with the qualitative guidelines but inconsistently meet the quantitative requirements of SFAS 133. They argue that the users of financial statements are able to assess the company's strategies for using derivatives but cannot always evaluate the outcomes of these derivative-related activities. The authors find that the derivative-related disclosures vary widely in terms of the amount of information disclosed and the format adopted to disclose it. They argue that the lack of uniformity in disclosing derivative activities under SFAS 133 could result in unnecessary difficulties for the users of financial statements to assess the impact and potential impact of derivatives' usage on a company's financial position. In addition, they also find that the disclosure of derivative-related information is scattered throughout the annual reports of sample companies, difficult to understand, hard to follow and lacked uniformity. It would make a great effort for financial statement users to collect and analyse the derivative-related information from a firm's annual report. Finally, they strongly suggest the development of a more uniform reporting format for derivative activities.

In the UK, Dunne et al. (2007) assess the impact of the Financial Reporting Standard 13 '*Derivatives and Other Financial Instruments – Disclosures*' (FRS 13) on the financial statements of UK quoted companies. The sample in this study includes 210

non-financial UK companies and they are sorted into large, medium and small groups following the market value. They adopt the content analysis method and compare the disclosed information about use of derivatives in the year before and after 1998's releasing of FRS 13. According to their findings, the implementation of FRS 13 is associated with a substantial increase in derivative-related information available in corporate annual reports and the increased disclosures required by FRS 13 could be viewed as a welcome improvement in the corporate accountability.

In Canada, Lajili and Zeghal (2005) adopt content analysis method to explore and synthesize the risk-related disclosures in 1999 annual reports of Canadian listed companies. The sample contains the TSE (Toronto Stock Exchange) 300 index companies. They find that the risk information disclosed by Canadian listed companies is almost exclusively qualitative in nature and located in the notes to the financial statement and/or in the 'management discussion and analysis' section following the Canadian risk disclosure regulations (CICA Handbook) and the most frequently cited risk categories are financial risk, commodity and market risk. In addition, for the risk sources and risk management techniques, the sample firms emphasise on down-side risks, but the potential up-side effects and value-creating opportunities are largely absent. Nevertheless, the risk assessment and analysis reported by those listed firms are quite limited and they lack valuable quantitative insights like sensitivity analysis showing the effects of potential changes on financial statement if one or more categories of risk increase or decrease.

Lopes and Rodrigues (2008) examine the accounting practices following the requirements of IAS 32 and 39 of European blue chips companies trading on leading stock exchanges. They compare the STOXX 50 companies' annual reports in 2001 with a checklist according to the provisions of IAS 32 and 39. Their findings illustrate that less than a half sample companies use the fair value measurement for the available-for-sale financial assets as IAS 39 requires. Although most of companies disclose the determination of fair value technique, the information is still away from

being clear and objective. The majority of firms provide low levels of disclosures for hedging transactions. The authors finally conclude that the largest companies in Europe have a long way to apply the most sophisticated accounting and reporting standards for derivatives.

Generally speaking, the prior studies indicate that the quoted companies present both qualitative and quantitative information as to derivative usage and associated market risk following the basic accounting requirements and disclosure rules in their annual reports. However, they are reluctant to disclose sufficient detailed information like assumptions of quantitative techniques and corporate risk management activities. Although the implementation of the compulsory disclosure requirements improves the reported information about the use of derivatives, the supervisory authorities still have a task to enhance the listed companies to disclose more clear and detailed information by complying all the accounting and reporting requirements.

2.3.2.2 Derivative Disclosures and Value Relevance Studies

While the previous section discusses the prior studies on disclosure quality by listed firms complying with related accounting and reporting standards, this section assesses the effect of derivative-related disclosures on market participants, particularly on investors, known as value relevance studies. This review provides a basis for understanding the research area on the value relevance of derivative disclosures.

The Usefulness of Accounting Information

According to the recent approved '*Conceptual Framework for Financial Reporting 2010 (the IFRS Framework)*' by the IASB, the types of information that are likely to

be most useful to users in making decisions are identified by the qualitative characteristics of useful financial reporting. Paragraph 5 of the Framework states that the relevance and faithful representation are the fundamental qualitative characteristics of useful financial information.

To be useful, information must be relevant to the decision-making needs of users. Qualitative Characteristics (QC) paragraphs 6 – 10 in the Framework define the relevant information as follows:

Relevant financial information is capable of making a difference in the decisions made by users. Financial information is capable of making a difference in decisions if it has predictive value, confirmatory value, or both. The predictive value and confirmatory value of financial information are interrelated.

The information must assist users in evaluating the past or present events and help them to predict future events that are likely to affect organisations, before making their decisions. The relevant information also helps decision makers to confirm or correct their past evaluations.

Ideally, decision makers can use the relevant information about assets or liabilities disclosed in the financial statements as to measuring future cash flows generated from each asset or liability. However, due to the uncertain nature of future events, this qualitative characteristic is not a sufficient condition for usefulness. Therefore, the relevant information depends on how reliable the information is in terms of its measurement and sources.

The users of financial statements must depend upon the reliable information when making decisions. To be reliable, the information must represent faithfully the economic conditions or events to which it relates. According to QC, *'Faithful*

*representation*⁸ can be interpreted as follows:

General purposes of financial reports represent economic phenomena in words and numbers. To be useful, financial information must not only be relevant, it must also represent faithfully the phenomena it purports to represent. This fundamental characteristic seeks to maximise the underlying characteristics of completeness, neutrality and freedom from error (QC paragraph 12). Information must be both relevant and faithfully represented if it is to be useful (QC paragraph 17). Comparability⁹, verifiability¹⁰, timeliness¹¹ and understandability¹² are qualitative characteristics that enhance the usefulness of information that is relevant and faithfully represented (QC paragraph 19).

Users are confident in making decisions based on such reliable information as it is free from error or bias toward particular people.

⁸ In considering reliability, the IASB observed that there are a variety of views of what the notion means. For example, some focus on verifiability or free from material error to the virtual exclusion of the faithful representation aspect of reliability. And to some, reliability apparently refers primarily to precision. Those considerations led the boards to consider how they could convey better what reliability means. Accordingly, the boards propose that faithful representation encompasses all of the qualities that the previous frameworks included as aspects of reliability. Faithful representation—the depiction in financial reports of the economic phenomena they purport to represent—is essential if information is to be decision useful. To represent real world economic phenomena faithfully, accounting representations must be complete, neutral and free from error (IFRS, 2010).

⁹ Information about a reporting entity is more useful if it can be compared with similar information about other entities and with similar information about the same entity for another period or another date. Comparability enables users to identify and understand similarities in, and differences among, items (QC paragraphs 20 – 21).

¹⁰ Verifiability helps to assure users that information represents faithfully the economic phenomena it purports to represent. Verifiability means that different knowledgeable and independent observers could reach consensus, although not necessarily complete agreement, that a particular depiction is a faithful representation (QC paragraph 26).

¹¹ Timeliness means that information is available to decision-makers in time to be capable of influencing their decisions (QC paragraph 29).

¹² Classifying, characterising and presenting information clearly and concisely make it understandable. While some phenomena are inherently complex and cannot be made easy to understand, to exclude such information would make financial reports incomplete and potentially misleading. Financial reports are prepared for users who have a reasonable knowledge of business and economic activities and who review and analyse the information with diligence (QC paragraphs 30 – 32).

Value Relevance Studies

In academic literature, the term of 'value relevance' is not a stated criterion of accounting standards discussed in the last section. Studies of value relevance are to assess the relevance and reliability of particular financial information to their users and they are an empirical operationalisation of the stated criteria of relevance and reliability (Barth et al., 2001). The financial report is value relevant only if it contains information relevant to investors in assessing the value of the firm and is measured reliably enough to be reflected in share prices (Barth et al., 2001). The value relevant test commonly includes the joint tests of relevance and reliability because it is difficult to separately examine the relevance and reliability of the accounting information (Barth et al., 2001).

According to the research by Holthausen and Watt (2001), studies related to the value relevance of accounting information can be sorted to three major categories as follows:

- a) Relative association studies. These researches compare the association between stock market values (or changes in values) and alternative bottom-line measures. These studies usually test for differences in the R^2 of regressions using different bottom line accounting numbers. The accounting number with the greater R^2 is described as being more value-relevant. This type of studies also called the relative association studies.
- b) Incremental association studies. These studies investigate whether the accounting number of interest is helpful in explaining value or returns (over long windows) given other specified variables. That accounting number is typically deemed to be value relevant if its estimated regression coefficient is significantly different from zero. Since differences between the estimated and predicted values are often

interpreted as evidence of measurement error in the accounting number, those studies are so called measurement studies.

- c) Marginal information content studies. These investigate whether a particular accounting number adds to the information set available to investors. They typically use event studies (short window return studies) to determine if the release of an accounting number (conditional on other information released) is associated with value changes. These researches are commonly called the information content study.

The majority of value relevance studies (94 per cent) performs the first two types of studies (relative and/or incremental) (Holthausen and Watt, 2001). Barth et al. (2001) point out that the value relevance studies provide interesting and fruitful insights for not only academic research but also accounting and reporting standards setting.

Value of Derivative Disclosures: Prior Studies

The *Statement of Financial Accounting Concepts No. 1 'Objectives of Financial Reporting by Business Enterprises'* issued by the FASB states that the objective of financial reporting (including disclosure) is to provide 'information that is useful to present and potential investors and creditors and other users in making rational investment, credit, and similar decisions' (paragraph 34). The most common-used method of assessing the usefulness of derivative disclosures is to examine whether the disclosed information is relevant to investors' decisions – i.e. whether it is reflected in the change of stock price, equity return, trading volume etc.

In the U.S., McAnally (1996) provides the evidence that the notional principal

amounts of some derivatives (such as futures, forwards, options and interest rate swaps) required by SFAS 105 are positively related to equity valuation.

Based upon the sample of 146 (133) US banks in 1992 (1993), Nelson (1996) assesses the value-relevance of the fair value disclosures under the provisions of SFAS 107 by examining the association between the market value of banks' common equity and the fair value estimates under SFAS 107. The findings indicate that only the investment securities' fair value estimates are marginally informative to book value in valuating sample banks' common equity, while the fair value estimates of loans, deposits, long-term debt or off-balance sheet financial instruments do not have incrementally explanatory power in the valuation of equity. Further, after controlling for variables related to the banks' future growth opportunities (such as the return on equity and growth in book value), the fair values of securities has no incremental ability to explain the market value. Finally, the author adopts the returns specification, which implicitly control for correlated omitted variables, to confirm the results that there is no reliable evidence of the fair value disclosures under SFAS 107 having the significant incrementally explanatory power in the valuation of banks' common equity.

In contrast to Nelson (1996), Barth et al. (1996) provide the evidence that the fair value estimates of securities, loans and long-term debt disclosed under SFAS 107 are value-relevant to the banks' common equity's valuation, but, those for deposits and off-balance sheet items are not. The sample consists of 136 US largest publicly traded banks between 1992 and 1993. The primary difference between this study and the Nelson's (1996) is the finding of incremental explanatory power for loans' fair values in valuating banks' equity. In addition, the results indicate that the conditioning variables, including the core deposit intangible asset, nonperforming loans and interest-sensitive assets and liabilities, are also significantly associated with the banks' share prices. They argue that since the loans' fair value, nonperforming loans and interest-sensitive assets and liabilities are simultaneously significant to the banks'

share prices, the disclosures of loans' fair value estimates do not fully reflect the loan default and interest risks. By permitting the coefficient of loans' fair values to vary according to financial condition of the bank, they find that it is higher for banks with relatively high regulatory capital ratios, implying that the market participants discount unrealised gains disclosed by less healthy banks.

Eccher et al. (1996) conduct a similar study to analyse whether the fair value disclosures of financial instruments required by SFAS 107 are associated with share prices of the U.S. banks between 1992 and 1993. They collect data from 296 and 328 banks in 1992 and 1993 respectively, representing the majority of all publicly traded bank holding companies. By implementing a series of regressions, the authors find that the difference between fair value and book values of financial instruments is value relevant to the market-to-book ratios. However, only the fair value estimates for securities other than net loans, long-term debt and market-related off-balance-sheet instruments are associated with the variation of share prices across the full sample. Furthermore, they examine whether the disclosures under SFAS 107 have incremental value over historical cost variables. The finding suggests that fair value disclosures only in 1992 are value relevant to market-to-book ratios after taking account of historical variables. Finally, they argue that the requirements of SFAS 107 have provided value-related information on banks' financial statements. The information disclosed under the previous historical cost reporting framework, however, is much more value relevant compared to the fair value disclosures and therefore, regulators should carefully evaluate both historical and fair value measurements when choosing alternative accounting regimes for banks.

By using the sample of 99 bank holding companies, Venkatachalam (1996) point out that the fair value estimates for derivatives under SFAS 119 help to explain cross-sectional variation in banks' share prices and the fair value estimates have the incremental explanatory power over the notional principle amounts of derivatives. Their findings suggest that the fair value estimates of derivatives are incrementally

useful to the notional values of derivatives, while the notional amounts are negatively related share values.

Schrand (1997), based upon 57 US public traded savings and loan associations (S&Ls) during the periods of 1984 – 1988, finds that the greater hedging activities, which are proxy for off-balance-sheet derivative activities, are associated with the lower stock-price interest rate sensitivity (measured by a institution's stock price to unexpected interest rate changes), and the maturity gap (measured by the maturity mismatch of institutions' assets and liabilities), which is proxy for on-balance-sheet exposures to interest rate risk, are also value relevant. Specially, the interest rate sensitivity is significant related to derivative activities for large institutions, while it is not significant for small institutions. Since the combined measurements of on- and off-balance-sheet positions are analogous to the derivative-related requirements under SFAS 119, the author insists that such derivative disclosures will provide value-relevant information about interest rate risk for S&Ls.

Seow and Tam (2002) examine the usefulness of derivative disclosures under SFAS Nos. 105 and 119 based upon the sample of 35 NYSE (New York Stock Exchange)-traded banks. According to their results, the disclosures related to the credit exposures and fair value gains and losses on trading and non-trading derivatives contain new and useful information not incorporated in earnings and market β but the disclosure of notional principle amounts of derivatives is not relevant to the companies' valuation.

In 2005, Wang et al. conduct a study to analyse the value-relevance of banks' derivative-related disclosures provided by SFAS Nos. 119 and 133 following the sample of 161 US banks from 1994 to 2002. They emphasize on the notional principal amounts and demonstrate that the notional values of both trading and non-trading derivatives are significantly relevant to the banks' valuation, which implies that the notional amounts can provide the information content beyond earnings and book

value.

During 1994 and 1995, the Securities and Exchange Commission (SEC) staff reviewed approximately 500 registrants' annual reports and they concluded that although the reporting requirements under SFAS 119 *'Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments'* (FASB, 1994) improved the quality of disclosures about derivative instruments, there are some remaining areas that needed amendments (FRR No. 48). SFAS 119 requires companies to disclose their accounting policies for recognising and measuring derivatives. The SEC suggests that SFAS 119 'explicitly indicate the type of information that should be included in the accounting policies footnote to help investors understand the effects of derivatives on the statements of financial position, cash flows, and results of operations' (FRR No.48, p23). SFAS 119 encourages, but does not require, disclosure of quantitative information about the market risk exposures that affect the company's derivatives and other financial instruments. In addition, SFAS 119 only applies to derivative financial instruments held or issued for purposes other than trading. In order to strengthen the disclosure requirements about derivatives and market risk under SFAS 119, the SEC promulgated the Financial Reporting Release No.48 (FRR No. 48) *'Disclosure of Accounting Policies for Derivative Financial Instruments and Derivative Commodity Instruments and Disclosure of Quantitative and Qualitative Information about Market Risk Inherent in Derivative Financial Instruments, Other Financial Instruments and Derivative Commodity Instruments'* in January 1997. FRR No. 48 expands the derivative disclosure requirements of SFAS 119 to encompass derivative commodity instruments, other financial instruments, and derivative instruments held for trading purposes. It requires firms to disclose two types information about derivatives and market risk: qualitative and quantitative information. Qualitative information includes the descriptions of a company's primary market risk, the objectives, general strategies and instruments used to manage the risk. The firm must disclose the changes in market risk exposures compared to the recent completed fiscal year, and the expected effect

in the future reporting periods. To provide the flexibility that will 'accommodate different types of registrants, different degrees of market risk exposure, and alternative ways of measuring market risk' (FRR No. 48, p25), the SEC allows companies to present derivative-related quantitative information using three, alternative disclosure formats:

- a) Tabular presentation: describing the fair values and contract terms of market risk sensitive instruments (i.e., derivative financial instruments, other financial instruments, and derivative commodity instruments) sufficient to determine the future cash flow amounts, categorized by expected maturity dates.
- b) Sensitivity analysis: describing the potential loss in future earnings, fair values, or cash flows of market risk sensitive instruments resulting from one or more selected hypothetical changes in underlying market rates (e.g., the interest rates and foreign currency exchange rates) or market prices (e.g., commodity prices and equity prices) over a selected time period.
- c) Value-At-Risk (VAR) format: describing the potential loss in future earnings, fair values, or cash flows of market risk sensitive instruments over a selected period of time, with a selected likelihood of occurrence, deriving from changes underlying market rates/prices.

FRR No. 48 also requires companies to separately report on trading and nontrading instruments. In general, the SEC hopes the release of FRR No. 48 can 'provide additional information about market risk sensitive instruments, which investors can use to better understand and evaluate the market risk exposures of a registrant' (FRR No. 48, p3). However, the critics argue that the reporting requirements under FRR No. 48 are likely to be unreliable and may result in problems for investors in valuating corporate derivative-related activities. For example, Logan and Montgomery (1997) point out that investors are unable to better understand the company's use of derivatives and associated risk following the requirements of FRR No. 48, and in fact, the derivative-related disclosures could be misled. The American Institute of Certified

Public Accountants (AICPA) illustrates that the accountants could not certify the accuracy of the sensitivity analysis disclosures because such disclosures are too dependent on relevant assumptions and hypotheses (AICPA, 1998). Lehn (1997) argues that allowing firms with three options for quantitative derivative and market risk reporting may limit investors' ability to compare those disclosures by a company with another, and consequently, the usefulness of derivative-related disclosures will be affected. Similarly, Hodder et al. (2001) conclude that the flexibility of application in FRR No. 48 will adversely affect users' risk judgments. They suggest that in order to enable investors to compare market risk disclosures across companies, the SEC should mandate just one type of disclosure format, alternatively, each market risk should be quantified by using all three measurement methods, rather than a single one. Reinstein and Lander (2000) argue that the complying with FRR No. 48 is costly and outweighs the benefits to investors. Increased detailed disclosures will bring extensive workload to auditors and managers and may not necessarily enhance the understanding of derivatives by investors. The SEC's new standards seem not to be an efficient solution for improving the accounting treatment of derivatives.

In 2005, Koonce et al. carried out a study to examine whether the derivative-related information disclosed under FRR No. 48 would cause problems for investors' risk judgments. They used 190 M.B.A students, which are the proxy for reasonably informed individual investors, to implement a series experiments. According to their findings, the disclosed information about financial instruments and derivatives under FRR No. 48 did result in systematic problems in valuating risk by investors. Firstly, the authors vary the labels which describe financial instrument and derivatives, and examine whether such label variation affect investors' risk preferences even when those instruments have the same underlying economic exposures. They find that participants evaluate different risk judgments for instruments having similar risk exposures, which the variable-rate debt with a swap are considered as riskier than other two instruments (i.e., fixed-rate debt and variable-rate debt with a swap described as a hedge) regardless their similar exposures. Further, they find that even

with the supplementary exposure information, investors still evaluate the swap as the riskiest option. Secondly, FRR No. 48 requires registrants to disclose the potential negative effects related to certain market rates/prices changes, but does not require companies to present the disclosure of potential gains. They conduct experiments to analyse whether those one-sided disclosures cause systematic problems in investors' risk judgments in companies with different risk-management strategies. Their results indicate that participants who read the loss-only disclosures make the similar risk judgments for firms using different strategies to manage risk. Further, they author find that the two-sided disclosures (i.e., disclose both gain and loss associated with certain market risk) enable investors to identify the specific derivative strategy which a firm uses to manage its risk. Finally, they recommend that the regulators should require the disclosures of both upside (gain) and downside (loss) information as such disclosed information can improve the usefulness of disclosures about financial instruments and derivatives.

Chipalkatti and Datar (2006) use 13 US banks to analyse whether the VAR disclosures are relevant for investors to assess the banks' potential trading loss in the third quarter of 1998. This study tests the relationship between banks' disclosed VAR and the magnitude of abnormal returns and abnormal trading volume surrounding the key LTCM¹³ event day. Their findings indicate that there is no association between banks' VAR disclosures and the magnitude of abnormal returns and trading volume. Thus, the authors discuss that investors do not use disclosed VAR information by sample banks to assess the potential loss at the time of LTCM crisis, which implies that such disclosures are unable to provide useful information to investors at that time. Finally, they conclude that the VAR disclosures are costly to prepare and difficultly understood by investors, but these information has no benefits for banks' investors.

¹³ The hedge fund, long-term capital management (LTCM), collapsed in September 1998 mainly due to the combined adverse impact of the Asian financial crisis, the Russian debt moratorium and the ruble devaluation. LTCM bet on the spread between low-and high-quality bonds to decrease but due to the joint impact of those events, the spread between low and high-quality bonds widened (Chipalkatti and Datar, 2006).

However, inconsistent with critics about FRR No. 48, Eccles et al. (2001) argue that the VAR measurements applied in FRR No. 48 are able to compare the risk among portfolios and trading strategies, hence, it is likely for institutions to allocate capital in most efficient manner – i.e., the most profitable business on a risk-adjusted basis. Jorion (2002) suggests that the VAR disclosures can improve the governance of derivative activities as such measurements force companies to develop a systematic process to manage risk. In addition, some researchers (e.g., Rajgopal, 1999; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004) provide the empirical evidence that the derivative-related disclosures following provisions of FRR No. 48 contain useful information for investors in the company's valuation.

Rajgopal (1999) illustrates that the commodity price risk disclosures, which are similar with the requirements of FRR No. 48, are associated with the market's oil and gas price sensitivity (i.e., oil and gas betas). Based upon the sample of 52 oil and gas (O&G) companies from 1993 to 1996, the author finds that the proxy for the tabular format analysis regarding derivatives has a significantly negative association with the O&G betas. Whereas, the proxy for the tabular analysis with respect to underlying exposure is significantly positively associated with O&G betas only for the firms whose disclosures perceived by the market contain less measurement error than those of the median firms. By using a subsample of 38 O&G firms for the same periods, it is found that the proxy for the fair value sensitivity disclosures of underlying exposures are statistically positively associated with O&G betas, while the proxy for the sensitivity formats of commodity derivatives exhibits a significantly negative association with O&G betas. This finding is contrary to the claims made by AICPA (1998) that the sensitivity analysis disclosures are too dependent on relevant assumption to reliably measuring the firms' market risk exposures. Besides, the author finds that the proxies for the tabular formats disclosures and sensitivity disclosures have the incremental power for explaining O&G betas respectively. Hence, the author concludes that the alternate formats disclosures are not complete substitutes for one another as each of these formats measure different aspects of O&G market risk

exposures, but this fact may cause difficulties for investors in comparing the outcomes of risk management of companies that use different disclosure formats.

Jorion (2002) implements a study to investigate whether there is a relationship between the VAR measurements of banks' trading activities disclosed in their annual reports and the subsequent variability of corresponding unexpected trading revenues. The sample includes eight major US commercial banks for the periods of 1994 – 2000. The results indicate that the publicly available VAR disclosures are significantly associated with the forthcoming market risk, especially in cross-sections. Specially, banks with low VAR measurements experience the limited downside risk, and those with large VAR measurements suffer greater variation in unexpected trading revenues. Thus, the author argues that the VAR measurement information disclosed in banks' financial reports can provide useful information for the future unexpected trading revenues and analysts are able to compare the risk profiles of different banks by using their publicly available VAR disclosures.

In 2002, Linsmeier et al. examined whether the releasing of FRR No. 48 would reduce the investors uncertainty and diversity about the listed companies' value of changes in interest rates, foreign currency exchange rates and commodity prices. According to their findings, after the firms disclose the derivative-related information following the mandated requirements of FRR No. 48, trading volume sensitivity changes to the underlying market rates (such as interest rates and foreign currency exchange rates) and energy prices decline, even after controlling for the factors affecting the trade volume sensitivity. Further, they found that the simple format like tabular analysis was more effective in reducing trade volume sensitivity to interest rate movement, whereas the complicated disclosures like sensitivity and VAR analysis were more effective in reducing trade volume sensitivity to foreign currency exchange movement. Finally, they concluded that the market risk disclosures under FRR No. 48 actually provide the useful information to investors.

By using a large sample of commercial banks from 1989 to 1997, Ahmed et al. (2004) provide indirect supportive evidence on the informativeness of the tabular market risk disclosures required by the SEC's FRR No. 48 in predicting the interest rate risk of banks. By testing the relationship between the maturity-gap disclosures made by sample banks and the future changes in net interest income, the authors achieve three findings. Firstly, the one-year maturity gap measurements exhibit a significant relationship with one-year- and three-years-ahead change in net interest income. Secondly, the fixed and variable-rate instruments disclosures have different explanatory ability. Thirdly, the one-to-five-year aggregate gap measurements also exhibit the explanatory power about the three-year-ahead changes in net interest income. Therefore, the authors conclude that the findings support the disclosure requirements under FRR No. 48 focusing on disclosed information in indicating near-term losses, and encourage the FRR No. 48 to separate the disclosures of fixed and variable instruments.

Liu et al. (2004) conduct a study to assess the usefulness of VAR disclosures required by FRR No. 48 using a sample of 17 U.S. registered commercial banks from 1997 to 2002. They find that the banks trading VAR disclosures have the predictive power for trading income variability and this predictive power increases with bank technical sophistication and over time. In addition, the banks' trading VAR disclosures have the predictive power for the total risk and return variability, both for the trading portfolio and the bank as a whole. They also find that the banks' trading VAR disclosures have the predictive ability for the two-wide measures of priced risk, beta and realised returns.

In 2010, Perignon and Smith carried out a cross-country study on the level and quality of VAR disclosures by commercial banks. Their sample consists of 60 U.S., Canadian and international commercial banks' data between 1996 and 2005. They find that for the quantity of VAR disclosures, there is an overall upward trend in the disclosed amount of information by banks where the U.S. banks provide considerably low

disclosures than Canada's. In addition, the Historical Simulation is the most prevailing VAR method in the world with 73 per cent of banks using the Historical Simulation to report their VAR. The quality of VAR disclosures, however, do not improve over time and furthermore, the VAR disclosures using the Historical Simulation method are very little informative to banks' future volatility.

In June 1998, the FASB issued the new derivative-related accounting regulation – SFAS 133 *'Accounting for Derivative Instruments and Hedging Activities'*. This pronouncement is seeking to resolve the problems with previous accounting and reporting practices for using derivative instruments. FASB believed that the previous regulatory framework might introduce several vital problems in accounting and reporting practice for derivatives. For instance, SFAS 133 in paragraph 234 notes that the impacts of derivatives were nontransparent in the basic financial statements. Before the issuance of SFAS 133, some derivatives were recognised in financial statements but others are not, which may cause some realised and unrealised gains and losses related to derivatives deferring from earnings recognition. This may introduce some difficulties for users of financial statements to identify the effects of derivative transaction. Additionally, paragraphs Nos. 235 and 236 report that the previous accounting guidance for derivative instruments and hedging activities was incomplete and inconsistent. The prior accounting and reporting practices for derivatives and hedging activities only addressed a few types of derivative instruments. For example, SFAS 52 *'Foreign Currency Translation'* provided accounting treatment for hedging activities in relation to the change in foreign exchange rates. SFAS 80 *'Accounting for Futures Contracts'* addressed the use of futures contracts in other hedging activities. Before the issuance of SFAS 133, the required accounting treatment also differed on the type of instrument used in a hedge and the type of risk being hedged. Finally, FASB concludes that 'the lack of a single, comprehensive approach to accounting for derivatives and hedging made the accounting guidance difficult to apply' (SFAS 133, paragraph 237). Hence, SFAS 133 supersedes SFAS No. 80 *'Accounting for Futures Contracts'*, No. 105 *'Disclosure of*

Information about Financial Instruments with Off-Balance-Sheet Risk and Financial Instruments with Concentrations of Credit Risk' and No. 119 '*Disclosure about Derivative Financial Instruments and Fair Value of Financial Instruments*', and makes several amendments to SFAS No. 52 '*Foreign Currency Translation*' and No. 107 '*Disclosures about Fair Value of Financial Instruments*'. SFAS No. 133 was originally effective for the fiscal years beginning after 15th June 1999. However, it suffered from complaints and setback, and the FASB delayed the effective date to fiscal years beginning after 15 June 2000.

SFAS No. 133 generally addresses the accounting and reporting standards for derivative instruments, including certain derivatives embedded in other contracts, and for hedging activities. It requires that all entities must recognise all derivative instruments as assets or liabilities on the balance-sheet and measure those instruments at fair value, and changes in the derivatives fair value are to be recognised in the current earnings unless specific hedge accounting criteria are met (i.e., full-fair-value measurement). SFAS No. 133 states that if certain conditions are met, a company can designate a derivative as:

- a) a hedge of the exposure to changes in the fair value of a recognised asset or liabilities or an unrecognised firm commitment (i.e., fair value hedge),
- b) a hedge of the exposure to variable cash flows of a forecasted transaction (i.e., cash flow hedge),
- c) a hedge of the foreign currency exposure of a net investment in a foreign operation, an unrecognised firm commitment, an available-for-sale securities, or a foreign-currency-denominated forecasted transaction (i.e., foreign currency hedge),
- d) speculative hedge (i.e., a derivative not designated as a hedging instrument).

The hedging accounting is applied to the gain or loss of derivatives designated and qualified as fair value hedge, cash flow hedge and foreign currency hedge, while the change in value of speculative hedge is required to be reported in current earnings.

Under this statement, the hedge accounting is only applied to highly effective hedges¹⁴. An entity applying hedge accounting must establish the method for assessing the effectiveness of hedging and measurement approach for determining the ineffective portion of the hedge. If the hedge is not passed the highly effective hedging test, the hedging accounting must be terminated. Even though the hedge meets the highly effective hedge test, some ineffectiveness may occur and the change in ineffectiveness must be recorded in current earnings. Further, certain detailed qualitative information, including objective for holding derivatives, associated risk management policy, and a description of hedged items or transactions, is required to be disclosed for all derivative instruments which are qualified as hedging instruments.

The FASB believes that the provisions of SFAS 133 can improve the quality of disclosed derivative information by entities and allow the users of financial statements to accurately evaluate a company's strategy for using derivative instruments as well as the effects of derivative transactions to its financial position. The FASB demonstrates that the statement 'increases the visibility, comparability, and understandability of the risks associated with derivatives by requiring that all derivatives be reported as assets or liabilities and measured at fair value' and it also 'reduces the inconsistency, incompleteness, and difficulty of applying previous accounting guidance and practice by providing comprehensive guidance for all derivatives and hedging activities' (SFAS 133, paragraph 238). Since SFAS 133 was promulgated, the FASB's Derivatives Implementation Group (DIG) has issued more than 180 guidelines to help companies understand and apply this statement. Even all efforts are made to ensure the implementation of SFAS 133, the problems associated with this standard, including its complexity, its potential impacts on earnings volatility and the concerns that the rule will negatively affect managers' behaviour for using derivative instruments, suffer intense critics from the practitioners and academicians.

¹⁴ The FASB Statement 133 Implementation Issue E7 (2000) requires that the 'highly effective hedge' is used in two different ways: prospective and retrospective considerations. Although an effectiveness range is not specifically defined in SFAS 133, market practice has consistently interpreted 'highly effective hedge' as the cumulative changes in the hedging derivatives should offset between 80 and 125 per cent of the cumulative changes in the fair value or cash flows of the hedged items (Hwang and Patouhas, 2001).

Kawaller (2004) points out that SFAS 133 is 'notorious for being the most complex of any of the FASB's pronouncements' (p24). He argues that the complicated requirements about accounting and reporting for derivatives make the entities hard to understand and apply it correctly and consistently, and further, may cause difficulties for investors and analysts in assessing and valuating a company's derivative activities. Indeed, SFAS No. 133's hedge accounting, in particular, is criticised as being 'so idiosyncratic and ... esoteric that auditing departments don't have the expertise to implement this without bringing in specialist expertise' (Hawser 2004, p45). In 2005, Reynolds-Moehrle conducted a study to examine how the market participants (i.e., investors and analysts) responded to earnings information after the adoption of hedging activities by companies. The author chose 107 non-financial firms, which disclosed information related to the use of derivatives from 1985 to 1995, identified as derivatives users. Another 64 non-financial firms, which did not disclose the use of derivatives during the same periods, were selected as non-users to isolate the impacts of hedging activities. The results indicate that the analysts and investors revise their attitude to earnings information after the company started the hedging activities. The magnitude of analysts' forecast errors declines and the unexpected earnings are incorporated into the subsequent earnings forecasts to a great extent. In addition, there is an increase in the magnitude of earnings-return relation. The author concluded that the implementation of hedging activities would be the welcome practice for market participants to forecast earnings and the participants view subsequently announced earnings information as providing greater information about future earnings. Finally, the author argued that even though the companies did not disclose much information about their use of derivatives following the detailed provisions required by SFAS No. 133, the users of financial statements would be able to detect the impacts of hedging activities on earnings information.

The full-fair-value measurement about the use of derivatives under SFAS 133 may introduce a greater degree of volatility in reported results of entities. Osterland (2000)

argues that the sophisticated and restrictive derivative-related treatments under SFAS 133 will result in an increase in earnings volatility and further, make it difficult for managers to smooth earnings. Leib (2001) points out that the implementation of SFAS 133 led to complexity in financial statements. The companies who were hedged prior to SFAS 133 and continued to hedge risk exposures using derivative instruments would see an increase in earnings volatility and decrease and/or decrease in ability for the market to predict their future earnings. Barton (2001) demonstrates that the implementation of SFAS 133 may have impacts on a company's hedging and earnings management strategies. The author provides the empirical evidence that the managers choose derivatives and discretionary accruals as substitute tools to control earnings volatility. He argues that since the adoption of SFAS 133 may potentially increase the earnings volatility, and subsequently increase costs for using derivative instruments, managers may adopt discretionary accruals as substitute for smoothing earnings, in other words, the imposition of SFAS 133 could reduce hedging activities and increase earnings management. Wang et al. (2005) investigate whether the derivative related disclosures under SFAS 133 provide incremental information content beyond earnings and book value. The observed sample consists of 161 banks from June 2000 to year-end 2002. The findings indicate that the SFAS 133 variables are statistically insignificant and the authors argue that the fair value data following SFAS 133 may not be reliable for banks. Based upon a sample of 345 US-based multinational corporations from 1995 to 2002, Richie et al. (2005) carry out a study to assess the impacts of SFAS 133 on foreign currency exposure of US-based multinational companies. Their results indicate that firms who were hedged prior to SFAS 133, i.e., the companies which managed their exposures using operational hedges, derivatives, or both, are able to decrease their exposures to exchange rates following SFAS 133. In addition, those firms who were hedged prior to SFAS 133 and remained hedged exposures using derivatives following SFAS 133 experience an increase in earnings volatility and decrease in earnings predictability. However, according to their findings, the market value of those companies does not change following SFAS 133 and this implies that the investors do not adequately account regulations changes and EPS

(earnings per share) volatility into the changes in the expected cash flows. Thus, the authors suggest that managers should not fear the decreased earnings predictability which is associated with the complexity of SFAS 133 because the investors could benefit from the disclosures by SFAS 133 without causing the firm to suffer a decrease in market value. In contrast to the opponents, some researchers (e.g., Eric et al. 2004; Ahmed et al. 2006) provide the evidence that the full-fair-value measurement required by SFAS 133 contains useful information to the financial statement users. For example, Eric et al. (2004) test whether the formats of fair-value-income measurement influence the bank equity analysts' risk and value judgments. The authors differ the income measurement: full-fair-value (i.e., all fair value changes recognised in income) versus piecemeal-fair-value (i.e., some fair value changes recognised in income, others disclosed in the notes). They also vary the interest-rate-risk exposure: exposed versus hedged. 56 buy-side equity-security analysts and portfolio managers participant in the experiment. According to the results, the bank analysts' risk and valuation judgments do depend on how banks measure income either by full-fair-value or by piecemeal-fair-value. Particularly, for banks exposed to interest rate risk, analysts' risk assessments do depend on the formats of fair-value-income measurement, but for the hedged banks, the measurement formats do not affect analysts' risk judgments. Additionally, they find that analysts judge statistically higher risk and lower value for exposed banks than for hedged banks only under the full-fair-value measurement. Under the piecemeal-fair-value-income measurements, analysts' risk and value assessments, however, do not distinguish between exposed and hedged banks. Finally, the authors argue that the full-fair-value-income measurement enables the professional analysts to clearly distinguish the fundamental risk and share value characteristics of banks. Ahmed et al. (2006) conduct a study to examine whether the derivative-related information is recognised or disclosed is value-relevant to investors' assessments. Using a sample of 58 banks having both recognised and disclosed derivative information in the pre-SFAS 133 periods (i.e., from 1995 to 2000), the authors find that there is a strongly positive relationship between investors' valuation and the recognised

derivative instruments whereas no linkage exists between investors' valuation and disclosed derivatives. Further, the authors conduct the test to compare investors' valuation of derivative instruments before and after the adoption of SFAS 133. The sample for this test consists of 82 banks which have only disclosed derivative instruments in the pre-SFAS 133 periods (i.e., from 1995 to 2000) and have recognised derivative information in the post-SFAS 133 periods (i.e., from 2001 to 2004). The results indicate that while the valuation coefficients on disclosed derivatives are not significantly different from zero, the valuation coefficients on recognised derivatives in the post-SFAS 133 periods are significantly positive. Thus, the authors conclude that investors do not pay an equal amount of attention to the recognised information relative to the disclosed information and the recognition and disclosure are not substitutes. Finally, they suggest that SFAS 133 is successful in increasing the transparency and visibility of financial derivatives.

The Association for Financial Professionals (AFP), in 2001, conducted a survey to assess the impacts of SFAS No. 133 on the corporate use of derivatives and associated risk management practices. The survey focuses on the end users of derivative instruments and the sample companies are asked detailed questions about the degree to which they have modified the risk management behaviour in response to SFAS No. 133. It is mailed to the treasury and finance professionals and finally more than 200 companies with a wide cross-section of businesses and revenue size respond. The survey, in general, shows that the implementation of SFAS No. 133 has caused significant problems for the use of derivative instruments by respondent companies. A number of detailed findings are drawn as follows: firstly, two thirds of the respondents agreed with the view that SFAS No. 133 had imposed an excessive burden on company's risk management activities. Only 25 per cent believed that SFAS No. 133 fostered a beneficial discipline on risk management activities while 47 per cent disagreed this view. 25 percent of respondents reported that they would adopt the regular derivatives accounting, rather than devoting time and expense for special hedging accounting ruled by SFAS No. 133, to the majority of their derivative

instruments because it is able to simplify the accounting treatment for derivatives. Secondly, although most respondents stated that their hedging activities for interest rate risks, currency risks and risks related to prices of raw materials would likely remain the same before and after the implementation of SFAS No. 133, more respondents reported a decrease in hedging activities than increase. The percentage that reported a decrease (increase) in hedging activities in relation to interest rate risks, currency risks and risks related to prices of raw materials was 17 (4), 12 (9) and 8 (2) per cent respectively. Thirdly, the adoption of SFAS 133 also changes the company's preference for using derivatives to hedge associated risks. After SFAS No. 133 is implemented, the use of forward contracts and interest rate swaps holds steady or rises by three percentage points or less, however, the enhanced preference for forwards and swaps is accompanied with a decrease in the use of options (e.g., swaps, caps or floors, option combinations like collars or corridors, and exotic options), futures contracts and other derivatives. Fourthly, two thirds of respondents that have formal risk policies and systems before the implementation of SFAS No. 133 stated that they needed to modify the existing risk management policies to accommodate the new requirements. Fifthly, the survey shows a reluctant for firms to rely on external systems expertise. Only 14 percent of respondents reported that they would purchase or lease a SFAS No. 133 compliant system to satisfy the new standard while over 70 per cent had adapted or planed to adapt existing systems to meet SFAS No. 133 requirements.

Zhang (2009) provides the indirect evidence on the effect of the adoption of SFAS 133 on corporate risk management behaviour. The total 225 non-financial sampling companies during the period of 1996 – 1999 are sorted to two groups: EH (effective hedgers, i.e., firm's risk exposure is successfully decreased after initiating derivative business) and IS (ineffective hedgers/speculators, i.e., those that fail to reduce their inherent risk after implementing derivative programs). The results illustrate that the IS firms have been experiencing a significant decrease in exposures related to the interest rate, foreign exchange rate and commodity price risk after the adoption of SFAS 133

after controlling for potential changes in the underlying business risk. However, there is no significant change in risk exposures for EH companies following the implementation of SFAS 133. In addition, the cash flow volatility for IS firms is significantly declined compared to that for EH companies after the adoption of SFAS 133 while the earnings volatility has no significant change for either EH or IS firms, implying that the IS firms adjust their derivative business towards more effective hedging manner following the adoption of SFAS 133. The author finally suggests that the implementation of SFAS 133 has enhanced IS companies to conduct more prudent risk management activities.

In the accounting literature, the studies from developed countries particularly the U.S. dominate the research field of derivative-related disclosures and there are very few studies conducted in the developing countries. For instance, *Ameer (2009)* investigates the value relevance of disclosed notional amount of derivatives by Malaysian listed companies. The sample contains 40 non-financial firms that consecutively report the use of foreign-exchange and interest-rate derivatives from 2003 to 2007. The results illustrate that firms within the plantation, industrial product, trading services and consumer products manufacturing sectors are the major users of foreign-exchange and interest-rate derivatives in Malaysia. The notional amount of value disclosed by Malaysian listed companies contains incremental information content beyond earnings and book value.

2.4 Summary

In summary, the impacts of regulations in relation to accounting and reporting for derivatives have attracted considerable academic attention in the recent decades and two streams of studies have been conducted by prior researchers. Studies in the first stream (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002;

Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) address the information quality of derivative related disclosures from the view of listed companies. They mainly apply the content analysis technique to reveal the degree to which quoted companies comply with associated derivative-related standards. Those researchers usually produce a disclosure index according to related derivative accounting and reporting requirements and then compare the quality of information content before and after the implementation of derivative-related standards. Results of those studies generally indicate that the mandated derivative-related accounting and reporting regulations have enhanced listed firms to provide more information about their derivative activities in annual reports, however, the compliance with relevant requirements is mixed. The basic rules of corresponding derivative-related standards are met as listed companies are generally able to present both qualitative and quantitative information related to their use of derivative instruments, however, many of detailed requirements are not met as reporting companies do not provide adequately detailed information such as the assumptions of applied quantitative techniques and the description of corporate derivative management activities.

The second stream specially examines the market response to such derivative disclosures from the view of market participants, particularly investors. The main purpose of those studies is to examine whether disclosures regarding the use of derivatives are value relevant to investors when making decisions. By establishing regression models, they mainly focus on the extent to which these mandated derivative disclosures are informative to firms' exposure, or sensitive to change of equity price, or value-relevant to market participants' risk judgments and assessments. The findings of these studies are mixed even contrary. Some researchers (e.g., McAnally, 1996; Barth et al., 1996; Ecocher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) present the empirical evidence that the

compulsory accounting and reporting requirements about the use of derivatives are value-relevant to investors' assessment of corporate risk profile. The disclosed information following the corresponding standard is significantly relevant to market response such as the change of equity price, equity return, trading volume etc., which indicates that the information mandated by derivative-related requirements have provided the new and useful information to the users of financial statement, especially to investors. Hence, such information is beneficial for investors to evaluate the corporate financial performance and effects of associated derivative activities, and further helps to facilitate their investment decisions. Nevertheless, a number of researches indicate that the mandated accounting and reporting rules pertaining to the use of derivatives have caused difficulties on investors' risk assessments and valuation of corporate financial performance. Some studies (e.g., Nelson, 1996; Wang et al., 2005; Chipalkatti and Datar, 2006; Perignon and Smith, 2010) provide the empirical evidence that there is no relationship between the disclosed derivative-related information and the market response. Some (e.g., Lehn, 1997; AICPA, 1998; Hodder et al., 2001; Kawaller, 2004; Reinstein and Lander, 2000) argue that the complicated requirements on accounting and reporting treatment for derivatives have caused difficulties for investors in valuating corporate derivative activities, and even a few studies (e.g., Logan and Montgomery, 1997; Koonce et al., 2005) indicate that the disclosures following the mandated derivative-related requirements have been misunderstood and adversely affected investors' assessments in company's risk profile and associated derivative activities. Besides, the restrictive and complex derivative-related standards, such as SFAS 133, have made the reporting entities hard to understand and caused a series of significant problems in the use of derivatives and smooth earnings volatility (e.g., Osterland, 2000; AFP, 2001; Barton, 2001; Leib, 2001; Richie et al., 2005). Such mixed and contrary results are consistent with the findings achieved by the first stream that the compliance with derivative-related standards is mixed and the standard's 'desired level of financial transparency on the use of derivative financial instruments is not being adequately achieved' (Bhamornsiri and Schroeder, 2004, p. 680).

Overall, the prior researches in relation to the impacts of compulsory derivative-related accounting and reporting requirements are mostly based upon the sample from developed countries with mature financial derivative markets. In particular, most of studies on risk management reporting and disclosures have been directed to the U.S. setting with an emphasis on financial risk disclosures. This might be explained in three ways as follows:

- a) The U.S. has the well-structured derivatives market. On the one hand, its market value is huge. According to the statistics published by BIS (2007), the American ETD market reached notional \$36,394.2 billion at the end of 2005, taking around 63 per cent in total global ETD derivatives market. On the other hand, there are various types of derivatives available on both ETD and OTC market such as customised forward contracts, futures, options and swaps for market or credit risks.
- b) A series of financial scandals in relation to the abuse of derivatives, especially the recent collapse of the U.S. submortgage markets causing the most serious worldwide economy crisis since the Great Depression, make the U.S. an interesting example to be analysed.
- c) The U.S. regulatory bodies always concentrate on establishing effective accounting and reporting standards to govern the use of derivatives and they have issued and implemented a large number of derivative-related requirements, which absorbs so much academic attention to assess the impacts of derivative-related regulations to the real world.

However, no study has specifically addressed accounting and reporting for derivatives in China and investigated usefulness of derivative disclosures by Chinese listed companies. China as the largest developing economy has made remarkable progress

in its economic development as well as its accounting reform over the last three decades. Since China started to transfer its national economy from originally government- to market-oriented in 1978, it made huge achievements in the development of economy. The gross domestic product (GDP) have been rapidly increased with the annual rate over 9.5 per cent and in the second quarter 2010, it reaches the peak in history of \$ 1.335 trillion dollars ranking only behind the U.S.A in the worldwide (National Bureau of Statistics of China, 2010). In 2008, the amount of foreign trade total (FTT) including both exports and imports was \$ 2.563 trillion dollars achieving the third place internationally; the foreign direct investment (FDI) also ranked the third with amount of \$ 92.395 billion dollars; referring to the foreign exchange reserves (FER), it achieved \$ 1.946 dollars which is the top 1 in the worldwide (National Bureau of Statistics of China, 2009). In addition, the recent convergence of Chinese Accounting Standards (CASs) with International Financial Reporting Standards (IFRSs) makes China an interesting case to examine the issues associated with the application of derivatives accounting rules. So far most existing studies choose the financial institutions as observed sample companies. On the one hand, such businesses hold significant portion of financial assets (liabilities) in their total assets (liabilities), thus, compared with other industries, financial institutions are more sensitive to the financial risks (e.g., interest rate risk, foreign exchange risk, credit risk etc.), and commonly, they would be active in issuing and using derivative instruments, such as the forward contracts, futures, options and swaps, to manage the associated market risks. On the other hand, the listed financial institutions mainly banks must comply with the regulations not only from accounting and reporting authorities (e.g., IASB, FASB and SEC) but also from banking supervisory bodies (e.g., Basel Committee on Banking Supervision). As a result, it is difficult for researchers to separate the effect of accounting-related and banking-related requirements on disclosures of the use of derivatives.

Therefore, this study will conduct an exploratory research to reveal the degree of compliance with accounting and reporting standards as to derivative activities of

Chinese listed companies and also examine the response of equity market participants to the derivative-related disclosures. The research contributes to helping fill the research gap in the existing literature by providing the assessment of accounting and reporting practices for derivatives in China. It is expected to enhance the understanding of the usefulness of derivative-related disclosures not only in developed economies but also developing countries, and it will provide the valuable insight to the development of derivative reporting standards by generating more policy implications particularly to developing economies. The next chapter provides a discussion of the development of China's domestic derivatives market and accounting practice for the use of derivatives.

**Chapter III China's Derivatives
Market and Accounting for
Derivatives**

Chapter III China's Derivatives Market and Accounting for

Derivatives

3.1 Introduction

This chapter is to discuss the development of China's derivatives market and associated accounting and reporting practice for derivatives with a view to assessing the current changes in China's derivatives market and accounting for derivatives.

3.2 History of China's Derivatives Market

Commodity Futures Market

Since the late 1970s, China has gradually transformed itself from a centrally planned economy into a market oriented economy. From 1990, China began to establish its commodity futures markets with the development of some commodity future products. Zhengzhou Commodity Exchange (ZCE) founded on 12 October 1990 as the first experimental futures market approved by China's State Council introduced futures trading on 28 May 1993 (ZCE, 2007). In October 1994, almost 50 local futures exchanges in China were merged into 15 large ones by the State Council (DCE, 2007). Further, in 1998 China decided to clear up the whole commodity futures market. Consequently, the commodity future products were reduced from 35 to 12 and three Shanghai futures exchanges: Shanghai Metal Exchange, Shanghai Commodity Exchange and Shanghai Cereals & Oil Exchange, were integrated into one single exchange: Shanghai Futures Exchange (SHFE) (SHFE, 2007). Since then, only three

commodity futures markets operated in China including Dalian Commodity Exchange (DCE), Shanghai Futures Exchange (SHFE) and Zhengzhou Commodity Exchange (ZCE). Nowadays, twenty-one commodity futures products are traded on the three exchanges as shown in Table 3.1. The metal and industrial materials futures, such as aluminum, copper and zinc, are mainly traded on SHFE while the agriculture commodity future products like soybean and wheat, are centrally traded on DCE and ZCE.

Table 3.1 China's Commodity Futures Markets

Futures Exchange Markets	Trading Products
Dalian Commodity Exchange (DCE)	Corn, Soybeans, Soybean Meal, Soybean Oil, LLDPE [*] , RBD Palm Olein, PVC ^{**}
Shanghai Futures Exchange (SHFE)	Copper, Aluminum, Zinc, Gold, Steel Rebar, Steel Wire Rod, Natural Rubber, Fuel Oil
Zhengzhou Commodity Exchange (ZCE)	Wheat, Cotton, Sugar, PTA ^{***} , Rapeseed Oil, Early Long-grain Nonglutinous Rice

Notes: * Linear Low Density Polyethylene

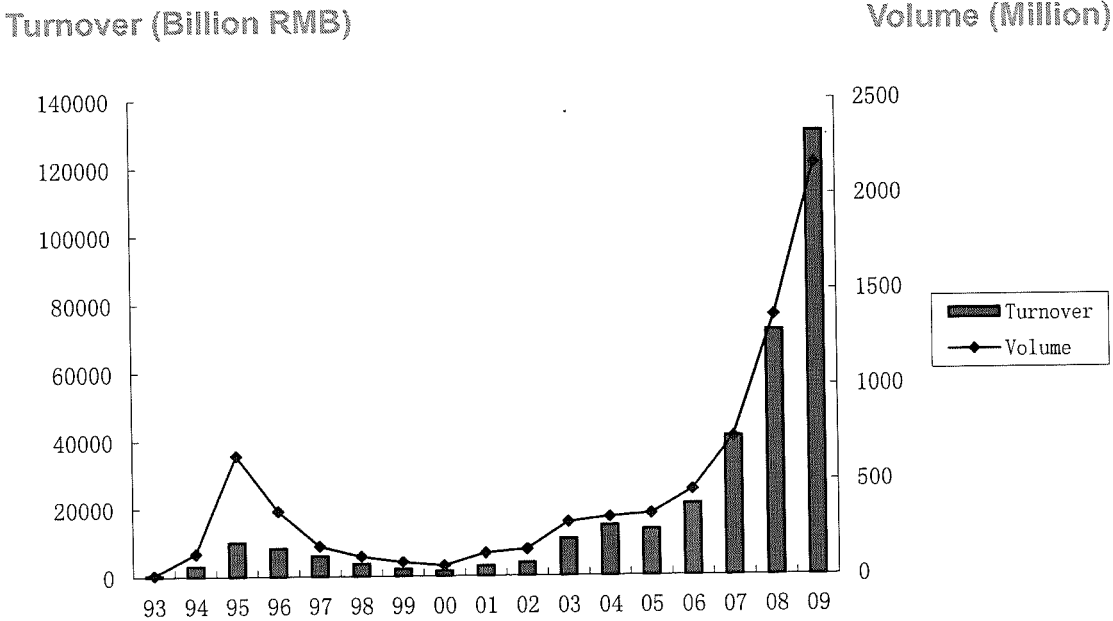
** Polyvinyl Chloride

*** p-Phthalic acid; Terephthalic acid

Chart 3.1 shows the turnover and trading volume of China's commodity future exchanges from 1993 to 2009. The development of Chinese commodity futures market can be divided into three stages. From 1993 to 1995, the commodity futures market achieved a rapid expansion. The turnover of 10,056.53 billion Renminbi (RMB) and volume of 636.121 million in 1995 was over 18 and 71 times bigger than the figures of 1993 respectively. From 1995 to 2000, the commodity futures market was declining at the annual rate of 30.69 per cent as shown in Table 3.2 and its turnover dropped at the bottom in 2000 with amount of 1608.229 billion RMB. There also has been a sharp contraction in terms of volume with the annual rate of 28.80 per cent dropping at the historically lowest point at 54.612 million in the end of 2000. Meanwhile, the other financial markets like the equity market were however experiencing a flourishing period. The total capitalisation in both Shanghai Stock

Exchange (SHSE) and Shenzhen Stock Exchange (SZSE) increased dramatically from 403.647 billion in 1995 to 6082.665 billion RMB in 2000 with the annual growth of 72.04 per cent. Since 2001 the trading of commodity futures has recovered from the recession. The turnover and trading volume of commodity future exchanges in 2001 was 3014.498 billion RMB and 120.464 million respectively, 87.44 and 120.59 per cent increase from the respective figures of 2000 figure and the market saw an uprise in terms of both turnover and volume in following years. Even when the global exchange-traded market suffered a retreat in 2008 caused by the recent financial crisis [i.e. the global ETD market was contracted at \$57,715.30 billion dollars in the end of 2008 which took approximately 73 per cent of the previous year's value (BIS, 2010).], the Chinese commodity futures market was however experiencing a soaring growth. The turnover of 71,914.194 billion RMB in 2008 was increased by 75.52 per cent than 2007's while there was an 87.24 per cent rise in trading volume. In the end of 2009, both the turnover and volume reached the historical peak at 130,510.72 billion RMB and 2,157.43 million respectively.

Chart 3.1 Turnover (Billion RMB) and Volume (Million) of China's Commodity Future Exchanges from 1993 to 2009



Source: Statistics of commodity futures' trading (1993 - 2004). <http://data.cninfo.com.cn/sjzx/tjbb/xwsgsc.html>.

Table 3.2 Turnover of Commodity Future Exchanges and Stock Exchanges from 1995 to 2000 (Billion RMB)

	1995	1996	1997	1998	1999	2000	Average Annual Growth (%)
Commodity Future Exchanges	10056.53	8411.916	6117.066	3696.724	2234.301	1608.229	-30.69
Stock Exchanges *	403.647	2133.216	3072.184	2354.425	3131.96	6082.665	72.04

Notes: * Turnover of stock exchanges includes both A and B shares traded on the SHSE and SZSE.

Source: Statistics of commodity futures' trading (1993 – 2004), <http://data.cninfo.com.cn/sjzx/tjbb/cwxgsc.html>, 2007.

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Financial Derivatives Market

In the 1990s, China began to develop some financial derivative products. The SHSE opened the foreign exchange futures on 28 December 1992. Hainan Stock Exchange Centre issued the Shenzhen composite stock index future products on 10 March 1993 (Ma, 2003). Other financial derivatives, such as equity warrants, convertible bonds and government bond futures, were also introduced in China's financial derivatives market. However, except government bond futures, the scale of other financial derivative instruments was so small that they were finally stopped due to the low trading volume as well as a number of abuse operations in the market (Ba et al., 2005). The first government bond future contract was traded on the SHSE in December 1992

and then China opened the trading of government bond futures through 50 brokerage firms to the general public in October 1993 (Fratzscher, 2006). In a short period, the market expanded considerably; by the end of 1994 the total turnover in government bond futures market achieved 2.8 trillion RMB that was 10 times bigger than the figure of 1993 (Ba et al., 2005). However, as the market developed, a series of frauds occurred and as a result, the supervisory body, China Securities Regulatory Commission (CSRC), on 17 May 1995, suspended the trading of government bond futures. The financial derivatives market was then ceased. Since then, only three commodity futures markets have been operating in China.

China's derivatives market is circuitously developed in its short history. The evolvement of commodity futures market is fluctuant. It achieved a fast growth in early years of the 1990s, followed by a five-year depression and rebounded since 2001. Compared with the global derivatives market, the absence of the trading of financial derivatives impedes the growth of the whole Chinese derivatives market. According to the statistics by BIS, the global ETD market grew to notional \$53 trillion in 2004, of which equity futures and options taking 65 per cent and interest rate derivatives possessing 26 per cent whereas commodity futures only seizing 9 per cent (BIS, 2004). The OTC derivative markets reached the notional value of US\$516 trillion dollars at the end of June 2007, which was dominated by interest rate contracts (75% of total notional amounts and 60% of total gross market values), followed by foreign exchange contracts (11% of overall notional value), credit derivatives (9.88%

of total notional amounts), equity derivatives (2.13% of overall notional value) and commodity derivatives (1.55% of total notional amounts outstanding) (BIS, 2007).

3.3 Factors Affecting the Development of China's Derivatives Market

By comparing and analysing the major derivatives markets in the Asia-Pacific countries, Fratzscher (2006) concludes that the successful development of derivatives must build on three foundations: solid product design, sound market infrastructure and strong regulation. The cash markets need to be liquid and efficient where the prices are determined by the markets. The derivatives exchange should be ideally set up through a single demutualised form and it requires safety cushions like appropriate capital and a sound margin system. The appropriate regulation which commonly includes self-regulatory-organisation (SRO) needs to be established. In addition, the derivative laws and relevant financial reporting policies should be enacted. The author argues that three vital issues should be carefully considered before the establishment of derivatives markets, including 'how can liquid cash markets be expanded; how much regulation is needed in OTC and ETD derivative markets; and what infrastructure is necessary' (Fratzscher 2006, p.13). Fratzscher's study fills a gap in the risk management literature, especially from the emerging markets perspective, by providing a theory on how to set up functioning derivatives markets in emerging countries. In this section, the study is to provide a critical analysis of the development of China's derivatives market by adopting Fratzscher's framework.

Inappropriate Product Design

The successful derivatives market should be built upon 'an efficient, liquid, and

integrated cash market (either for bonds, equities, other assets, or commodities) that is broadly market determined rather than driven by administered prices' (Fratzscher 2006, p.20). The well efficient and liquid cash market is the precondition for design of derivative products. Otherwise, if the derivatives market is established on a poor functioning cash market, the prices of derivative products will be misled. Consequently, the derivative contracts will be traded in a casino-like atmosphere and highly profiled failures will occur. The 'Contract 327 Affair' is one typical example of such a failure happened in China's derivatives market.

The 'Contract 327 Affair' was the world's largest exchange that traded 4 million government bond futures in one day on 23 February 1995 and then collapsed. It is so-called the 'Chinese Barings Scandal'. China opened the government bond futures market to the general public in October 1993 and the trading of bond futures was sharply expanded in a short period. At that time, the government bonds were issued as zero-coupon bonds with three or five year maturities; some at variable interest rates which were adjusted by the Ministry of Finance (MOF) with so-called 'inflation subsidies'. The government bonds were primarily traded in Shanghai, but also in Beijing, Shenzhen and Wuhan. On 23 February 1995, one small brokerage firm, named Liaoning Guofa (Group) Limited Company (which was owned by the MOF), got the news in advance that the MOF would announce the 'inflation subsidies' for illiquid three-year-maturity bonds issued in 1992 and took long position in these bonds, which caused the huge losses from the short position at the largest broker, Shanghai International Securities. To corner the market, Shanghai International Securities then sold short these futures with amount of \$26 billion dollars which exceeded position limits by 20 times. As a result, the price manipulation caused over \$10 billion dollars losses in just eight minutes! What was worse, the Chinese government suspended the trading of bond futures three months later on 17 May 1995 and as a result, China's financial derivatives market closed (Huang and Gao, 2008).

The most vital lesson learned from this case is that the derivatives design must be

based upon a well functioning and liquid cash market. The derivative instruments are derived from the demand for innovation in cash market and the development of derivatives market is restricted by the scale of cash market. However, in early 1990s, the Chinese government bonds market was so far away from highly efficient and liquid cash market due to several reasons.

Firstly, the scale of government bonds issuance is small and the variety of bonds is pretty limited. China reopened the government bonds issuance market in 1981 and although the circulation of bonds was growing in the following years, the total market was rather small. The National Bureau of Statistics of China revealed that in 1994, the government bonds were issued with the amount of 113.755 billion RMB and the year-end balance was 228.640 billion, where the circulating bonds around 45 billion only took 19.7 per cent in practice (China Statistical Yearbook, 1996). In addition, the structure of bonds in cash market was quite simplex. At that time, bonds were dominated by long-term maturities, most of three- or five-year maturity plus a few with ten year maturities as shown in Table 3.3. In 1994, the long-term bonds took 88.33 per cent in total issuance amount and 94.20 per cent in the year-end balance while in 1995 the two figures were increased by 92.13 and 96.40 per cent respectively. Apparently, the small scale and centralised bonds structure could not fulfill the huge amount of futures' settlement in bond futures market.

Table 3.3 Long-term Government Bonds* in 1994 & 1995 (Billion RMB)

	1994	1995
Circulation of long-term government bonds	100.485	139.197
Total circulation	113.755	151.086
Long-term bonds in total circulation (%)	88.33%	92.13%
Year-end balance of long-term government bonds	215.370	318.141
Total year-end balance	228.640	330.030
Long-term bonds in total year-end balance	94.20%	96.40%

(%)		
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Notes: * Three, five and ten-year maturity bonds

Source: *China Statistical Yearbook 1996 and 1997*

Secondly, the interest rate is not liberalized. The price of a bond is directly determined by the interest rate and the fluctuating interest rate in bonds market would drive investors to use derivatives for the hedging or speculating purpose (Ba et al., 2005). However, in early 1990s, China adopted the fixed interest rate system that the interest rate was determined by the government instead of the market. At that time, the interest rate of government bonds was fixed by the MOF when first issued and it was administrated so strictly that the range of interest rate fluctuation was relatively narrow. The only exception was ‘inflation subsidies’ which were adjusted discreetly by the government to the change of interest rates. However, the ‘inflation subsidies’ were calculated by the People’s Bank of China (i.e. the central bank) and in fact, it was still government- not market-oriented. Thus, under that circumstance, the interest rate could not reflect the real prices of the bonds, which caused the deficiency in bonds cash market. Consequently, on the one hand, the fixed interest rate reduced the demand of using bonds futures as hedging tools for interest rate risk. On the other hand, the ‘Contract 327 Affair’ reveals that the administrated interest rate would invite more speculation in derivatives that often lead to overshooting once the policies constraints are removed (Huang and Gao, 2008). Many Chinese practitioners and academicians (e.g., Li and Wang, 2004; Ba et al., 2006) point out that the fixed interest rate system leads the bond futures market to a casino for ‘inflation subsidies’ and finally causes its failure.

Thirdly, the liquidity in bonds market is generally low. In early years of the 1990s, the individual not institutional investors possessed the majority of the government bonds and as shown in Table 3.4, from 1994 to 1995, 75 per cent of the government bonds were owned by individuals. Due to this ownership structure, the large proportion of bonds was not traded in the cash market because the individuals commonly held bonds for saving rather than trading purpose (Ba et al., 2005).

Table 3.4 Structure of Chinese Government Bondholders 1991 – 1995 (%)

Year	Individuals	State-owned corporations	Non-bank financial institutions	Pension funds	Banks
1991 - 1993	75%	10%	10%	5%	0
1994 - 1995	75%	5%	10%	5%	5%

Source: Yang et al., 2000

Poor Infrastructure

The poor infrastructure is another important factor blocking the growth of Chinese derivatives market. Fratzscher (2006) argues that to achieve a successful derivatives market, the sound infrastructure at exchanges and clearing houses should be developed and the exchange should set the incentives for market participants to follow the honour rules of conduct and stabilise the trading system. However, the ‘Contract 327 Affair’ reveals that in early 1990s, the infrastructure of Chinese government bond futures exchanges was deficient (Huang and Gao, 2008). This is because the margin system of exchanges is poor. The sound margin system can reduce the counterparty credit risk to a maximum extent while enhance the efficiency of an exchange (Huang and Gao, 2008). When the ‘Contract 327 Affair’ happened, a 20,000-yuan government bond future contract only requires 500 yuan margin which could only cover 2.5 per cent in its total amount, and the margin for other futures was even less, taking approximate 1 per cent in the total value (Ba et al., 2005). As a result, this low margin level was deficient in controlling the credit risk and stimulated the speculative atmosphere in the bond futures market.

Also, the supervision of exchanges is weak. In early 1990s, due to the absence of supervision from the government and the self-regulatory-organisation (SRO), the exchanges played the most significant role in supervising derivatives’ trading.

Although a series of requirements were promulgated to regulate the derivative activities, some were ignored in practice (Huang and Gao, 2008). For instance, in order to attract more investors, some exchanges loosed the speculative position limits and lowered the margin which already took so small portion in total contract's value (Ba et al., 2005). As in the case of the 'Contract 327 Affair', just in one day, Shanghai International Securities sold short government futures with the amount of \$26 billion dollars which exceeded the position limits by 20 times, which implied that the rules regarding the trade of futures were ineffective and the supervision of SHSE was completely deficient. Overall, the poor infrastructure at exchanges, such as inadequate margin system and weak supervision, reduces its functioning while increases the systemic risk in the market.

Weak Corporate Governance and Control

The weak corporate governance and control is the third crucial factor for the slow development and even collapse of derivatives markets in China and the 'China Aviation Oil (CAO) Incident' is a typical example to illustrate how the weak regulation from the supervisory body, deficient corporate governance and weak accounting system can lead to a huge derivative-related loss.

China Aviation Oil (CAO), listed on the Stock Exchange of Singapore since 2001, is the Singapore subsidiary of China Aviation Oil Holding Company (CAOHC) which is a state-owned company in Beijing and the monopoly importer of jet fuel. From 2003, following the anticipation that the oil price would fall in 2004, CAO disregarded Chinese regulations and engaged in the OTC derivatives trading of oil options, taking highly speculative short position in the options. However, the rising oil price at the beginning of 2004 caused CAO \$5.8 million dollars losses. With a desire not to record the losses, CAO decided to restructure its option portfolio with several option counterparties in January, June and September 2004. The restructuring involved the simultaneous buying of options to closeout existing positions to avoid losses and

selling of new options with larger volumes and longer tenure, which finally increased the short options positions from 2 million tons of crude oil to 52 million tons. Meanwhile, CAO misrepresented its financial position with accounting gimmicks to avoid reporting incurred losses. However, as the oil price continuously rose, the losses sharply climbed and the substantial margin calls depleted CAO's cash reserves. Finally, CAO sought court protection in November 2004. According to the statistics, the failure led to losses with over \$550 million dollars for CAO which can only compare to the collapse of Barings (\$1 billion dollars losses) in 1995 (Huang and Gao, 2008).

Before the CAO incident occurred, Chinese regulators had prepared a set of rules, including China Securities Regulatory Commission (CSRC) regulations of 2001 that all companies were banned to operate speculative derivatives trading overseas and the State of Council stipulates that the state-owned companies are strictly forbidden to engage in the OTC derivatives trading overseas. However, the supervisory body did not establish the relevant supervision system to monitor the derivative activities conducted by companies, which caused many practical difficulties for regulators in governing companies' derivatives trading. In this case, CAO disregarded Chinese regulations and operated the unauthorised OTC options trading in the overseas market.

The failure of corporate governance and internal control is frequently cited as contributing factor in many derivative-related scandals (Overdahl and Schachter, 1995; Hogan, 1997; Jayaraman and Shrikhande, 1997; Dunne and Helliard, 2002; Burton et al. 2003). In the case of CAO incident, the company itself had elaborately established internal systems for governing trading of derivatives. It invested in risk management systems, created VAR models and built three ways of internal controls which were senior traders having strict limits, a risk control committee and an internal auditing department (Fratzscher, 2006). From 2003, CAO had already engaged in the OTC oil options but nothing was reported to the parent company until margin calls exploded. During the two-year period, CAO itself and the parent company did not take any step

to deter these highly risky transactions, which implied that the internal control systems were totally deficient for monitoring trading of derivatives. Thus, this case indicates that the self-regulation and internal risk control are inadequate for governing derivative activities.

If the accounting information on trading of derivatives is transparent and adequate, investors can assess the company's risk exposures and make a better investment decision. In the case of CAO incident, the inadequate accounting system in both home and host countries was obvious. At that time, the accounting system regarding derivative activities was weak in the Stock Exchange of Singapore as the IAS 39 *Financial Instruments: Recognition and Measurement* was not applied and derivatives positions were not marked to market. All derivative products were treated as off-balance sheet instruments and relevant information about derivative activities was disclosed in notes attached to the financial statement. The situation in China was even worse that the requirements related to derivative instruments were absent in the Chinese accounting system and the derivative disclosures were entirely on the voluntary base. Hence, this lack of timely disclosure together with extreme risks of these instruments impedes both the investors and regulators' ability to assess all factors that affect a firm's financial condition and creates an opportunity for CAO to manipulate its financial reports through accounting gimmicks (Huang and Gao, 2008).

To summarise, the inappropriate product design, poor market infrastructure and inadequate governance and control are three major problematic factors blocking the development of China's derivatives market. The 'Contract 327 Affair' reveals that the derivative products design must be established upon a well functioning and liquid cash market. It also illustrates how a sound infrastructure at exchanges is important for a successful derivatives market. Finally, the 'China Aviation Oil (CAO) Incident' underlines the importance of the regulation from the supervisory body, the effectiveness of the efficient internal control system, and the significance of adequate accounting disclosure for trading of derivatives.

3.4 New Developments in China's Derivatives Market

3.4.1 Commodity Futures Market

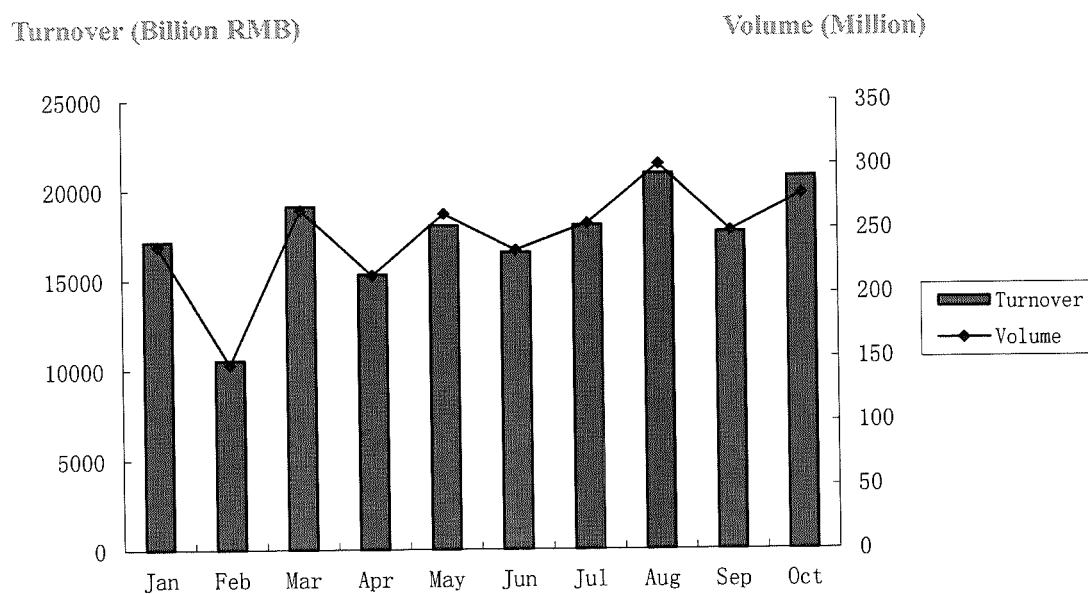
During the first ten months of 2010, the Chinese commodity futures market is fluctuant in terms of trading turnover and volume. As shown in Chart 3.2, the rising of turnover and trading volume was always followed by the decline of those in the next month. Both turnover and volume achieved the highest point in August with the amount of 20925.825 billion RMB and 300.209 million respectively.

Until October 2010, the whole Chinese commodity futures market, as shown in Table 3.5, have been growing with 174.59 and 147.20 per cent annual growth in terms of trading turnover and volume respectively compared with the first ten months 2009. Among three commodity futures exchanges, SHFE takes the biggest proportion in total commodity futures' trading (58.61% in total turnover and 43.82% in total volume), followed by ZCE possessing 24.32 and 31.45 per cent in respective total turnover and volume. Regarding to the growth, ZCE, however, achieved the highest rate of growth with 230.05 and 130.82 per cent in terms of total turnover and trading volume, followed by SHFE and DCE with the least growth rate of 17.07 and -8.27 in respective turnover and trading volume. For the trading products, as shown in Chart 3.3, the products traded at SHFE take four positions among the top seven of the most popular commodity futures during the first ten months 2010 which include the natural rubber (19.94% in total turnover), copper (14.23%), zinc (11.91%) and steel rebar (9.92%) whereas the sugar (16.24%) and cotton (5.15%) at ZCE, soybean oil (6.23%) at DCE seize the rest of three among the top seven. At present, the prices of soybean, wheat and copper future contracts obtain higher attention from both home and abroad.

SHFE is one of three authoritative price-setting centres in global copper market (SHFE, 2007) and DCE becomes the second largest soybean futures' trading market in the world (DCE, 2007).

At the same time, the risk management in commodity futures market has been enhanced. On 2 June 1999 the State Council issued the *Administration of Futures' Trading Tentative Regulations* which are the first ruling to regulate activities involved in futures trading. The 'Three-level Risk Management Regime' has also been established in the futures market. The three-level regime includes the top level of the CSRC which is in charge of regulating all activities in the market, the middle level of the China Futures Association (CFA), a self-regulatory-organisation with the responsibilities of managing the whole industry, and the lowest level of the exchanges and brokerage firms which are required to directly govern and manage the risks in the market.

Chart 3.2 Turnover (Billion RMB) and Volume (Million) of China's Commodity Future Exchanges in 2010



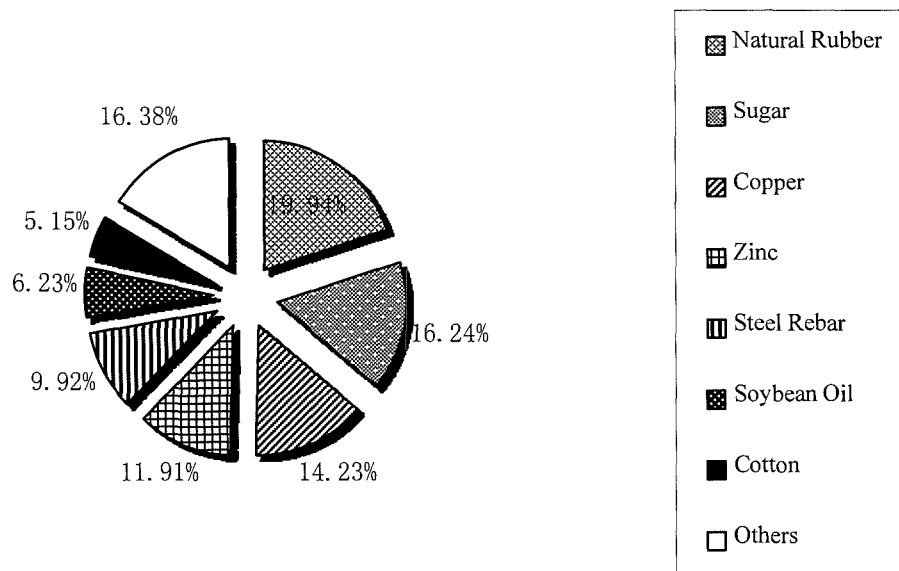
Source: CFA, 2010.

Table 3.5 Statistics of China's Commodity Futures Markets during the First 10 Months of 2009 and 2010

Exchanges	Accumulated Turnover (Billion RMB) until October 2009	Accumulated Turnover (Billion RMB) until October 2010	Annual Growth Rate (%)	Turnover % in Total Turnover 2010	Accumulated Volume (Million) until October 2009	Accumulated Volume (Million) until October 2010	Annual Growth Rate (%)	Volume % in Total Volume 2010
DCE	28954.234	29726.266	2.67	17.07	653.418	599.408	-8.27	24.73
SHFE	57955.958	102061.924	76.10	58.61	662.857	1062.058	60.22	43.82
ZCE	12835.011	42361.729	230.05	24.32	330.224	762.218	130.82	31.45
Total	99745.203	174149.919	174.59	100	1646.499	2423.684	147.20	100

Source: CFA, 2010.

Chart 3.3 Proportions of Future Products in Total Turnover during the First 10 Months 2010



Source: CFA, 2010.

3.4.2 Financial Derivatives Market

With the rapid development of China's economy, there is a rising calling for the reestablishment of the financial derivatives market. Tian (2005) claims that the building of financial derivatives market would improve the capital structure and profit-making ability of Chinese commercial banks, reinforce the effect of monetary policies and absorb more international capital, thus accelerating the Chinese

economy's future growth. By deliberately rethinking of the bankruptcy of financial derivatives markets in the early 1990s, the Chinese central government has been very cautious to reintroduce the financial derivatives market.

Warrants Market

In the history, SHSE created the first warrant product – Dafeile stock right offering warrant, in June 1992 and Shenzhen Bao'an Corporation issued the first long-term put warrant on 19 October 1992. There were fourteen warrants available in the early 1990s but due to the prevailing of speculation, the warrants market was finally suspended by the authorised body (Ba et al., 2005). The share reform imposed by the government offered an opportunity for the CSRC to reintroduce financial derivatives to the market without being rejected by the central government. Before the reform, most shares of publicly listed companies on Chinese equity market were occupied directly by the government or indirectly through its agents such as the government-controlled funds management firms. These shares were forbidden to be traded in the public market. With the intend to enhance the mobility of the stock market, the central government in 2005 announced a plan to convert its large non-tradable share holdings into tradable shares and eventually floated them in the market. However, this plan was resisted by vast of investors who worried about suffering large losses due to the depression of stock prices as a result of the dramatic increase in the numbers of freely tradable shares. In order to convince the public to accept the share reform plan, the government decided to compensate holders of floating shares for their potential losses. Under that circumstance, the CSRC allowed some firms involved in the share reform to issue warrants as part of their compensation packages to public investors.

A warrant, which is defined as 'an option written by a firm on its own stock' (Chance,

1995, p556), is an essentially financial option issued by publicly quoted companies. There are two basic types of warrants – call and put warrants. A call warrant gives its holder the right to buy stock from the issuing firm at a predetermined strike price during a pre-specified exercise period, while a put warrant gives its holder the right to sell stock back to the issuing firm. Both call and put warrants derive their values from the underlying stock price: the value of a call warrant increases with the stock price, while that of a put warrant decreases (Chance, 1995).

Compared with the stock market, the CSRC has provided more trading-favoured supports for the warrants market which is discussed in the SHSE's regulation - *'Tentative Administration Measure of Warrants'* (2005) as follows:

Firstly, stock trading is subject to the so-called 'T+1' rule, which requires investors to hold their stocks for at least one day before selling. Warrants trading is subject to the 'T+0' rule, which allows investors to sell warrants they purchase earlier - on the same day. As a result, investors can pursue day-trading strategies in warrants but not in stocks.

Secondly, investors incur a lower transaction cost when trading warrants. When trading stocks (either buying or selling), investors pay a stamp tax to the government, a registration fee to the stock exchange, and a brokerage fee. The stamp tax is a flat percentage of the total proceeds. The tax rate has changed several times in the past, ranging from 0.1 to 0.3 percent. The registration fee is 0.1 percent of the total proceeds. The trading commission is negotiable with brokers and is capped at 0.3 percent of the total proceeds (MOF, 2010). Investors are exempted from paying any stamp tax and registration fee when trading warrants. They still pay a brokerage fee, which is also negotiable and is capped at 0.3 percent of the total proceeds. Because of the large volume in the warrants market, brokers usually charge a lower trading commission on warrants than on stocks.

Thirdly, warrants have a wider daily price change limit. The CSRC imposes a 10 percent limit daily price increase or decrease of any stock traded on the two stock exchanges in Shanghai and Shenzhen. Once the price of a stock rises or falls by 10 percent relative to the previous day's closing price, the trading of this stock is halted for the day. The daily permitted price increase (decrease) of a warrant in Chinese currency unit – Yuan, is equal to the daily permitted price increase (decrease) of the underlying stock in Yuan, multiplied by 1.25 and the warrant's exercise ratio. An example is given as below:

Company A put a warrant on 13 November 2010. On the previous trading day, the warrant's closing price was 1.122 Yuan and the underlying its stock's closing price was 21.61 Yuan. The warrant had an exercise ratio of 0.5, i.e., one share of the warrant gave its holder the right to sell 0.5 share of Company A stock to the issuing firm. With the 10 per cent daily price change limit, the price of Company A's stock was allowed to increase or decrease by 2.16 Yuan on this day. Then, the warrant price was allowed to increase or decrease by $2.16 \times 1.25 \times 0.5 = 1.35$ Yuan, which corresponded to 120 per cent of the warrant's closing price from the previous day.

Since a warrant has a high leverage ratio, its price-change limit is much wider in percentage terms than the limit on the underlying stocks.

The Chinese law prohibits investors from shorting-sell stocks or warrants in the market¹⁵. The severe short-sale constraints make it impossible for investors to arbitrage any stock or warrant which are over-valuated. Similarly, companies are not able to easily arbitrage through the overvaluation of their warrants by issuing more as the quota of the new issuance is restrictively constrained by the central government.

¹⁵ The CSRC starts to allow shorting of a selected set of stocks only in 2010.

The SHSE had experimented with a limited shorting mechanism for the traded warrants by allowing a group of designated brokerage firms to create additional shares of warrants. When a designated firm wants to create more shares of a warrant, it must obtain approval from the SHSE¹⁶. The newly created warrants are traded in the market undistinguished from original ones and the firm can buy back warrants from the market to offset its earlier creation¹⁷ (SHSE, 2010).

Financial Derivatives Exchange

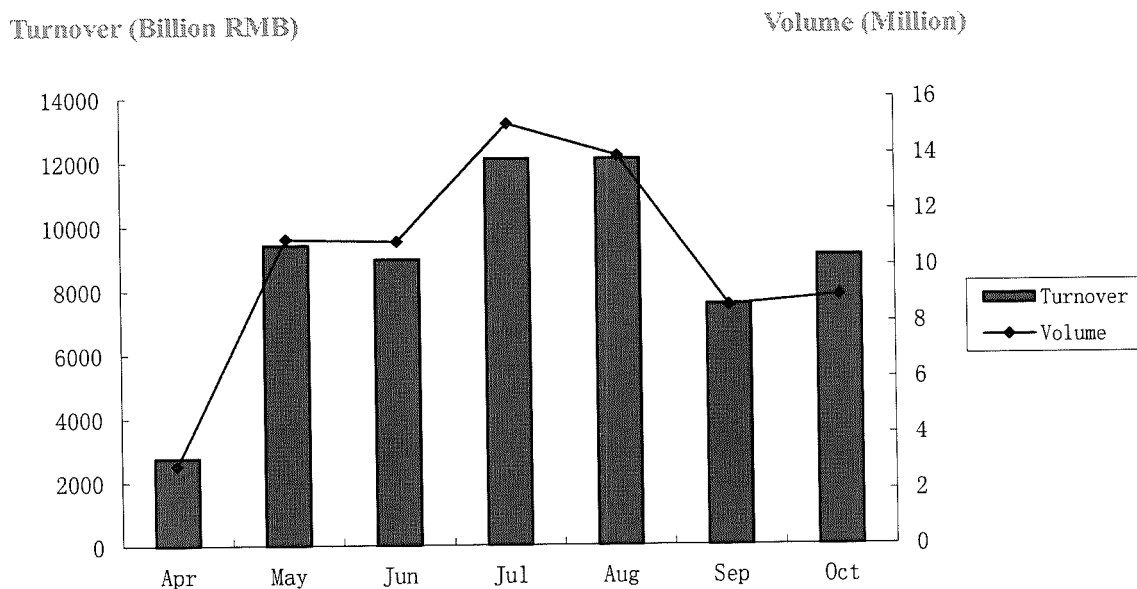
On 8 September 2006, China Financial Futures Exchange (CFFEX), the first demutualised exchange focusing on financial derivatives' trading, was inaugurated in Shanghai with the approval of the State Council and CSRC. This event is a milestone in the history of Chinese derivatives market as it symbolises the reopening of financial derivatives market. The CFFEX is a joint venture of the DCE, SHFE, ZCE, SHSE and SZSE. It constructs a well-structured electronic market, multi-tiered members' clearing system and risk management policy to improve its competitive strength. In early 2008, the CFFEX launched the first derivative product – the Chinese Stock Index (CSI) 300 index futures. After two years' preparation, the trading of the CSI 300 index futures was finally approved by the State Council and CSRC in the early of 2010 and officially listed in the market on 16 April 2010 (CFFEX, 2010). As shown in Chart 3.7, the market has been experiencing a rapid expansion in early months since the CSI 300 index futures were publicly traded and achieved the highest point at 12,109.055 billion RMB and 15.074 million in terms of trading turnover and volume respectively in July. But it saw a consecutive two-month decline and rebounded in October with the amount of 9,080.535 billion RMB and 8.945 million in

¹⁶ The SHSE does not allow the brokerage firms to issue stock-settled put warrants at a quantity substantially more than the floating shares of the firm stocks as otherwise the warrant holders won't be able to exercise their put warrants at expiration.

¹⁷ Creations and cancellations are publicly disclosed by the SHSE within the same day.

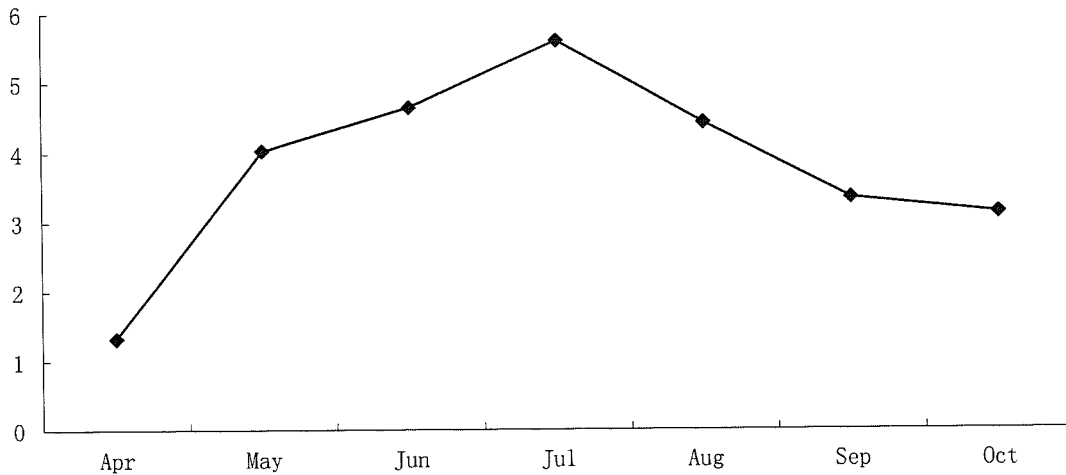
terms of turnover and volume. Similarly, the proportion of the CSI 300 index futures in total market turnover, as shown in Chart 3.5, was keeping rising from 1.32% in April to its peak at 5.60% in July. The percentage, however, was consecutively falling in the next three months. In addition, the CFFEX plans to introduce other financial derivatives such as other index futures, index options, government bonds futures and currency futures in the future.

Chart 3.4 Turnover (Billion RMB) and Volume (Million) of CSI 300 Index Futures in 2010



Source: CFA, 2010.

Chart 3.5 Proportion (%) of CSI 300 Index Futures in Month's Turnover of Total Derivatives Trading 2010



Source: CFA, 2010.

Clearly, China has accelerated the step to facilitate the derivatives market from 2006, following the roadmap that firstly developing the commodity futures market then introducing equity derivative products at the exchange. Some studies (e.g., Al Janabi 2006; Fratzscher 2006) provide the analogical roadmap for emerging countries to establish a sound derivatives market. Fratzscher (2006) suggests the emerging countries to follow the building blocks which typically start from the commodity to index futures at demutualised exchanges finally to tailored OTC derivative products. Similarly, Al Janabi (2006) recommends that it is appropriate for emerging countries to firstly create derivatives related to equities than other types of financial derivative products.

3.5 Accounting and Reporting for Derivatives in China

3.5.1 Harmonisation of National Accounting and Reporting Standards and Its Relevance to Emerging Economies

With the development of the world economy rapidly, globalisation has turned to be the most obviously characteristic. It presses for a uniform and comparable accounting standard in the global scopes. The tendency for developed and developing countries to adopt IFRS and IAS standards has been accelerating in recent years (Deloitte, 2012).

Advantages to developing nations of harmonising on IFRS and IAS include: the elimination or reduction of set-up costs in developing national accounting standards; the potential for rapid national improvement in the perceived quality and status of financial reports; increases in market efficiency in (inter)national financial markets through the provision of more understandable, comparable, and reliable financial statements; and a reduction in the cost to firms of preparing financial statements (Ashraf & Ghani, 2005; Belkaoui, 2004; Chandler, 1992; Choi & Mueller, 1984; Murphy, 2000; Nobes & Parker, 2006).

Disadvantages of harmonising on IFRS and IAS for developing nations relate to the adoption of a set of accounting standards unsuited or irrelevant to national needs (Tyrrall, 2007). At firm and national levels, this may result in 'standards overload' (Choi & Mueller, 1984), as firms endeavour to comply with IFRS and IAS that exceed their business requirements in complexity (Belkaoui, 2004) and the ability of indigenous accounting staff to operate them (Perera, 1989). Increasing harmonisation and complexity in accounting standards tends to facilitate expansion of large international accounting firms at the expense of local firms in both developing (Choi & Mueller, 1984; Radebaugh et al., 2006; Salter & Niswander, 1995) and developed (Jopson, 2006) countries.

3.5.2 Evolution of Accounting and Reporting for Derivatives in China

Over the past two decades, China has made an enormous achievement in its economic

development and reform. In order to meet the rapid growth in economy, a series of accounting standards has been promulgated and implemented. Before 2007, the Chinese Accounting Standards (CASs) consisted of Accounting Standards for Business Enterprises (called Basic Standards) with 16 other specific accounting standards and Accounting Systems for Business Enterprises, Financial Institutions and Small Business Enterprises. Besides, some ad hoc pronouncements (usually titled as 'Caikuai') issued by the MOF have also formed an important part of CASs. Since numerous huge derivative-related losses occurred in the Chinese derivatives market, the supervisory authorities took some efforts, including issuance of accounting rules to report on the trading of derivatives. For instance, Caikuai [2000] No. 19 promulgated by the MOF provides a number of pronouncements that standardise the accounting treatment related to commodity futures. Nevertheless, even though the Chinese securities supervisory body and accounting standards setters have been aware of the emergency to regulate the derivatives trading, the requirements for the disclosure of derivative activities are significantly absent in the Chinese accounting system.

In recent decade, especially after the accession to the World Trade Organisation (WTO) in 2001, China has gathered pace integrated itself with the global economy and the international capital market, which increases strong needs for more accurate and objective financial reporting with greater quality, transparency and comparability. In line with the globalisation of the worldwide economy and the international capital market, the Chinese authorities fully adopt the International Financial Reporting Standards (IFRSs) for the reporting of the trading of derivatives. In 2004, the MOF issued the exposure draft which covers accounting treatment of derivatives and hedge accounting for financial institutions. On 21 September 2005, the MOF promulgated a set of proposals about accounting for financial instruments including *Financial Instruments: Recognition and Measurement*, *Financial Assets Transfer*, *Hedging Accounting* and *Financial Instruments: Presentation and Disclosure*. Those four proposals are quite similar to IFRS No. 32 and No. 39. In November 2005, the

Chinese Accounting Standards Committee (CASC) and the International Accounting Standards Board (IASB) held a convergence meeting on accounting standards in Beijing and signed a Joint Statement in which both parties expressed their views on international convergence of accounting standards and agreed that a new set of CASs would be developed to achieve the convergence with IFRSs.

Fratzscher (2006) points out that an adequate legal framework for enforcement and the adoption of the IFRSs, including IAS No.32 and No.39, are crucial prerequisites for a sound derivatives market. On 15 February 2006, the MOF issued a series of new and revised Accounting Standards for Business Enterprises (the 'New Accounting Standards') which is effective from 1 January 2007 for all listed companies. The issuance and implementation of the new accounting system have achieved the substantial convergence of CASs with IFRSs, taking an important step in integrating China with global economy and international capital market. The New Accounting Standards introduce many new concepts in financial reporting, such as financial instruments, investment property and share-based payments. They also introduce some new accounting principles and measurement requirements; of which the most significant shift is the requirement of 'fair value' measurement in many areas. The New Accounting Standards comprise the revised Basic Standard, 22 newly-issued specific accounting standards and 16 revised specific accounting standards. There are four newly-issued standards on 'Financial Instruments' including derivatives, *ASBE Nos. 22 Recognition and Measurement of Financial Instruments, 23 Transfer of Financial Assets, 24 Hedging and 37 Presentation of Financial Instruments*, which fully converge with corresponding IFRS and IAS standards (i.e., IFRS 7, IAS 32 and 39). They provide detailed requirements regarding derivatives recognition, measurement, presentation, disclosure and application of hedging accounting.

In the New Accounting Standards, the full-fair-value measurement is adopted that all entities must recognise all financial instruments, including derivatives, as assets or liabilities on the balance-sheet and measure those instruments at fair value, and

changes in the derivatives fair value are to be recognised in the current earnings unless specific hedge accounting criteria are met. In a corporate annual report, the derivatives instruments are treated as balance-sheet instead of off-balance-sheet items. In addition, the comprehensive disclosures on a firm's financial risk exposures are now required, including the significance of derivative instruments for a company's financial position and performance as well as qualitative and quantitative information regarding the nature and extent of risks derived from those instruments to which the company is exposed to. All requirements of the four standards are fully consistent with the corresponding parts of IFRS 7, IAS 32 and 39.

The issuance of the New Accounting Standards is the new era for the alignment with international accounting practice in China. It fills in a gap in the area of accounting for derivatives and also symbolises that the regulations for derivative-related activities is shifting from a voluntary to mandated base. Although it is too early to assess the economic consequences of China's new accounting standards, the new system would expect to have a big effect on governing derivative-related activities. Firstly, under the compulsory disclosure framework, the listed companies have to disclose more accurate and objective information, either good or bad, about their use of derivatives and they have to improve their internal control system and risk management policy to monitor trading of derivatives. Secondly, investors can obtain much more useful information about the risk exposures of a quoted firm to facilitate their investment decisions. Particularly, the New Accounting Standards will help overseas investors and users of financial statements to better understand financial positions of Chinese listed companies.

3.6 Summary

Despite China's rapid economic growth over the past three decades, its derivatives

market is still in development and offer far less investment choices than the markets in other developed economies. The evolution of Chinese derivatives market is circuitous in history and there have been only three commodity futures exchanges operated in China for almost ten years since the central government closed out all financial derivatives markets in 1995 after a notorious manipulation scandal – ‘Contract 327 Affair’. By using the Fratzscher’s framework, this chapter has analysed three vital factors - the inappropriate product design, poor market infrastructure and inadequate governance and control that have contributed to the slow and tortuous development of China’s derivatives market. China has begun to progressively develop its derivatives market by re-establishing the financial derivatives market since 2005. The reintroduce of the warrants trading, especially the reopen of the CFFEX, is a remarkable progress in the evolution of China’s derivatives market. The central government has been very cautious about new financial products because of the concern that they might be misused or abused by investors. Hence, there is just one financial derivative contract – CSI 300 index futures trading at the CFFEX at present. The accounting and reporting practice for the use of derivatives has been largely absent in a long period and as a result, the disclosure of derivative activities is mainly voluntarily provided by companies. The situation has been gradually improved since 2005 as the Chinese authority has gathered pace in integrating its accounting and reporting standards with the IFRSs framework. The release of the ‘New Accounting Standards’ in 2006 was an era in the development of derivative-related regulations in China as it was fully converged with the IFRSs accounting and reporting practice for the use of derivatives which symbolised that the disclosure of derivative-related activities was shifting from voluntary to mandatory basis. The next chapter provides the research design regarding how to assess the usefulness of derivative disclosures by Chinese listed companies and also discusses the research methodology applied in the study.

Chapter IV Research Methodology and Data Collection

Chapter IV Research Methodology and Data Collection

4.1 Introduction

This chapter describes the research methodology, methods and sample data selection employed in the study. It is structured as follows: the argument of the research methodology is firstly presented, followed by the discussion of research methods and description of data collection. A summary is provided in the end.

4.2 Research Methodology

In logic, there are two broad methodological approaches to reasoning which may result in the acquisition of knowledge, namely inductive reasoning and deductive reasoning (Kirkeby, 1990; Hyde, 2000).

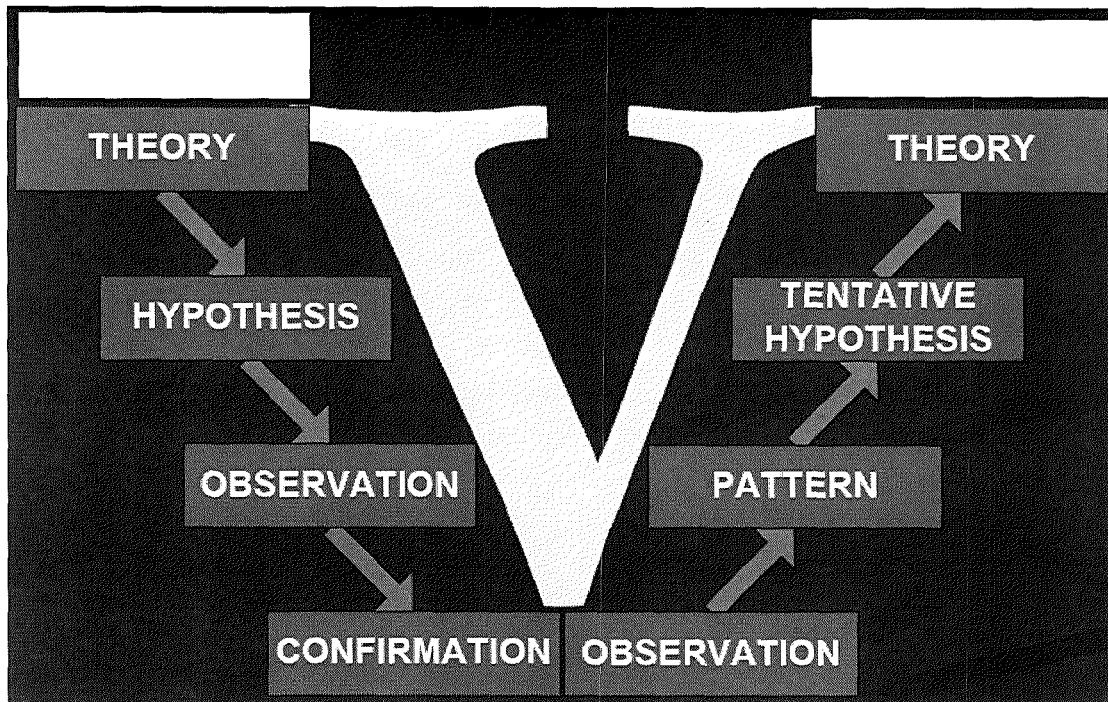
4.2.1 Deductive Methodology

Deductive reasoning starts from the 'general' to the 'specific' and is also called a 'top-down' approach (Hyde, 2000). It works as shown in Chart 4.1. It begins with thinking of a theory about the topic. Then it is narrowed down to specific hypothesis that can be tested. It needs to be narrowed down even further when the observation is collected as to addressing the hypothesis. This ultimately leads to test the hypothesis with specific data – a confirmation (or not) of the original theory. The deductive perspective '...emphasises universal laws of cause and effect on an explanatory framework which assumes a realist ontology; that is that reality consists of a world of

objectively defined facts' (Henwood & Pidgeon 1993, p15). In the deductive methodology, the researcher starts '... with an abstract, logical relationship among concepts then move(s) towards concrete empirical evidence' (Neuman 1997, p46). Thus in a deductive research, there is a well-established role for existing theory since it informs the development of hypotheses, the choice of variables, and the resultant measures which researchers intend to use. Within this paradigm the researcher formulates a particular theoretical framework and then sets about testing it. Thereby, deductive approach is defined as a theory testing process, which commences with an established theory or generalisation, and seeks to examine whether the theory applies to specific instances (Hyde, 2000). In deductive research, general conclusions are presented based upon the corroboration or falsification of the hypotheses through empirical tests (Kirkeby, 1990; Arlbjørn and Halldósson, 2002). Deductive research develops hypotheses before the testing and generalising the results and these generalisations and discussions in light of prior knowledge constitute the new knowledge (Peter and Olson, 1983).

The deductive approach has its own inherent advantages but also limitations. In deductive studies, researchers are able to make use of previous study work (Ali and Sue, 1999). However, as hypotheses are generated from prior theoretical knowledge only, the novelty of the knowledge resulting from deduction is disputable (Peirce, 1931). Deductive study is only possible to examine whether or not, or to what extent, the hypothesised relationships exist. It, therefore, cannot help researchers to identify what other unanticipated factors such as contingent variables or new constructs may exist (Ali and Sue, 1999).

Chart 4.1 Deductive V.S. Inductive Approach



4.2.2 Inductive Methodology

The inductive research process can be described as the mirror image of the deductive process (Johnson, 1996). It works from observations towards generalisations and theories, which is also called a ‘bottom-up’ approach (Hyde, 2000). As shown in Chart 4.1, the inductive research commences from specific observations, followed by looking for patterns, formulating hypotheses and finally ended up with developing general theories or drawing conclusions. In other words, argumentation in inductive process moves from a specific empirical case or a collection of observations to general law, i.e. from facts to theory (Andreewsky and Bourcier, 2000; Taylor et al., 2002), following the pattern of case –result–rule (Danermark, 2001; Kirkeby, 1990). At the beginning of an inductive research, the knowledge of a general frame or literature is not necessarily needed (Andreewsky and Bourcier, 2000; Gioa and Pitre, 1990). Instead, empirical observations about the world lead to emerging hypotheses and their generalisation through logical argumentation within a theoretical frame (Danermark, 2001). Furthermore, induction aims to develop not test theory

(Danermark, 2001; Johnson, 1996). Following inductive research process, hypotheses are developed on the basis of the empirical study instead of prior to observations (Kovacs and Spens, 2005). A classic inductive research process is how Sir Isaac Newton reached to 'Law of Gravitation' from 'apple and his head'.

The inductive research methodology is a very easy tool to use as there is no specialised knowledge, education or training required (Trochim, 2006). The inductive research can be assembled in a relatively short period of time without any great effort or ability on part of the researcher (Ali and Sue, 1999). However, the inductive study is not by its nature intended for reconstructing a specific research targets situation as the data is generalised from limited population samples and not specifically related to any one case. It is a generalised set of representations, averaged from a small group who may or may not have been appropriately sampled, depending on the knowledge an ability of the person collecting and assembling data (Ali and Sue, 1999). Although the generalisations in an inductive study can accurately predict some of the non-distinguishing elements of a research situation, there is not with a great deal of consistency or reliability (Hyde, 2000).

Generally speaking, inductive reasoning, by its very nature, is more open-ended and exploratory, especially at the beginning. While deductive reasoning is more narrow in nature and is concerned with testing or confirming hypotheses (Trochim, 2006). In practice, both deductive and inductive arguments occur frequently and naturally. Both forms of reasoning can be equally compelling and persuasive, and neither form is preferred over the other (Hollihan, 1994).

4.3 Research Methodology Used in the Study

The current study follows the deductive research process, which starts with a strong

theoretical footing (Danermark, 2001; Hyde, 2000) and aims to test theoretical knowledge (Johnson, 1996) that has been developed prior to empirical research (Kovacs and Spens, 2005). Critical reviews and analyses drawn from the existing literature are the starting point of the research. The research literature about the usefulness of derivative related disclosures (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Linsmeier et al., 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Chipalkatti and Datar, 2006; Ahmed et al., 2006; Dunne et al., 2007; Ameer, 2009; Perignon and Smith, 2010) contain numerous discussions in relation to the association between corporate value and derivative disclosures. The researcher built on key research questions and hypothesis from these literatures. Then the quantitative (i.e., content analysis) and qualitative (i.e., interview) research methods were employed to gather, analyse and interpret data. As the data was interpreted, research questions and hypothesis were ultimately answered and examined. The study ends with extending the current research framework by generating the new understanding of the value relevance of derivative disclosures in the context of China-the largest emerging economy in the world.

4.4 Research Method

Research method is classified into two different types of approaches: quantitative and qualitative. Much of the debates on the choice of research tend to revolve on the choice between quantitative and qualitative methods. Qualitative and quantitative methodologies refer to commitments to different styles of research, different epistemologies and different forms of representation (Denzin and Lincoln, 1994). However, the decision on the choice of either quantitative or qualitative method relies on three main criteria - (1) the purpose of the study (2) how the variables are measured (3) how the information is analysed (Kumar, 1999).

4.4.1 Quantitative Research Method

The quantitative research usually concentrates on measurements and numbers. It aims to study the association between variables in the population. It relates generally to research that emphasises 'the measurement and analysis of causal relationships between variables with inquiry ... purported to be within a value-free framework' (Denzin and Lincoln, 2000, p8). Quantitative methods entail 'the use of standardized measures so that the varying perspectives and experiences of people can be fit into a limited number of predetermined response categories to which numbers are assigned' (Patton, 1990, p14). However, with standard quantitative designs 'there is an effort to limit the role of personal interpretation for that period between the time the research design is set and the time the data are collected and analysed statistically sometimes thought of as a 'value free' period' (Stake, 1995, p41). Such research strategy emphasises the quantification in the collection and analysis of data; it therefore generates numerical data or data which could be converted to figures while the researchers remain distant and independent.

4.4.2 Qualitative Research Method

The qualitative method refers broadly to the 'research that produces descriptive data: people's own written or spoken words and observable behaviour' (Taylor and Bogdan, 1984, p5). It concentrates on words and observations to articulate reality and endeavours to describe people in nature and in natural situations (Amaratung et al., 2002). In contrast to the quantitative research it produces non numerical data. It employs to explore and understand people attitude and behaviour. Denzin and Lincoln (2000, p3) state that qualitative researchers 'study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.' They argue that this kind of research involves the studies that use

collection of a diversity of empirical materials such as case study; personal experience; introspective; life story; interview; artifacts; cultural texts and productions; observational, historical, interactional, and visual texts which describe routine and problematic moments and meanings in individuals' lives.

There are much of debates concerning strengthens and weaknesses of either quantitative or qualitative research methods and some key views are summarised in Table 4.1.

Table 4.1 Strengthens and Weaknesses of Quantitative and Qualitative Research Method

	Strengthens	Weaknesses
Quantitative Approach	<ul style="list-style-type: none"> a) It states the research problem in very specific and set term (Frankfort-Nachmias and Nachmias, 1992); b) Clearly specify both the independent and dependent variables (Bryman and Bell, 2003); c) It closely follows the research goals, achieves more objective conclusions by testing hypotheses and finally determines the issues of causality (Bryman and Bell, 2003); d) It contributes to eliminating or minimising subjectivity of judgment (Kealey and Protheroe, 1996); e) It allows for longitudinal analysis of subsequent performance of research subjects (Bryman and Bell, 2003). 	<ul style="list-style-type: none"> a) It fails to distinguish people and social institutions from the world of nature; b) There is an artificial and spurious sense of precision and accuracy in the process of measurements; c) It blocks the connection between research and everyday life due to the reliance on instruments and procedures; d) The results by examining relationships between variables create a static view of social life which is independent of people's lives. (Bryman and Bell, 2003)
Qualitative Approach	<ul style="list-style-type: none"> a) Obtaining a more realistic feel of the world that cannot be experienced in the numerical data and statistical analysis used in quantitative research (Bryman and Bell, 2003); b) Flexible ways to perform data 	<ul style="list-style-type: none"> a) Departing from the original objectives of the research in response to the changing nature of the context (Cassell & Symon, 1994); b) Arriving to different conclusions based on the same

	<p>collection, subsequent analysis, and interpretation of collected information (Bryman and Bell, 2003);</p> <p>c) Provide a holistic view of the phenomena under investigation (Bogdan & Taylor, 1975; Patton, 1980);</p> <p>d) Ability to interact with the research subjects in their own language and on their own terms (Kirk & Miller, 1986);</p> <p>e) Descriptive capability based on primary and unstructured data (Bryman and Bell, 2003).</p>	<p>information depending on the personal characteristics of the researcher;</p> <p>c) Inability to investigate causality between different research phenomena;</p> <p>d) Difficulty in explaining the difference in the quality and quantity of information obtained from different respondents and arriving at different, non-consistent conclusions;</p> <p>e) Requiring a high level of experience from the researcher to obtain the targeted information from the respondent;</p> <p>f) Lacking consistency and reliability because the researcher can employ different probing techniques and the respondent can choose to tell some particular stories and ignore others.</p> <p>(Bryman and Bell, 2003).</p>
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However, Stake (1995) divided the main differences between qualitative and quantitative method into three areas. The first is related to the distinction between explanation and understanding as the purpose of the inquiry. Quantitative researchers are concerned with explanation as the main purpose of the inquiry, while qualitative research is mainly interested in understanding the complex interrelationships between different variables. The second area is associated with the distinction between knowledge discovered and knowledge constructed. Proponents of qualitative researchers believe that knowledge is constructed rather than discovered, while, qualitative researchers see this methodology as a useful tool to expose actors' meanings and interpretations. The third major difference between qualitative and quantitative methodologies is about the distinction between the personal and

impersonal role of the researcher. The influence of researchers on the research setting is limited in quantitative studies while it is more recognised in qualitative ones.

4.5 Research Methods Used in the Study

This study employs more than one type of approaches to achieve its objectives. Both quantitative (i.e., content analysis) and qualitative (i.e., interview) were utilised in this study. Content analysis method is mainly employed in the first stage as the technique is widely adopted by vast of researchers (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) to address the information quality of derivative disclosures reported by quoted firms. Interview approach is adopted in the second phase so as to gain some insight of market participants concerning the usefulness of derivative disclosures provided by Chinese listed companies. Such a combination of methods ensures the validity and reliability of the research.

4.6 Content Analysis

Content analysis method was employed in this study as the first research approach in order to collect quantitative data on derivative related disclosures via the annual reports of Chinese listed companies. The popularity of content analysis comes as it is a powerful tool that has been used in the analysis of documents and texts that seek to quantify content in terms of predetermined categories and in a systematic and replicable manner (Bryman and Bell, 2003). It has been stated that content analysis is considered particularly helpful in exploratory research, where there may be no set of theoretical perspective being adopted, or where there is no need to make

generalisation (Kolbe and Burnett, 1991). According to Morris (1994), content analysis can be used to extract data from a wide range of communications media. Berelson (1952, cited in Weber, 1985) pointed out many purposes where content analysis can be used as following:

- Disclose international differences in communication content;
- Compare media or 'levels' of communication;
- Audit communication content against objectives;
- Code open-ended question in surveys;
- Identify the intentions and other characteristics of the communicator;
- Describe attitudinal and behavioural responses to communications;
- Reflect cultural patterns of groups, institutions, or society;
- Describe trends in communication content.

4.6.1 Definition of Content Analysis

A number of definitions of content analysis have been propounded. Berelson (1952) state that content analysis can be used to objectively, systematically, and quantitatively describe the manifest content of communication. Kassirjian (1977, p10) defines it as 'a scientific, objective, systematic, quantitative, and generalisable of communication content'. Abbott and Monset (1979, p504) define content analysis as a 'technique for gathering data that consist of codifying qualitative information in anecdotal and literary form into categories in order to derive quantitative scales at varying levels of complexity'. The above definitions highlight a need for quantitative description of data. However, Krippendorff (1980, p21) shift the emphasis by defining content analysis as 'a research technique for making replicable and valid inferences from data to their context'. Weber (1985, p9) define it as 'a methodology that utilizes a set of procedures to make a valid inferences from text'. Neuendorf (2002, p25)

define it as ‘summarizing, quantitative analysis of messages that relies on the scientific method (including attention to objectivity-intersubjectivity, a priori design, reliability, validity, generalizability, replicability, and hypothesis testing) and is not limited as to the types of variables that may be measured or the context in which the messages are created or presented’. More recently, Bryman and Bell (2007) state that content analysis is an approach to the analysis of documents and texts (printed or visual) that seeks to identify content in terms of predetermined categories and in a systematic and replicable manner.

Having reviewed the definitions mentioned above, it is apparent that there is a consensus among researchers that an essential purpose of content analysis is to make inferences from the message (textual or spoken). Content analysis aims to analyse language or the text by reference to incidence with certain pre selected recording units. A number of researchers (e.g., Daft and Wiginton, 1979; Krippendorff, 1980; Weber, 1985; Gephart and Wolfe, 1989; Wolfe, 1991; Bryman and Bell, 2007) have discussed the advantages of conducting a content analysis as follows:

- Content analysis is unobtrusive, neither the sender nor the receiver of analysed messages is aware that the messages will be analysed (Wolfe, 1991);
- Content analysis of various types of documents produced on regular scheduled basis presents an opportunity to develop longitudinal data bases (Wolfe, 1991);
- Content analysis allows the researcher to work directly on a core human and organisational behaviour-communication (Weber, 1985);
- Content analysis may facilitate researchers of differing methodological and theoretical persuasions to work together thus potentially contributing to the convergence of theoretical and empirical perspectives (Wolfe, 1991);
- Content analysis analyse naturally occurring language which has advantages over numerical analyses for understanding and describing many organisational phenomena (Daft and Wiginton, 1979);
- Content analysis facilitates linking summary statistics to natural language thus

resulting in research outcomes having face validity and meaning to everyday actors as well as scientists (Gephart and Wolfe, 1989);

- Content analysis research method is transparent as the coding theme and the sampling procedures can be clearly conducted, which enables the feasibility of replications and follow-up studies (Bryman and Bell, 2007);
- Content analysis is highly flexible because it can accept a wide variety of kinds of unstructured material (Krippendorff, 1980; Bryman and Bell, 2007).

4.6.2 Core Steps of Content Analysis Method

According to Weber (1985), the researcher initially has to identify the research question to be investigated. The first research question for the current study is '*What is the level of derivative related disclosures made by Chinese listed companies?*'. In seeking to answer this question this study compares the practices of derivative disclosures by non financial institutions listed on Chinese equity market with core provisions required by mandated disclosure regulations. There are six essential steps or processes in any content analysis studies (Weber, 1985; Wolfe, 1991) which include first, determine the sampling units; second, determine the recording unit; third, determine the categories to be coded; fourth, determine the coding mode; fifth, test coding on sample of text; sixth, assess reliability and validity.

4.6.2.1 Determine the Sample Units

In this stage of content analysis a decision needs to be decided concerning the source of document to be analysed (data source) (Unerman, 2000). Deciding which documents is to be analysed is an essential stage in any content analysis study (Krippendorff, 1980). The great majority of the studies in this field of research has

employed the annual report as data source and accepted it as an appropriate source of a company's attitudes towards derivative accounting and reporting as the annual report is generally considered to be the most reliable source of information about corporate activities (Owen, 1994; Deegan and Rankin, 1997). In this regard, Gray et al., (1995b, p83) state: 'The annual report is used as the principal focus of reporting. There is some justification for this. The annual report not only is a statutory document, produced regularly, but it also represents what is probably the most important document in term of organisation's construction of its own social imagery'.

In this accounting literature, proponents of the use of the annual report (e.g., Guthrie and Mathews, 1985; Guthrie and Parker, 1990; Zeghal and Ahmed, 1990; Tilt, 1994; Holland and Foo, 2003) argue that it is considered virtually impossible to identify all corporate communications on social activities conducted by companies over a long period of time, and it is therefore not sure how complete non annual report data are (Unerman, 2000). Holland and Foo (2003) state that the annual report is most effective means of communication and possesses a degree of credibility not associated with other forms of advertising. However, there is some recognition in the literature that this focus on the annual report may not give a full picture of companies' reporting practice (Roberts, 1992; Unerman, 2000). For example, Campbell et al. (2003, p566), state 'disclosure of social information in the annual report represented a small proportion of the company's total social reporting'. Zeghal and Ahmad (1990) examine corporate brochures and advertisements along with annual reports and found that firms did communicate social and environmental information through other media. However, Abu-Baker and Naser (2000) point out that in developing countries, other disclosure channels (e.g., Internet; press releases) are of little use to most companies, and it is very likely to see most of information presented in the formal annual report. Accordingly, this study will focus on the annual report as a source of text so as to keeping with the majority of the literature in this field of research

4.6.2.2 Determine the Recording Unit

The coding unit determines how content is measured or defined (Kassarjian, 1977; Krippendorff, 1980, 2003; Unerman, 2000) and in other words how the data is to be captured and measured. In the accounting literature, empirical research chooses between two alternative paths through which content analysis has been used to date, namely the number of disclosures and the amount of disclosures (Gray et al., 1995b). The former focuses on 'the attribution of the incidence on an event as indicated by the mention of the event under question in the literary document.....the resulting scale varying between zero and the number of attributes being investigated' (Abbott and Monsen, 1979, p504). The latter quantifies the volume of disclosure using either words, sentences or pages to different themes. The empirical investigation in derivative disclosures literature has attempted to capture either incidence or amount. With respect to the measurement of the extent of disclosure in the reports, there have been two methods used either through the weighted disclosure approach or the un-weighted disclosure approach. The weighted one (e.g., Singhvi and Desai, 1971; Buzby, 1975; Malone, et al., 1993; Maali et al., 2006) is based on the perceived relative degree of importance in terms of disclosure items while the un-weighted approach (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) uses a dichotomous procedure in which an item scores 1 if it is disclosed and 0 if not. However, both methods have their own limitations. The un-weighted approach, for instance, assumes that every information item is equally important for all users of annual reports, however, the information relevance is harder to define since potential users of annual reports may have extremely different interests (Rubin and Austin, 1986; Chow and Wong-Boren, 1987). The weighted approach, on the other hand, entails a certain subject and arbitrariness in its construction which cannot be completely removed (Marston and Shrivies, 1991). In addition, 'any method of assigning weights to individual disclosure items is misleading because the

importance of any disclosure item varies from company to company, industry to industry and time period to time period' (Spero, 1979, p42). In this study, the disclosure items were not weighted mainly due to the consideration of the potential score biases and scaling problems of weighting.

Defining the recording units is one of the most fundamental and important decisions in the process of content analysis (Weber, 1985). A number of different coding units have been used in previous investigations that have employed content analysis and some examples are listed on Table 4.2.

Table 4.2 Coding Units Employed by Prior Studies

Studies	Words	Sentences	Pages and Proportions of A Page	Frequencies	Number of Lines	High/Low Disclosure
Zeghal and Ahmed, 1990	*					
Deegan and Gordon, 1996	*					
Wilmshurst and Frost, 2000	*					
Xiao et al., 2005	*					
Milne and Adler, 1999		*				
Deegan et al., 2000		*				
Woods and Reber, 2003		*				
Linsley and Shrives, 2006		*				

Konishi and Ali, 2007		*				
Guthrie and Mathews, 1985			*			
Guthrie and Parker, 1989, 1990			*			
Gray et al., 1995			*			
Campbell, 2000			*			
Dunne et al., 2007			*			
Cowen et al., 1987				*		
Ness and Mizra, 1991				*		
Trotman and Bradley, 1981					*	
Papa, 2007					*	
Patten, 1991						*

The most common and preferred units of analysis tend to be ‘words’, ‘sentences’ and ‘pages’ (Gray et al., 1995b). Nevertheless, there is no single accepted unit of capturing data in content analysis and each has its own pros and cons. Although counting ‘words’ may provide a precise measure, individual words have no meaning to provide a sound basis for coding disclosures without a sentence or sentences for context. Therefore, the extra precision that might be gained is unlikely to add to understanding (Milne and Adler, 1999). Although the measurement in sentences may be carried out with greater accuracy than measurement in proportions of a page (Milne and Adler, 1999), the former is likely to give less relevant results than the latter (Unerman, 2000) as it seems to ‘ignore the possibility that differences in use of grammar might result in

two different writers conveying the same message by using a similar number of words and taking up a similar amount of space but using a different number of sentences' (Unerman, 2000, p675). In addition, words and sentences are smaller and more numerous as a unit of measurement compared to sentences, thus, using 'words' or 'sentences' is more time consuming and costly, especially when contemplating a large sample. Gray et al. (1995) and Milne and Adler (1999) summarised the debate concerning the most suitable coding unit for content analysis and they concluded that pages and the proportion of a page devoted to a particular topic was the preferred coding unit, as this measurement reflected the amount of space given to the issue and, by inference, the importance of that issue to the preparer of the document (Gray et al, 1995; Milne and Adler, 1999). This coding unit was, therefore, employed in the current research.

4.6.2.3 Determine the Categories of Disclosure

A precise classification and definition of disclosure categories is essential for any content analysis research (Kassarjian, 1977; Tilt, 1997; Krippendorff, 1980, 2003). Beresford and Cowen (1979) indicate that the categories defined are a description of what has happened in the past years, as well as a benchmark to evaluate the changes and progress in reporting. The development of explicit decision rules relating to each category is necessary in order to ensure mutually exclusive, exhaustive and independent categorisation of all derivatives related disclosures (Krippendorff, 1980; 2003; Gray et al., 1995; Unerman, 2000). The categorisations need to possess 'shared meanings' (Gray et al. 1995, p85) and the data collection and analysis must be capable of replication, in order to satisfy Krippendorff's criterion for reliability. For these reasons, this study develops a checklist instrument - *Financial Derivatives Disclosures Index (FDDI)* (as shown in Appendix I) describing the categories of derivative related disclosures. It is mainly based upon IFRS and IAS derivative

related provisions which are different from many indices used in the existing literature largely on the basis of U.S. reporting requirements, since Chinese regulators have enhanced the convergence of its accounting and reporting policies with IFRS and IAS regulations in recent years.

As shown in Appendix I, the themes in FDDI were expressed by asking questions where the definitions and classifications utilised with the IFRS 7 *Financial Instruments: Disclosures*, IAS 32 *Financial Instruments: Presentation* and IAS 39 *Financial Instruments: Recognition and Measurement* were employed. IFRS 7 classifies the required disclosures into two categorisations. These categories were chosen as the basic structure for the content analysis, because Chinese listed companies would be most likely to use this structure for their reporting practice. In addition, the categories were 'externally determined' by the IASB and should thus provide an objective basis for the analysis. This selection procedure resulted in two categories: first, the information about the significance of financial instruments for the entity's financial position and performance; second, the information about the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date, and how the entity manages those risks. Further breakdown of the items to be included under the two broad category headings mentioned in the standard was determined by the classifications included within the standard. As a result, there are total of 24 items/questions within the disclosure checklist which includes 23 derived from subheadings under the major disclosure categories required by IFRS 7 and one extra question - Q24 *'Does the firm provide other disclosures related to their use of derivative instruments?'* with the aim to measuring such voluntary derivative disclosures not required by IFRS and IAS accounting and reporting provisions reported by companies.

4.6.2.4 Determine the Code Mode

There are two types of coding mode: first, coding by human; second, coding by computer. The computer based interpretation has its advantages such as the speed, minimum error, and formally comparable results (Wolf, 1991). However, it is decided to focus on the human interpretation in this research as the computer can only provide explicit data due to the complexity for the computer to pick up on implicit or tacit meanings, or themes (Wolfe, 1991). In addition, given the nature of Chinese words, computer has some difficulties to recognise the true meanings of Chinese words as a combination of Chinese words can lead to many different meanings.

4.6.2.5 Test Coding on Sample of Text (Pilot Test)

Testing a sample of documents as a pilot study prior to conducting the main content analysis shall give the researcher practical experience that may add to increase the reliability of content analysis results (Weber, 1990). In addition, this practice will make the researcher to become more familiar with the process of content analysis. Random annual reports were chosen and analysed to ensure the usability of the framework. The researcher then analysed the content of annual reports of five surveyed companies as a part of pilot work which completed prior to gathering data for this study. The reports were coded based on the initially selected and defined content categories. Throughout the pilot work, difficulties concerning, inter alia, the interpretation of the decision rules were noted and clarified. Solutions were discussed with the supervision team and other academics whose have previous experience in using content analysis.

4.6.2.6 Assess Reliability and Validity

Reliability and validity refer to a measuring procedure, which provides the same results on repeated trails (Neuendorf, 2002). In other word, reliability and validity are determined to ensure that different researchers will code the text in the same way and therefore diminish the chance for inaccuracy and biases. Yin (2003) describes reliability as the extent to which a test or procedure produces similar results under contrasting conditions on all occasions. According to Krippendorff (1980), there are three types of reliability for content analysis which are stability, reproducibility and accuracy as shown in Table 4.3.

Table 4.3 Types of Reliability

Type of Reliability	Reliability Designs	Errors Assessed	Relative Strengths
Stability	Test-retest	Intra-observer inconsistencies	Weakest
Reproducibility	Test-test	Intra-observer inconsistencies and Intra-observer disagreements	
Accuracy	Test-standard	Intra-observer inconsistencies; Intra-observer disagreements and systematic deviations from a norm	Strongest

Source: Krippendorff (1980, p131)

Stability refers to the ability of a judge to code data the same way over time and it is the weakest form of reliability tests (Milne and Adler, 1999). Reproducibility refers to inter-rater reliability (Milne and Adler, 1999). It reflects on the measurement of the extent to which coding is the same when using different coders (Weber, 1988). High reproducibility is the minimum standard for content analysis (Weber, 1990). Accuracy involves the assessment of coding performance against predetermined standard¹⁸ (Milne and Adler, 1999). Guthrie and Mathews (1985) argue that there are no identified standards for disclosures and therefore, no correct performance or measure. Thus, to ensure the strong form of reliability in this study, it was vital to include reproducibility and stability.

¹⁸ The predetermined standards could be employed in prior studies or set by expert researchers.

The reliability of the coding decisions on a pilot sample could be shown to have achieved an acceptable level before the coder is permitted to code the main data set. A few steps listed as follows were taken to ensure the research's reliability:

Firstly, coding instruments with well instructed decision rules have been well specified and developed so as to minimise discrepancies and fulfil objectivity¹⁹.

Secondly, the researcher, 'main coder', has undergone an extensive period of educating and training prior starting the process of analysing in order to have a better understanding of the subject.

Thirdly, five annual reports were examined by different coders²⁰ in a pilot test in order to ensure reproducibility. Ambiguities were discussed with the researcher with the aim to ensure that all coders used the same coding rules and any points made were used to develop the framework of the analysis.

Fourthly, each step in the research process must be fulfilled on the basis of explicitly formulated rules and procedures. Moreover, any definitions used in the data gathering must be negotiated to realise these 'shared meanings' which recreate 'the same referents in all the associated investigators' (Gray et al, 1995b, p80).

Fifthly, a few annual reports analysed by the researcher, were those which were analysed during the pilot test. This procedure was undertaken in order to ascertain if the initial categories identified and their measurement have been remained stable at different times (stability). The result was almost stabilised.

¹⁹ The requirement of objectivity stipulates that the categories of analysis be defined so precisely that different analysts might apply them to the same body of content and secure the same results (Berelson, 1952).

²⁰ Two independent researchers who had years of doing research in accounting and reporting (e.g., corporate social responsibility and environment reporting) and were familiar with the use of content analysis were employed in this research as multiple coders.

Krippendorff (1980) states that apart from being reliable, the data collected must be valid. In this regard, Holsti (1968) argues that objectivity implies that all decisions are guided by an explicit set of rules that minimise (but never quite eliminate) the possibility that the findings reflect the analyst's subjective predispositions rather than the content of the documents under analysis. To enhance validity, explicitly formulated rules and procedures were applied. The agreement between the researcher and other coders on the categorisation of the text, as mentioned earlier, indicates that the procedure utilised in the categorisation is valid.

4.6.3 Limitations of Content Analysis

Like all research techniques, the content analysis suffers from certain limitations, which, for instance, have been discussed by Bryman and Bell (2007) as follows:

Firstly, a content analysis can only be as good as documents on which the practitioner works. When a content analysis is being conducted, it is especially important for the researcher to carefully assess whether or not the documents are authentic, credible and representative.

Secondly, it is difficult to answer the 'why' questions by using the content analysis. The method can only be employed to measure the importance of particular issue to the preparers of documents, but it is impossible to provide the answers to why that issue is important to documents.

Thirdly, content analytic studies are sometimes accused of being theoretical. The emphasis in the content analysis on measurement may easily result in being paid more focus on what is measurable rather than on what is theoretically significant or

important.

4.7 Interview

The interview 'is a conversation, usually between two people. But it is conversation where one person: the interviewer is seeking responses for a particular purpose from the other person: the interviewee' (Gilbert, 1993, p135). The interview has been strongly claimed to be one of the most widely used methods of research (Gilbert, 1993). It is probably the most popular method employed in qualitative research (Bryman and Bell, 2003). The aim of the interview is to gain in-depth information that could be difficult to acquire via other methods (Zhang, 2006). As a matter of fact that the sample of this research is considered to be low, it is, therefore, more likely that other types of data collection such as questionnaires would not be suitable in this study. In addition, Maali (2005) argues that interviews provide an opportunity to understand meaning held in unarticulated way by the subjects interviewed. Graham et al. (2005) argue that the interview enables researchers to assess questions not suited to quantitative analysis and can provide some new explanations that have not been discussed in the prior studies.

4.7.1 Semi-structured Interview

Interview can be structured, semi-structured or unstructured. A structured interview intends to capture precise data of a codable nature in order to explain the behaviour within pre-established categories (Denzin and Lincoln, cited in Kamla, 2005). In contrary, an unstructured interview aims to understand the complex behaviour of members of society without imposing any prior categorisation that may limit the field of inquiry (ibid). A semi-structured interview lies between the structured and

unstructured interview. It is a process in which there are no formal questions, and instead, a series of topics usually introduced from a checklist, and will be discussed in any order that seemed natural during the interview (Bryman and Bell, 2007). Wengraf (2001, cited in Maali, 2005) argues that semi-structured interviews are employed when informants' responses cannot be predicted in advance, and the interviewer may to greater extent have to modify the procedure of the interview in response to the respondent's replies to the initial prepared questions.

Semi-structure interviews are adopted in the second stage of the current research because they allow space for discussion and encourage the participants or interviewee to raise and elaborate on important related issues, in their own terms attitude and experience that are relevant to the research questions (Walker, 1985). In addition, semi-structured approach appears to be friendlier and less intimidating (Cohen and Manion, 1980). Furthermore, to improve data quality this study employed the face-to-face interview to attain the highest response, establish rapport, and motivate the respondent to answer fully and accurately (Judd et al., 1991).

4.7.2 Limitations of Interview

It is recognised that the interview has its limitations that researcher should be aware of, such as poor recall, inaccurate articulation and researcher bias (Yin, 2003, cited in Maali et al., 2006). In addition, the interviewee's answer may not be reflection of his or her own belief or idea but tend to give the answer that would suit the interviewer expectations or desires (Judd et al., 1991). In this regards, Taylor and Bogdan (1984, p81) state 'as a form of conversation, interviews are subject to the same fabrications, deceptions, exaggerations, and distortions that characterise talk between any person. Although people's verbal accounts may lend insight into how they think about the world and how they act, there can be a discrepancy between what they say and what

they actually do'. However, in order to overcome such limitations in interviews, Yin (2003) suggests the corroboration of interview data by information from other sources, which was undertaken in the present research by combining two methods of data gathering (i.e., interview data and content analysis data).

4.8 Data Collection and Description

This section describes the data selection for both stages of the study. It provides a discussion about the sample selection procedures which cover descriptions of the sample selection process, selection of the sample period and justifications for the selection of the sampled firms and interviewees.

4.8.1 Companies Selection for Stage One

4.8.1.1 Sample Selection Process

Financial institutions are excluded from the analysis as the study only focuses on derivative activities reported by non-financial entities. Annual reports of Chinese listed companies in 2006 are considered as the sampling unit for observation and analysis. Companies' annual reports are obtained from the Internet and in order to ensure the validity of the data, only those official websites, such as the websites of SHSE and SZSE, as well as the authorised securities markets' data providers, like the China Securities Index Company Limited (CSI Co., Ltd) and Juchao Information, are considered as the figures or reports posted on them are deemed much more reliable.

All sample companies are selected from the Chinese Securities Index (CSI)²¹ 100 and 200 representing large and medium firms in terms of market capitalization in Chinese domestic A-share market as evidence (e.g., Bodnar et al, 1996; Grant and Marshall, 1997; El-Masry, 2006) shows that the large companies are more likely to use derivative products. The process of choosing sample companies can be divided into two stages:

Firstly, I carefully checked annual reports produced by every CIS 100 entity and found 39 non-financial firms which used derivative instruments in 2006.

Secondly, 100 randomly²² chosen non-financial CSI 200 companies' reports were scrutinised so as to provide some indication about reporting by medium size organizations and the total of 14 listed firms disclosed that they got involved in derivative business in 2006.

In order to identify whether the company used derivative products, I adopt the 'word search' function of Adobe Reader. The key words to be searched and the reasons for choosing them are listed in Table 4.4. By using the 'word search' function, all of the eleven key words in Table 4.4 have been searched for every annual report. If one of them has been found in the document, I carefully read the paragraphs where the word located and make a judgment whether the company got involved in derivatives

²¹ The CSI Co., Ltd, a joint venture between the SHSE and SZSE, is a professional business entity specialising in the creation and management of indices and index-related services. The company produces a series of CSI indices including CSI 100, 200, 300, 500 and 700 as well as other tailor made indices such as CSI Sector Indices, CSI Style Indices, CSI Thematic Indices, CSI Strategy Indices, CSI Overseas Indices, CSI Fund Indices, CSI Bond Indices, CSI Customised Indices and CSI Futures Indices. CSI 100 consists of the top 100 stocks with the largest market value in CSI 300 aiming to comprehensively reflect the price fluctuation and performance of the large and influential companies in Shanghai and Shenzhen securities market. CSI 200 consists of all 200 stocks that are non-constituents of CSI 100 in CSI 300 index. CSI 200 aims to comprehensively reflect the price fluctuation and performance of the mid-cap companies in Shanghai and Shenzhen securities market (CSI Co., Ltd. 2010).

²² The process of random sampling is as follows:

1. Number each company listed on the CSI 200 table from 1 to 200.
2. Label every number between 1 and 200 on an individually small paper card. Drop all two hundred cards into a box and shake it as to make them mixed.
3. Pick up one card at once and mark the chosen number. Total one hundred cards were drawn out.
4. Find out companies on the CSI 200 table corresponding to the selected numbers and finally get 100 sample firms.

business. If the reporting company clearly mentioned the use of derivatives, it will be selected as a sample firm; otherwise, the company is not chosen into the sample, if none of the key words have been found or it did not mention the use of derivative instruments.

Table 4.4 Key Words to be Searched

Key Words	Reasons
Financial Instruments	Under the IAS framework, the derivative is a type of financial instruments
Financial Assets	IAS 39 adopts the full-fair-value measurement that all entities must recognise all financial instruments, including derivatives, as assets or liabilities on the balance-sheet and measure those instruments at fair value, and changes in the derivatives fair value are to be recognised in the current earnings unless specific hedge accounting criteria are met.
Financial Liabilities	
Fair Value	
Derivatives	By scrutinising hundreds of annual reports, I find that commodity futures, warrants, convertible bonds and foreign currency swaps are the most popular derivative products used by Chinese listed companies.
Futures	
Warrants	
Convertible Bonds	
Foreign Currency Swaps	
Risk	IFRS 7 requires that, for each type of risk arising from financial instruments, an entity shall disclose: <ul style="list-style-type: none"> a) the exposures to risk and how they arise; b) its objectives, policies and processes for managing the risk and the methods used to measure the risk; and c) any changes in 33(a) or (b) (see above) from the previous period.
Hedging	Following the provisions of IFRS 7, an entity shall disclose the following separately for each type of hedge described in IAS 39 (i.e. fair value hedges, cash flow hedges, and hedges of net investments in foreign operations): <ul style="list-style-type: none"> a) a description of each type of hedge; b) a description of the financial instruments designated as hedging instruments and their fair values at the reporting date; and c) the nature of the risks being hedged.

The process results in a final sample of 53 companies in 2006 which can be

categorised by:

Size – 39 from CSI 100 and another 14 from CSI 200 representing large and medium size firms respectively as shown in Table 4.5.

Table 4.5 List of Sample Companies

	CSI 100 Companies	CSI 200 Companies
SHSE	AIR CHINA LIMITED	ANHUI JIANGHUAI AUTOMOBILE CO.,LTD
	ANHUI CONCH CEMENT CO., LTD	NANJING WATER TRANSPORT INDUSTRY CO.,LTD
	BAOSHAN IRON &STEEL CO., LTD	QINGDAO HAIER CO., LTD
	BEIJING CAPITAL CO.,LTD	TBEA CO.,LTD
	BEIJING GEHUA TV NETWORK, INC	
	CHINA SHIPPING DEVELOPMENT CO., LTD	
	CHINA SOUTHERN AIRLINES CO., LTD	
	CHINA UNITED TELECOMMUNICATIONS CORPORATION LIMITED	
	CHINA YANGTZE POWER CO., LTD	
	GD POWER DEVELOPMENT CO., LTD	
	GUANGXI GUIGUAN ELECTRIC POWER CO.,LTD	
	GUANGZHOU BAIYUN INTERNATIONAL AIRPORT CO., LTD	
	HANDAN IRON & STEEL CO.,LTD	
	HUADIAN POWER INTERNATIONAL CORPORATION	
	HUANENG POWER INTERNATIONAL, INC	
	INNER MONGOLIA BAOTOU STEEL UNION CO.,LTD	
	JIANGXI GANYUE EXPRESS CO.,LTD	
	JIANGXI COPPER CO., LTD	
	KWEICHOW MOUTAI CO., LTD	

	MAANSHAN IRON & STEEL CO., LTD	
	SHANGHAI AUTOMOTIVE CO.,LTD	
	SHANGHAI ELECTRIC POWER CO., LTD	
	SHANGHAI INTERNATIONAL AIRPORT CO., LTD	
	SHANGHAI ZHENHUA PORT MACHINERY CO.,LTD	
	SINOCHEM INTERNATIONAL CORPORATION	
	TSINGTAO BREWERY CO., LTD	
	WUHAN IRON AND STEEL CO., LTD	
	YANTAI WANHUA POLYURETHANES CO.,LTD	
SZSE	ANGANG STEEL CO., LTD	ANHUI BBKA BIOCHEMICAL CO., LTD
	BEIJING YANJING BREWERY CO.,LTD	CHINA MERCHANTS PROPERTY DEVELOPMENT CO., LTD
	CHINA INTERNATIONAL MARINE CONTAINERS (GROUP) CO., LTD	CSG HOLDING CO.,LTD
	CHINA VANKE CO., LTD	HEBEI JINNIU ENERGY RESOURCES CO., LTD
	CHONGQING CHANGAN AUTOMOBILE CO., LTD	SHANDONG CHENMING PAPER HOLDINGS LIMITED
	HUNAN VALIN STEEL TUBE & WIRE CO., LTD	SHANDONG HAIHUA CO., LTD
	PANZHUIHUA NEW STEEL & VANADIUM CO., LTD	SHENZHEN ZHONGJIN LINGNAN NONFEMET CO., LTD
	QINGHAI SALT LAKE POTASH CO., LTD	YUNNAN ALUMINIUM CO., LTD
	SHENZHEN ENERGY INVESTMENT CO., LTD	YUNNAN COPPER CO.,LTD
	TCL CORPORATION	YUNNAN TIN CO., LTD
	WULIANGYE YIBIN CO.,LTD	

Listing exchange – 32 listed on SHSE and the remaining 21 on SZSE as shown in Table 4.2.

Industries – The sample firms are operated in 14 different industries as shown in

Table 4.6. The Metal & Nonmetal industry with the largest number of 16 companies takes nearly a third of the total sample, followed by the industries of Transportation & Warehousing (7), Machinery, Equipment & Meter (6), Electricity, Gas, Water Producers & Suppliers (6), Food & Beverage (5), Oil, Chemical & Plastic (3), Real Estate (2), Social Service (2), and the industries of Broadcast & Culture, Electronics, IT, Mining, Paper Making & Pressing, Wholesale & Retail with the only one respectively have the least sample firms. It is quite interesting that compared with other non-financial organisations, the metal enterprises seemed to be more active to use derivative instruments in 2006. Regardless the incentives of using derivatives, I think the availability of derivative instruments in China's securities markets is one possible reason to explain such situation. As discussed in Chapter III, China only had three commodity futures markets in 2006 and the metal and industrial materials like aluminum, copper and zinc were centrally traded on SHFE. There were more derivative products for metal companies to choose and they were therefore more likely to get involved in derivatives' trading.

Table 4.6 Sample Companies Categorised by Industries

Industries	Nos of Companies
Broadcast & Culture	1
Electricity, Gas, Water Producers & Suppliers	6
Electronics	1
Food & Beverage	5
IT	1
Machinery, Equipment & Meter	6
Metal & Nonmetal	16
Mining	1
Oil, Chemical & Plastic	3
Paper Making & Pressing	1
Real Estate	2
Social Service	2
Transportation & Warehousing	7
Wholesale & Retail	1

4.8.1.2 Factors Considered in Companies Selection

1. Why choose companies listed on A not B shares market in the sample?

China's equity shares are listed in terms of A shares (known as domestic shares), B shares (known as foreign shares) and H shares (referring to the quoted shares of companies incorporated in mainland China that are traded on the Hong Kong Stock Exchange). The A and B shares are major types of equities traded on both SHSE and SZSE. The key distinction is that the A share is denominated in China's local currency – RMB whereas the B share in foreign currencies (US dollars in SHSE and Hong Kong dollars in SZSE). For a long period, the A shares market was merely open for Chinese residents and closed to foreign investors while the B shares market was only to foreign investors due to the regulatory restriction. However, when it comes to the 21st century, especially after China's accession to the World Trade Organisation (WTO) in 2001, China's stock market started to relax the restrict capital control and open its domestic market to the foreign investors. In February 2001, China implemented plans to allow domestic Chinese residents with authorised foreign-currency accounts to legally purchase the B shares. In November 2002, China published the regulations to permit the Qualified Foreign Institutional Investors (QFII) with authorised local-currency accounts to invest in the domestic equities. Some companies list their equities on both boards, but their B shares trade at a large discount to their A-shares, which tend to see much larger trading volumes (Liu, 2006). Compared with the B shares market, the A shares market is greater huge in terms of numbers of listed companies and the market size as shown in Table 4.7. In the end of 2006 focused by the research, the number of companies listed in the A shares market was over ten times larger than those in the B shares market while the market value of the A shares market was almost twenty folders bigger over that of the B shares market. Hence, the study chooses companies listed on the domestic A shares market as sample units so as to provide a picture of the disclosure of using derivatives by firms quoted

on the main China's stock market.

Table 4.7 China's A and B Shares Market Overview

Year	Nos of Listed Companies		Market Value (Billion RMB)	
	A Shares Market	B Shares Market	A Shares Market	B Shares Market
2002	1113	111	1171.9	76.6
2003	1176	111	1230.6	87.3
2004	1267	110	1099.8	69.0
2005	1272	109	1002.8	60.2
2006	1325	109	2373.1	127.2
2007	1441	109	9052.7	253.8
2008	1516	109	4441.9	79.5

Source: China Statistical Year Book 2009

2. Why emphasise on the year of 2006?

China was a centrally planned economy that developed a number of features designed to maintain the central control by the government. Various share ownership types have been created in a shareholding enterprise and among them the state shares, legal person shares and A shares are most dominant. Both the state shares and legal person shares are state-controlled and they have some commonalities. Firstly, they are usually owned by the government. The state shares are exclusively owned and managed by the government asset management bureaus and the legal person shares, on the other hand, are held by domestic institutions and other non-individual entities, such as state-private mixed companies and non-bank financial institutions (Qi, et al., 2000). Although those entities commonly have mixed ownership structure with both the state and private stakes, they are usually indirectly controlled by the government in fact. A dataset created by Delios and Wu (2005) comprising of Chinese quoted companies during the periods 1991 – 2001, illustrates that the government-related organisations owned 81.5 per cent of total legal person shares. Secondly, the state and legal person shares are not legally tradable which is distinct with the A shares. The state-owned shares can only be transferred privately to other government agencies,

legal entities, and foreign investing firms subject to state approval (SAMB, 1997). Thirdly, the state-controlled shares take the majority of shares in most listed companies. In a database assembled by Jiang et al. (2008) which covers listed firms in SHSE in the end of 2004, the state and legal person shares averagely took 60 per cent in a company's total shares. The government-centrally-controlled ownership usually creates several problems as follows:

Firstly, the government political interference distorts and misleads the entity's goal to maximise shareholders' wealth as the government may pursue objectives that do not necessarily aim to maximise the company's value which is to some extent in conflict with the expectation of holders of the A shares (Gupta, 2002; Jiang et al., 2008).

Secondly, the state ownership often leads to the lack of managerial discipline and incentives that may result in low efficiency of state owned enterprises (SOEs) (Groves et al., 1994; Qian, 1996; Qian and Roland, 1996; Gupta, 2002).

Thirdly, the corporate control would only be in the hand of the government but may not be converted to other private owned businesses by conducting takeovers as the majority of total shares are non-tradable (Jiang et al., 2008).

Such problems triggered the Chinese government to conduct a series of shareholding reform. The state has a goal of achieving greater economic efficiencies by establishing a 'modern enterprise system' (Chen et al., 2002) that led to the privatisation of small and large SOEs since the late 1990s (Cao et al., 1999; Lin and Zhu, 2001). The development of the shareholding reform can be divided into two stages as follows:

a) Reforms before 2005

The shares reform of enterprises in China has begun with small and medium SOEs since the late 1990s. The privatization of small and medium companies was carried

out by the change of state owned to employee owned enterprises, or the sale of large shares to a small number of parties like managers (Bengtsson, 2005). In December 1999, the government deliberately picked ten companies with stable and high profits, to start selling off their state owned shares. The sale of shares was mainly for the immediate purpose of covering the gap in the social security system²³ (CSRC, 2007). Two companies –China Jialing Industry Co., Ltd (Group) and Guizhou Tyre Co., Ltd, were firstly selling their state owned shares. However, only 80 per cent of the shares were sold because their shares were priced close to market value despite their excellent performance (Bengtsson, 2005). Since the result of the reform did not achieve the government's expectation, it had to be suspended before the other eight companies had started selling (CSRC, 2007).

In June 2001, a new shares reform took off and 16 listed SOEs were selected this time to sell their state owned shares to the public. The income from the selling of state owned shares was supposed to cover social security funding as well (CSRS, 2007). But the equity market shrank 30 per cent as investors seriously concerned about the possible decrease of the market value as a result of supplying more trading shares and the reform was abandoned like the 1999's (Bengtsson, 2005).

b) Reforms since 2005

In February 2004, the State Council issued guidelines to facilitate the shareholding reform of selling state owned shares. CSRC, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), and MOF were responsible for supervising the reform and guiding companies to sell state-owned shares. CSRC announced the initiation of the shareholding reform in April 2005 and four listed SOEs were chosen as the experimental examples for the privatisation in

²³ Since 1997, the government has been working on reforming the social security system in line with selling state owned shares in state owned enterprises. Back then, the government had just changed the retirement system from pay as you go to official funding, and needed cash to fill up the gap representing workers that had not participated in the pay as you go system (Bengtsson, 2005).

May 2005 (CSRC, 2007). In order to protect minority investors, CSRC ruled that two thirds of the owners of tradable shares must vote in favour of a decision for it to be accepted. In early June, share prices of the stock market fell to the lowest level in eight years. In response, the CSRC issued a new regulation on 16 June to urge companies to buy back their own shares. On 17 June they introduced a lower limit on ratio of shares to stop the share price from falling even lower and then 42 companies were chosen for the second part of the reform on 20 June, and this time lessons were learned from the first part of the reform (Bengtsson, 2005). On 26 August 2005, CSRS announced a draft of ruling all companies listed on the exchanges to be privatized and companies involved in the reform would receive the preferential treatment by authorities. On 4 September, the draft became to the formal regulation – *The Administrative Measures of the Shareholding Reform by Listed Companies* ('Measures 'thereafter), and 40 companies announced that they would participate in the reform (CSRC, 2007). The Measures state that shareholders owning more than five percent of former non-tradable stock may sell their shares after a twelve month lock up period. From the date that the implementation plan is accepted, the shareholders that are entitled to sell have to wait twelve months, and after that period is over they may sell a maximum of five percent of the total shares in the listed company during the first twelve months. During the first twenty four months they may sell a maximum of ten percent of the total share value in the listed company. These are minimum regulations, and the companies may very well decide to prolong the suggested period before the state is allowed to sell their shares (CSRC, 2005).

The shareholding reform was initially resisted by most of investors as they worried about suffering huge losses as a result of depression stock prices caused by the dramatic increase in the supply of freely tradable equities (Bengtsson, 2005). When the state owned shares become tradable, holders of the former non-tradable shares gain money by selling them, by contrast, holders of tradable shares often have to see the value of their shares decrease, because there is a larger supply of shares on the market. The government therefore decides to compensate holders of floating equities

so as to encourage the privatisation reform. Under that circumstance, CSRC allowed some firms to complete the shareholding reform by issuing warrants as a way to compensate their public investors. Take *Baoshan Iron & Steel Co., Ltd* for instance, the company's compensation plan to investors holding tradable shares are as follows:

The owners of non tradable shares will give the owners of tradable shares 2.2 shares for every ten shares held and a European call option with a strike price of RMB 4.5 and 378 days to expiry. The parent Baosteel Group will also guarantee a price floor; if the price falls below 4.53 RMB they will buy back the shares outstanding up to a total purchase amount of RMB 2 billion. The plan is for Baosteel Group to hold 67 per cent of total outstanding shares in three years (Baoshan Iron & Steel Co., Ltd, 2006).

There are three important reasons for the study to focus on the year of 2006 as follows:

Firstly, most listed companies finished their shareholding reform in 2006 and according to the statistics, 94 per cent of Chinese listed companies had completed the ownership conversion process by mid-year 2006 (People's Daily, 2006). Since some companies may issue warrants to pursue the privatisation reform, it is therefore expected to gather more sample companies using derivatives from their 2006's annual reports.

Secondly, literature has identified the price discovery, risk shifting, hedging, market efficiency and operational advantages as the basic social and economic functions of the derivatives (e.g., Powers and Castelino, 1991; Chance, 1995; Kolb, 1997). However, a certain type of derivate instruments – warrants, can be used as a compensation tool for listed companies to finish the privatisation reform in emerging economies such as China and it is an interesting phenomenon existing in Chinese equity market. Hence, there is a need for researchers to choose the year of 2006 to

investigate why Chinese listed firms adopt warrants to complete their shareholding reform, how they finish the process, what kind of information they disclosed etc.

Thirdly, as discussed in Chapter III, the use of derivative instruments is compulsorily disclosed after 1 January 2007 so the year of 2006 is an important year to analyse whether Chinese listed companies have sufficient preparations to be adapted with the forthcoming mandated derivative regulations.

3. Why choose non-financial rather than financial institutions²⁴ as sample companies?

Previous studies have examined the usefulness of derivative disclosures by both financial and non financial organisations and most of them choose one type of institutions rather than mixing them up as shown in Table 4.8. The study only selects non-financial institutions in the sample and it is based upon following considerations:

Firstly, financial organisations are more likely to get involved in financial derivatives business as there is a need for them to use derivative instruments to manage risks arising from the adverse movement of the market factors (e.g., interest rate and foreign exchange rate) that may cause huge losses to their financial assets. Meanwhile, they are restrained by different regulations not merely accounting and reporting standards. For instance, banks are under the supervision of BCBS in the worldwide and will follow their guidelines for capital and banking regulations, which is so-called the 'Basel Accords'²⁵. In China, different with a non-financial company, a listed

²⁴ Financial institutions are enterprises that are principally engaged in financial intermediation or in auxiliary financial activities which are closely related to financial intermediation. There are three major types of financial enterprises:

- a. Deposit-taking institutions that accept and manage deposits and make loans, including banks, building societies, credit unions, trust companies, and mortgage loan companies
- b. Insurance companies and pension funds
- c. Brokers, underwriters and investment funds (Organisation for Economic Co-operation and Development (OECD), 2001).

²⁵ The first of the Basel Accords (Basel I) was published by BCBS in 1988 and the Basel Capital Accord sets down the agreement among the G10 central banks to apply common minimum capital standards to their banking industries, to be achieved by end-year 1992. The objective was to introduce international convergence of capital

financial institution faces multi-folder regulatory framework which is so-called ‘One Bank and Three Committees Regime’ meaning that it would be supervised by the People’s Bank of China (i.e. the central bank), as well as CSRS, China Banking regulatory Commission (CBRC)²⁶ or China Insurance regulatory Commission (CIRC)²⁷. For the information disclosed in annual reports, the listed financial companies therefore follow not only accounting and reporting standards required by the Chinese accounting authorities but also specified regulations imposed by the regulators of financial institutions. Since the research solely focuses on whether quoted companies disclose their use of derivative products following related accounting and reporting standards, financial institutions were excluded from the final sample.

Secondly, there were only eight and one listed financial institutions on CSI 100 and

measurement and capital standards. The standards are almost entirely addressed to credit risk, the main risk incurred by banks. The second of the Basel Accords (Basel II) was initially published in June 2004 aiming to create an international standard that banking regulators can use when creating regulations about how much capital banks need to put aside to guard against the types of financial and operational risks banks face. Basel II attempted to accomplish this by setting up risk and capital management requirements designed to ensure that a bank holds capital reserves appropriate to the risk the bank exposes itself to through its lending and investment practices. BCBS updated their guidelines for capital and banking regulations, which is so-called the ‘Basel III’ on 20th September 2010 in a response to the deficiencies in financial regulation revealed by the recent global financial crisis. Basel III strengthens bank capital requirements and introduces new regulatory requirements on bank liquidity and bank leverage (BCBS, 2010).

²⁶ CBRC is an agency authorised by the State Council to regulate the banking sector. Its main functions are as follows:

- a. Formulate supervisory rules and regulations governing the banking institutions.
- b. Authorise the establishment, changes, termination and business scope of the banking institutions.
- c. Conduct on-site examination and off-site surveillance of the banking institutions, and take enforcement actions against rule-breaking behaviors.
- d. Conduct fit-and-proper tests on the senior managerial personnel of the banking institutions;
- e. Compile and publish statistics and reports of the overall banking industry in accordance with relevant regulations.
- f. Provide proposals on the resolution of problem deposit-taking institutions in consultation with relevant regulatory authorities.
- g. Responsible for the administration of the supervisory boards of the major State-owned banking institutions.
- h. Other functions delegated by the State Council (CBRC, 2006).

²⁷ CIRC is an agency of China authorised by the State Council to regulate the Chinese insurance products and services market and maintain legal and stable operations of insurance industry. It was founded on 18 November 1998, upgraded from a semi-ministerial to a ministerial institution in 2003, and currently has 31 local offices in every province. The major functions of CIRC include:

- a. Create laws, rules and regulations to supervise the industry.
- b. Approve and examine incorporation of insurance entities, merge, split, change or dissolve.
- c. Accreditation, regulate the hiring of senior managers in various insurance companies.
- d. Regulate premiums, new insurance products and categories.
- e. Ensure payment ability, insurance deposit, insurance guarantee fund.
- f. Regulate self-insurance and mutual insurance, insurance trade associations.
- g. Investigate and punish unfair competition and illegal conduct, non compliance of registration.
- h. Regulate overseas operations of domestic insurance firms.
- i. Create standards for risk, forecast, profitability and report to the People's Bank of China.
- j. Subordinate to State Council directives (CIRC, 2006).

200 respectively in the end of 2006²⁸ indicating that Chinese large and medium size quoted companies were dominant by non-financial organisations at that time. Hence, it is beneficial for selecting non-financial companies to the sample to get better understanding of the overall patterns of derivative related disclosures in Chinese equity market.

Table 4.8 Sample Companies in Previous Studies

	Financial Institutions	Non-Financial Institutions
Ahmed et al., 2004	*	
Ahmed et al., 2006	*	
Ameer, 2009		*
Barth et al., 1996	*	
Bhamornsiri and Schroeder, 2004	*	*
Blankley, 2000 and 2002	*	*
Chipalkatti and Datar, 2006	*	
Dunne et al., 2007		*
Eccher et al., 1996	*	
Edwards and Eller, 1996	*	
Jorion, 2002	*	
Lajili and Zeghal, 2005	*	*
Linsmeier et al., 2002		*
Liu et al., 2004	*	
Lopes and Rodrigues, 2008	*	*
Nelson, 1996	*	
Perignon and Smith, 2010	*	
Rajgopal, 1999		*
Reynolds-Moehrle, 2005		*
Richie et al., 2005		*
Roulstone, 1999	*	*
Schrand, 1997	*	
Seow and Tam, 2002	*	
Venkatachalam, 1996	*	
Wang et al., 2005	*	

²⁸ Financial institutions on CSI 100 include: Bank of China Limited, China Merchants Bank Co.,Ltd, China Minsheng Banking Corp.,Ltd, CITIC Securities Co., Ltd, Hua Xia Bank Co.,Ltd, Industrial and Commercial Bank of China Limited, Shanghai Pudong Development Bank Co.,Ltd and Shenzhen Development Bank Co.,Ltd.

The financial institution on CSI 200 Includes: Hong Yuan Securities Co.,Ltd.

Zhang, 2009		*
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4.8.2 Interviewees Selection for Stage Two

4.8.2.1 Sample Selection and Profile of Interviewees

The study mainly concentrates on two equity market participants groups, institutional investors and professional analysts, as they are widely perceived with a better understanding of the complex nature of derivatives and associated disclosures. Table 4.9 summaries the details of the interviewees. There are total 21 interviewees in the sample where ten investment managers and another eleven professional analysts are included. Interviewees are selected from two organisations which include ten (i.e., five funds managers and five analysts) from a mutual funds management company – *China Southern Fund Co., Ltd. (CSF)*²⁹, and the rest eleven (i.e., five investment managers and six analysts) from a securities company – *Qilu Securities Co., Ltd. (QLS)*³⁰. As shown in Table 4.9, all of interviewees are male and relatively young as 19 out of 21 (90.48%) are aged from 21 to 40. Generally, they have much of experience in the securities business on average, they have worked for seven more years in the business. Sample interviewees are well educated as the vast majority (i.e., 20 out of 21) achieved the postgraduate degrees like Masters and PhD. Most of them which are 16 out of 21 (76.19%) have one qualification, namely Qualifications of Securities Practitioners (QSP)³¹ and four interviewees possess one more additional

²⁹ In March 1998, with the approval of CSRC, China Southern Fund Management Company, the first regularised fund management company, was officially established with a registered capital of 150 million RMB. Headquarter of CSF is located in Shenzhen. By the end of 2010, the assets managed by the company including 26 mutual funds had been approaching to 190 billion RMB which was ranked the top within the industry (CSF, 2011).

³⁰ Qilu Securities Co., Ltd. is a large-scale comprehensive securities company approved by CSRC with registered capital of 5.2 billion RMB and a staff of over 2000. Headquarter of the company is located in Jinan and it has 117 branches all over Shandong Province as well as large and medium-sized cities in China. QLS is the only national securities dealer in Shandong Province (QLS, 2011).

³¹ CSRC stipulates that the professionals, who undertake securities business in the institutions engaging the securities business, shall pass the qualification examination for the securities practitioner and meet the stipulated professional conditions.

qualification, such as Chartered Financial Analyst (CFA) and Certified Public Accountant (CPA).

Table 4.9 Interviewees' Profile

Interviewee's Code	Location	Gender	Age Group	Job Title	Years of Working in the Field	Highest Education Qualification	Professional Qualification
Interviewee (IV) 01	Shenzhen	Male	31-40	Chief Investment Manager	9	Master	QSP
IV 02	Shenzhen	Male	31-40	Deputy Chief Analyst	10	Master	QSP
IV 03	Shenzhen	Male	21-30	Analyst	2	Master	QSP
IV 04	Shenzhen	Male	21-30	Analyst	2.5	PhD	QSP
IV 05	Shenzhen	Male	31-40	Analyst	2	PhD	CFA, QSP
IV 06	Shenzhen	Male	21-30	Analyst	1	Master	QSP
IV 07	Shenzhen	Male	31-40	Funds Manager	9	Master	CPA, QSP
IV 08	Shenzhen	Male	31-40	Funds Manager	16	Master	CPA, QSP
IV 09	Shenzhen	Male	21-30	Funds Manager	6	Master	CFA, CPA, QSP
IV 10	Shenzhen	Male	21-30	Assistant Funds Manager	3	Master	QSP
IV 11	Jinan	Male	50+	Analyst	16	PhD	None
IV 12	Jinan	Male	31-40	Analyst	13	Master	QSP
IV 13	Jinan	Male	31-40	Analyst	10+	Master	QSP
IV 14	Jinan	Male	41-50	Senior Analyst	15	Bachelor	QSP
IV 15	Jinan	Male	31-40	Senior	11	Master	QSP

		e	0	Strategy Analyst			
IV 16	Jinan	Male	31-40	Analyst	1	PhD	QSP
IV 17	Jinan	Male	31-40	Investment Manager	11	Master	QSP
IV 18	Jinan	Male	31-40	Senior Business Manager	3	PhD	QSP
IV 19	Jinan	Male	21-30	Senior Investment Manager	6	Master	QSP
IV 20	Jinan	Male	21-30	Investment Manager	3	Master	QSP
IV 21	Jinan	Male	31-40	Business Manager	2	Master	QSP

4.8.2.2 Interview Process

A series of semi-structured interviews were undertaken in Shenzhen and Jinan between July and October 2009. All interviews were conducted in the interviewees' offices. An interview guide (see Appendix II³²), which contains a cover letter with descriptions of the general background of the research and a list of questions, was prepared prior to the interview process. Such guide would help interviewees to focus on some points and gain the related information in respect to those particular points. As shown in Appendix II, there are total twelve questions included in the guide and all questions prepared are open ended, which allow for more dialogue between interviewees and the researcher. However, the last two questions - Q11 *'In your view, what is the impact of recent financial crisis to the development of Chinese derivatives market?'* and Q12 *'In your view, what is the impact of recent financial crisis to the accounting and reporting for derivatives in China?'* are not taken into account in the present research as the primary objective of asking these two questions is to collect

³² Appendix II is an English version of the interview guide but in practice, the Chinese version was provided to each interviewee prior to the interview.

qualitative data for other studies in the future, and therefore, the first ten questions were employed in the study to examine equity market participants' attitudes, opinions and views towards derivative disclosures reported by Chinese listed companies.

Before conducting interviews, the participants were assured that the whole process was confidential and their names and personal details would not be disclosed. Thus, all of 21 participants gave their permission to record the interviews. The researcher took all possible effort to cover the entire topic, however, phrasing and sequence of questions varied from one interview to another (Kamla, 2005). At the beginning of each interview, the researcher explained to the participants the aim of the interview and the research, and then, asked if there was any further explanation needed. It was explained to the interviewees that the researcher was not looking to the right and wrong answer (O'Dwyer, 1999) but rather seeking their opinions and perceptions on the matters of discussion. Interviews were carried out in Chinese.

All interviews lasted for approximately 40 minutes. According to Gillham (2000), different method could be followed in transcribing the interview data. In this research, all of 21 interviewees were voice recorded. Then the entire interview has to be writing down word by word and writing up the transcript was done in the same interview language. Next, the researcher translated the entire documents to the English and doubly checked the translation with a Chinese to English translator on the accuracy of the translation to make sure the translation carry the same meaning emphasised by the interviewee (Kamla, 2005). No variations were found.

4.9 Summary

This chapter has comprehensively described the research methodology, methods and data collection adopted in this research. The study has followed the deductive research

methodology. It employed both quantitative and qualitative research methods and with regard to the research approaches, content analysis as well as interview was applied in either the first or second stage of the study. In conducting content analysis, six essential steps suggested by Weber (1985) and Wolfe (1991), which include first, determine the sampling units; second, determine the recording unit; third, determine the categories to be coded; fourth, determine the coding mode; fifth, test coding on sample of text; sixth, assess reliability and validity, were adopted. The semi-structured interview approach was then employed to elicit the perspectives of equity market participants on derivative related disclosures provided by Chinese listed companies. By carefully selecting, the final sample used in the first phase comprises 53 large and medium non-financial listed companies in 2006 and in the second phase, there are total 21 interviewees included in the sample.

Chapter V Content Analysis Results and Discussions

Chapter V Content Analysis Results and Discussions

5.1 Introduction

This chapter is to provide an argument of the first stage of the study with the primary aim to answer following research questions:

- What is the level of derivative related disclosures made by Chinese listed companies?
- What is the information content of derivative related disclosures provided by Chinese listed companies?

It tries to draw a picture to describe the degree and nature of information in relation to the use of derivative instruments by Chinese quoted firms. The chapter starts with the discussion of overall disclosures level, followed by reporting on the disclosures made by companies in different sizes, information content of derivative disclosures, disclosures of different types of derivatives. A summary of findings will be presented in the end.

5.2 Overall Disclosures Level

In this section, the degree of derivative disclosures complying with relevant IFRSs and IASs regulations by Chinese listed companies is presented and discussed from three major perspectives: the scores, amount of information and disclosed sections.

5.2.1 Overall Scores

Table 5.1 presents the result of the number of questions in Financial Derivatives Disclosures Index (FDDI) disclosed by individual companies. The quantities of questions mentioned by each sample company were ranging from 1 to 11³³ and the mean value was 4.28 indicating that firms, on average, only disclosed around 4 questions out of total 24 in FDDI. In other words, almost 20 questions related to the use of derivative instruments were absent in the company annual reports.

Table 5.2 summarises the numbers of sample firms that disclosed individual questions in their annual reports and all of 24 questions presented in FDDI can be categorised into three groups as follows:

1. Frequently Disclosed Questions. This group contains Questions 2, 4, 9, 10, 17, 19, 22 and 24 that are mentioned by over or nearly a third of sample companies implying that these questions are most popularly addressed by reporting entities. Q2 has the biggest score of 40 indicating that the majority of 53 sample companies revealed the objectives of their using derivative products, followed by Q24 (33) that provided information not required by IFRSs and IASs. Concerning Q9, nearly half of the sample companies report derivatives in terms of principal, stated, face or other value. 23 out of 53 companies stated their compound financial products containing both derivative and non derivative features (referring to Q22). For Q19, 20 firms presented the residual market value of derivatives after netting gains and losses arising from those instruments. While 19 companies mentioned the date of their derivative instruments to be mature, expire or executed (Q10), almost one third of the entities reported the fair value of their derivative products (Q17) and 17 sample firms provided information about accounting policies for the

³³ Among total of 53 companies, *GUANGZHOU BAIYUN INTERNATIONAL AIRPORT CO., LTD* merely mentioned one question while *JIANGXI COPPER CO., LTD* disclosed the biggest quantities of 11 questions in its 2006's annual report.

treatment of derivatives (Q4).

2. Less Frequently Disclosed Questions. This group includes questions addressed by less than 10 sample companies. It consists of Questions 1, 5, 6, 7, 8, 18, 20 and 23. These questions were infrequently disclosed in a firm's annual report. For example, for Q18 and Q23, there are only six reporting entities that presented the carrying amount of derivatives and separated embedded derivatives from their compound financial instruments. Five companies addressed Q20 by disclosing methods to determine the value of derivative products. Q5 and Q6 are equally discussed by four firms that provided information about corporate hedging policies and the management of risks arising from the derivatives business. Q7 *'Does the firm discuss any changes to the above disclosures from the previous reporting period?'*, Q8 *'Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?'* and Q1 *'Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?'* were addressed by only three, two and one entities respectively.

3. Rarely Disclosed Questions. This group refers to the questions that were hardly mentioned in the annual reports. Eight of total 24 questions were not mentioned by any company in the sample, including:
 - Q3 *'Does the firm specify the associated risks provided by derivative instruments?'*
 - Q11 *'Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?'*
 - Q12 *'Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?'*
 - Q13 *'Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?'*

- Q14 *'Does the firm disclose the effective interest rates of derivative instruments?'*
- Q15 *'Does the firm specify to whom they have credit risk exposures?'*
- Q16 *'Does the firm provide the estimated maximum credit risk exposures at the reporting date?'* and
- Q21 *'Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?'*

The absence of disclosures in relation to Q15 and Q16 is understandable as unlike mature economies such as the U.S. and UK, there were no any credit related derivatives such as CDS available in the Chinese securities market at the time. Chinese listed companies were not permitted to get involved in the trade of credit related derivative instruments. However, it is quite interesting that no one mentioned Q3, suggesting that the information related to the risk arising from the use of derivatives was not provided by any sample company. As discussed in Chapter II, derivative instruments are usually described as 'double-edged swords' that are not only useful for risk management but also create huge risks that expose the entire corporate to financial distress (Berry, 2003). The North American and European evidence (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) has demonstrated that companies in mature economies provide some quantitative information regarding the risk related to the use of derivative instruments although reporting entities do not provide adequately detailed information (e.g., the assumptions of applied quantitative techniques). For example, by analysing the derivative disclosures by top ten U.S. dealer banks in 1995, Edwards and Eller (1996) find the evidence that the reporting quality of the information related to the use of derivative instruments is greatly improved by sample banks. The ten banks provided more detailed quantitative disclosures about the value-at-risk and the results of trading activities in their 1995 annual reports. However, the authors also suggest that none of the reports could be singled out as the best because most of the banks adopt a novel reporting approach on the use of derivatives that is not used by the

others. From the evidence reported in this study, it seems that Chinese listed companies were reluctant to disclose potential risks inherent in the use of derivatives. Unfortunately, this study cannot find any reporting entity that has explained the reasons for not reporting on information about the risk arising from the use of derivative products in their annual reports. There are several possible reasons that could be used to explain why Chinese listed companies did not disclose information on risks potentially caused by the use of derivatives as follows:

Firstly, the large absence of derivative-related regulations in CASs could be a factor contributing to such phenomenon. Although Chinese authorities encouraged listed companies to comply earlier with the New Accounting Standards which was effective from 1 January 2007, the accounting and reporting for the use of derivative instruments was still on a voluntary base in 2006. Therefore, it is possible that most of the companies adopted non-reporting strategy in terms of risks embedded in the derivatives business.

Secondly, the agency problem could be another reason reflecting the fact where managerial disclosure preferences are not aligned with those of shareholders. The risk associated with derivatives' trading would have adverse impacts on corporate value so managers may have a tendency to hold such 'bad news' as career concerns can motivate them to withhold bad news and gamble that subsequent corporate events will allow them to 'bury' the bad news (Nagar,1999; Nagar et al.,2003).

Thirdly, there might be another explanation that the risk associated with derivative instruments was so immaterial to companies' earnings that there was no need to disclose such information. This can be an interesting issue for further researches in terms of materiality of derivatives disclosure. There is a need to examine the impact of the use of derivatives on a company's earnings in a transitional economy.

Table 5.1 Nos of Questions in FDDI Disclosed by Companies

Nos of Companies	Minimum Disclosed Questions	Maximum Disclosed Questions	Mean	Std. Deviation
53	1	11	4.28	2.042

Table 5.2 Overall Scores of Questions in FDDI

Questions	Nos of Companies	Mean
Q2 Does the firm specify the objectives for holding or issuing derivative instruments?	40	1
Q24 Does the firm provide other disclosures related to their use of derivative instruments?	33	1
Q9 Does the firm disclose the Principal, stated, face, or other similar amount of derivative instruments?	25	1
Q22 Does the firm specify the existence of derivative features in its compound financial instruments?	23	1
Q19 Does the firm disclose the net market value for derivative instruments?	20	1
Q10 Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?	19	1
Q17 Does the firm disclose the fair value of derivative instruments?	19	1
Q4 Does the firm specify the accounting policies for derivative instruments?	17	1
Q18 Does the firm disclose the carrying amount of derivative instruments?	6	1
Q23 Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?	6	1
Q20 Does the firm specify the methods in determining the value of derivative instruments?	5	1
Q5 Does the firm specify its hedging policy?	4	1
Q6 Does the firm specify how they monitor and manage the risks associated with derivative instruments?	4	1
Q7 Does the firm discuss any changes to the above disclosures from the previous reporting period?	3	1
Q8 Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?	2	1
Q1 Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?	1	1
Q3 Does the firm specify the associated risks provided by derivative instruments?	0	0

Q11 <i>Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?</i>	0	0
Q12 <i>Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?</i>	0	0
Q13 <i>Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?</i>	0	0
Q14 <i>Does the firm disclose the effective interest rates of derivative instruments?</i>	0	0
Q15 <i>Does the firm specify to whom they have credit risk exposures?</i>	0	0
Q16 <i>Does the firm provide the estimated maximum credit risk exposures at the reporting date?</i>	0	0
Q21 <i>Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?</i>	0	0
Total	53	4.283

5.2.2 Overall Amounts

The overall amount of information regarding the use of derivatives disclosed by sample companies is presented in Table 5.3 and the disclosures are measured at the percentage of the annual report that relates to the overall size of the annual report. There are two new variables in Table 5.3: -1) NoFairValue which contains Questions 9, 10, 11, 12, 13 and 14 with respect to the disclosures related to derivatives valued at alternative methods other than the fair value measurement; and 2) FairValue which comprises Questions 17, 18, 19 and 20 as to the amount of information regarding to derivative instruments measured at the fair value method.

The mean value of the total sample is 0.972 per cent that indicates that the disclosures related to derivative activities take less than 1 per cent in a firm's annual report. The disclosure amount is relatively smaller compared with the evidence from developed

economies. For instance, according to the study conducted by Dunne et al. in 2007 that compared the derivative related information disclosed by non-financial UK listed companies in the year before and after 1998's releasing of FRS13, the mean value of the pre and post FRS 13 periods was 2.124 and 4.479 per cent respectively, which were two and four times greater than those disclosed by Chinese listed companies reported in this study.

Referring to individual questions, for example, Q22 '*Does the firm specify the existence of derivative features in its compound financial instruments?*' has the biggest mean value at 0.278 per cent demonstrating that firms report the largest amount of information concerning the use of compound financial instruments (e.g., convertible bonds³⁴) embedded with derivative instruments in their 2006 annual reports. This can be explained as the convertible bond viewed as 'delayed equity' is an important financing tool adopted by a large number of Chinese listed companies (Chen and Cao, 2008). Q24 '*Does the firm provide other disclosures related to their use of derivative instruments?*' gets the second largest mean value at 0.251 per cent. The figure implies that companies provide much information about their use of derivatives not required by IFRSs and IASs and this is likely due to the voluntary-based reporting framework applied to the disclosure of derivative activities. Q2 ranks the third place in terms of the mean value at 0.110 per cent, followed by NoFairValue (0.0996%), FairValue (0.0734%), Q4 (0.0558%), Q8 (0.0541%), Q5 (0.0198%), Q23 (0.0195), Q7 (0.0062%), Q6 (0.0036%) and Q1 (0.0003%). Sample companies do not provide any amount of information related to Questions 3, 15, 16 and 21, which is consistent with the findings reported in the previous section that no reporting entity mentioned these questions in their annual reports.

Table 5.3 Overall Amounts (Percentage of Annual Report) of Questions in FDDI

³⁴ Convertible bond is a kind of hybrid financial instruments with both fixed-income securities and equity characteristics. Convertible bonds especially for its hybrid characteristics could provide an additional option with financier (Chen and Cao, 2008).

Questions	Minimum (%)	Maximum (%)	Mean (%)
Q22 Does the firm specify the existence of derivative features in its compound financial instruments?	0	1.503	0.278
Q24 Does the firm provide other disclosures related to their use of derivative instruments?	0	1.373	0.251
Q2 Does the firm specify the objectives for holding or issuing derivative instruments?	0	0.671	0.110
NoFairValue*	0	0.593	0.0996
FairValue**	0	0.866	0.0734
Q4 Does the firm specify the accounting policies for derivative instruments?	0	1.113	0.0558
Q8 Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?	0	1.868	0.0541
Q5 Does the firm specify its hedging policy?	0	0.551	0.0198
Q23 Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?	0	0.334	0.0195
Q7 Does the firm discuss any changes to the above disclosures from the previous reporting period?	0	0.166	0.0062
Q6 Does the firm specify how they monitor and manage the risks associated with derivative instruments?	0	0.076	0.0036
Q1 Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?	0	0.017	0.0003
Q3 Does the firm specify the associated risks provided by derivative instruments?	0	0	0
Q15 Does the firm specify to whom they have credit risk exposures?	0	0	0
Q16 Does the firm provide the estimated maximum credit risk exposures at the reporting date?	0	0	0
Q21 Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?	0	0	0
Total	0.095	3.549	0.972

Notes: * NoFairValue includes Q9 'Does the firm disclose the Principal, stated, face, or other similar amount of

derivative instruments?', Q10 'Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?', Q11 'Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?', Q12 'Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?' principal amount', Q13 'Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?' and Q14 'Does the firm disclose the effective interest rates of derivative instruments?'

** FairValue includes Q17 'Does the firm disclose the fair value of derivative instruments?', Q18 'Does the firm disclose the carrying amount of derivative instruments?', Q19 'Does the firm disclose the net market value for derivative instruments?' and Q20 'Does the firm specify the methods in determining the value of derivative instruments?'

5.2.3 Disclosed Sections

The derivative related disclosures are dispersedly reported across sixteen sections in the companies' annual reports as shown in Table 5.4 and the amount of information is measured at the percentage of the annual report. The section of *Notes to the Financial Statements* has the largest mean value at 0.3494 per cent, which indicates that Chinese listed companies report the most amount of information concerning about their use of derivatives in the notes pertaining to the financial statements and this finding is consistent with some North American evidence in relation to the risk information disclosures. For example, Lajili and Zeghal (2005) find that the risk related disclosures reported by Canadian listed companies are centralisedly located in the sections of *Notes to the Financial Statements* and *Management Discussion and Analysis*.

It is interesting that the amount of derivative related information disclosed in the section of *Change of Shares and Shareholders' Information* is just behind those in *Notes to the Financial Statements* with the second biggest mean value of 0.2730 per cent, which implies that sample firms provide a large amount of information that relates to how derivative instruments affect their equity structure. There are various types of derivative products but not all of them are able to have impacts on the user's

structure of shares. Taking an interest rate swap³⁵ for instance, it is likely to influence the company's future cash flows rather than its shares structure. Commonly, the use of two types of derivative instruments – warrant and convertible bond might affect an issuer's equity structure as the holders of those derivatives are likely to purchase, sell or transfer parts of shares of the issuing company over a period in the future. This finding suggests that Chinese listed companies seem to prefer to use derivatives such as warrants and convertible bonds that have potential impacts on the company's structure of shares in 2006. This phenomenon is understandable as, on the one hand, most quoted firms finished the shareholding reform in the sample year of 2006 (People's Daily, 2006) and the warrant was an important tool to complete such reform and, on the other hand, the convertible bond was favoured by Chinese listed companies to refinance (Chen and Cao, 2008).

The board of directors report has the third biggest mean value of 0.1358 per cent, followed by sections of *Important Affairs* (0.0833%), *Table of Adjusted Shareholders' Funds Between Old and New Accounting Standards*³⁶ (0.0572%), *Supplementary*

³⁵ An interest rate swap is an agreement between two or more parties to exchange of interest payments over a period in the future (Kolb, 1997).

³⁶ In order to prepare for implementing the New Accounting Standards that would be effective from 1st January 2007, the Chinese authorities require listed companies to provide a table called *Table of Adjusted Shareholders' Funds Between Old and New Accounting Standards* and notes pertaining to this table to briefly summarise differences of accounting numbers before and after the adoption of the New Accounting Standards in their 2006 annual reports and an example quoted from *CHONGQING CHANGAN AUTOMOBILE CO., LTD* is shown as follows:

Table of Adjusted Shareholders' Funds Between Old and New Accounting Standards (Yuan RMB)

Items Nos.	Items	Notes	Yuan RMB
1	Consolidated Shareholders' Funds on 31 st December 2006 (Current Accounting Standards)	1	7,306,779,344
Adjustments:			
2	Difference of consolidated long-term equity investment under the same enterprise's control	2	(20,612,082)
3	Adjusted amortisation of the debit balance of other long-term equity investment employed equity method following the New Accounting Standards	3	19,909,725
4	Financial derivative instruments	4	(16,873,622)
5	Income tax	5	201,319,271
6	Influence of joint ventures according to the new accounting standards to retroactively adjusts the book value of the long-term equity investment	6	(2,254,835)
7	Government subsidies pertinent to assets	7	(79,822,013)
8	Period expenses of organisation costs	8	(301,050,194)
9	Adjustments of investment return on <i>Jiangling Motors Corporation, Ltd</i> according to the New Accounting Standards	9	7,847,576

Documents (0.0258%), Information of Warrants and Convertible Bonds (0.0126%), Board of Supervisors Report (0.0123%), Brief Summary of Financial and Operational Performance (0.0105%), Information of Directors, Supervisors, Senior Managers and Employees (0.0033%), Brief Information of Shareholders' Conference (0.0028%), Corporate Governance (0.00192%), Financial Statements (0.00186%), Evaluation Report of Board of Directors to Internal Control (0.0014%), Basic Information of the Company (0.0011%) and Company Dairy 2006 (0.0002%).

Table 5.4 Amount of Derivative Related Information (Percentage of Annual Report) Disclosed across Sections of the Annual Report

Sections	Minimum (%)	Maximum (%)	Mean (%)
<i>Notes to the Financial Statements</i>	0	1.335	0.3494
<i>Change of Shares and Shareholders' Information</i>	0	1.503	0.2730
<i>Board of Directors Report</i>	0	1.868	0.1358
<i>Important Affairs</i>	0	1.183	0.0833
<i>Table of Adjusted Shareholders' Funds Between Old and New Accounting Standards</i>	0	0.359	0.0572
<i>Supplementary Documents</i>	0	0.954	0.0258
<i>Information of Warrants and Convertible Bonds</i>	0	0.666	0.0126
<i>Board of Supervisors Report</i>	0	0.166	0.0123
<i>Brief Summary of Financial and Operational Performance</i>	0	0.128	0.0105
<i>Information of Directors, Supervisors, Senior Managers and Employees</i>	0	0.176	0.0033
<i>Brief Information of Shareholders' Conference</i>	0	0.149	0.0028
<i>Corporate Governance</i>	0	0.102	0.00192
<i>Financial Statements</i>	0	0.036	0.00186

10	Adjustments above mentioned from item No. 2 to 9 belonging to equity of minor shareholders	10	18,055,293
11	Balance of minor shareholders' equity on 31 st December 2006 under Current Accounting Standards classified to the shareholders' funds under New Accounting Standards.		1,694,956,851
	Consolidated shareholders' funds on 1 st January 2007 (New Accounting Standards)		8,828,255,314

<i>Evaluation Report of Board of Directors on Internal Control</i>	0	0.076	0.0014
<i>Basic Information of the Company</i>	0	0.041	0.0011
<i>Company Dairy 2006</i>	0	0.013	0.0002
Total	0.095	3.549	0.972

In summary, the compliance with IFRSs and IASs derivative related regulations by Chinese quoted companies is generally low as sample companies on average only disclosed approximate four out of twenty-four questions in FDDI and less one per cent in terms of the amount of derivative related information in its annual report. Similar with firms in developed economies, Chinese listed companies provided the most amount of information related to the use of derivatives in the section of *Notes to the Financial Statements*, but they tended to use those derivatives (e.g., warrants and convertible bonds) that may affect the structure of shares as they presented a great quantity of information about derivative activities in the section of *Change of Shares and Shareholders' Information*.

5.3 Disclosures by Companies in Different Sizes

This section is to provide a discussion about the relationship between the level of derivative disclosures and the size of Chinese listed companies. Although the study does not intend to find out the determinants of derivative related disclosures by Chinese quoted firms as it is not the main objective of the research, it still helps to have a better understanding of derivative related disclosure patterns in a transitional economy by providing an argument about whether the size of a Chinese company has an impact on the degree of disclosures related to the use of derivatives.

5.3.1 Association between Company Size and Disclosure Quality

Investors require companies to provide high quality disclosures in order to make their economic decisions. Compared with investors, managers are claimed to have more and better information about the economic performance of their firms and they have incentives to withhold value-relevant unfavourable information (Sengupta, 1998). Greater disclosure, therefore, is to diminish the level of such information asymmetry between managers and investors and as a result, will attract investors to participate more aggressively. Sengupta (1998) argues that the costs of capital (i.e., debt and equity) would be lowered for companies that disclose high quality information. Moreover, high quality disclosure is able to reduce the uncertainties faced by investors and creditors (Miller and Bahnsen, 2002) and help to level up their confidence in financial statements produced by reporting firms, finally leading to an increased investment in these firms. The firms' value will be eventually boosted as a result of higher share prices. To be contrary, failing to meet the information needs of investors and creditors is likely to have a huge impact on companies as they may take actions which are disadvantageous to firms such as increasing the cost of capital or withdrawing their investments. Lack of information disclosures may also force market participants to seek other investment opportunities which may reduce the firm's shareholders' value. Miller (2001) suggests that even though investors could invest in companies with a low quality disclosure, they are likely to require comparatively higher rate of return leading to a higher cost of capital and lower share price and as a result companies could be difficult to grow and develop.

Although it is perceived that the provision of sufficient and high quality information is vital for companies, prior studies (e.g., Firth, 1979; Verrecchia, 1983; Skinner, 1994; Wallace et al., 1994; Depoers, 2000; Latridis, 2008; Elsayed and Hoque, 2010) generally suggest that the level and quality of disclosures is related to firms characteristics such as firm size, listing status, firm auditor, scope of business, risk of trading and industry type. They find that the firm's size is one of the key determinants of quality of accounting disclosures and there is a positive relationship between corporate size and the disclosure quality. There are several arguments that can be used

to link the company's size and disclosure quality. For instance, Singhvi and Desai (1971) argue that larger firms have larger resources to allocate for the preparation of high quality information and lesser costs used to generate such information due to the economies of scale. Similarly, Buzby (1975) states that the publication of annual reports would place a financial burden on small companies as the process of gathering, preparing and disclosing information in the form of annual reports is costly and therefore, only large firms are more likely to afford such expenditure. In addition, big companies tend to disclose more detailed information in their annual reports because compared with small corporate, they are more exposed to scrutiny by financial analysts and more recognised by the public (Firth, 1979). Based upon the agency theory proposed by Jensen and Meckling (1976) which suggests that disclosures are associated with the amount of outside financing, Leftwich et al. (1981) assert that companies with large sizes have incentives to disclose more information in their public reports as they use more outside capital. Likewise, larger firms have greater chances to operate in different markets or sectors to obtain funding in different countries and therefore have to provide more information to the public (Schipper, 1991; Depoers, 2000). Verrecchia (1983) points out that the proprietary costs in relation to competitive disadvantages of additional disclosures are smaller as the company size increases. Watts and Zimmerman (1990) provide an argument that political costs are high in larger companies and so bigger firms are more likely to show high levels of disclosure since it improves confidence and reduces political costs. Also bigger companies have incentives to disclose more information because the potential litigation costs and net disclosure-related costs are an increasing function of company size (Skinner, 1994; Ali et al., 1994). Moreover, smaller companies are more inclined to disclose far less information than their larger counterparties as the smaller a firm, the greater chances the disclosure of information puts it in a competitive disadvantage position (Craswell and Taylor, 1992; Wallace et al., 1994; Raffournier, 1995; Naser 1998; Naser and Al-Khatib, 2000).

5.3.2 Scores

As shown in Table 5.5, the mean value of questions disclosed by 39 large size firms is 4.44, which is bigger than that of 3.86 for 14 medium companies indicating that large firms on average disclosed more questions than the medium firms in terms of disclosures related to the use of derivatives. Interestingly, the group of big companies contains not only the company with the largest score (i.e., *JIANGXI COPPER CO., LTD* scored at eleven) but also the one with the least (i.e., *GUANGZHOU BAIYUN INTERNATIONAL AIRPORT CO., LTD* merely scored at one) among the total of 53 sample firms. Table 5.6, which summarises the statistical result by comparing the mean values of the two types of firms, demonstrates that the p value of 0.368 is larger than the significance level of 0.05 implying that the mean values of the two groups are not significantly different and in other word, the quantity of questions disclosed by large and medium companies is statistically insignificant although the mean value of big firms is larger than that of the medium firms. Referring to individual questions, as shown in Table 5.7, the two types of companies have the similar disclosure tendency with little differences. For instance, Q2 and Q24 were most frequently mentioned questions by both groups as more than a half of the firms in either group provided information about those two questions in their 2006 annual reports. The difference is that opposite to large companies, Q24 was mentioned by most medium firms (10) followed by Q2 (8). Nearly fifty per cent of companies from either group provided disclosures related to Q4, Q9, Q17, Q19 and Q22 with one difference that eighteen big companies (46.15% in their group) mentioned Q10 '*Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?*' while disclosed by only one medium firm (7.14%). Q3, Q11, Q12, Q13, Q14, Q15, Q16 and Q21 were not discussed by either types of firms while compared with large companies, five more questions - Q1 '*Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?*', Q6 '*Does the firm specify how they monitor and manage the risks associated with derivative*

instruments?', Q7 'Does the firm discuss any changes to the above disclosures from the previous reporting period?', Q8 'Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?' and Q18 'Does the firm disclose the carrying amount of derivative instruments?', were not mentioned by any medium company in their annual reports.

Table 5.5 Overall Scores of Disclosures by Large and Medium Size Companies

Size (Large = 1; Medium = 0)	Nos. of Companies	Mean	Std. Deviation	Std. Error Mean
0	14	3.86	1.994	.533
1	39	4.44	2.062	.330

Table 5.6 Independent Samples Test for Scores of Large and Medium Size Firms

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.196	.660	-.908	51	.368	-.579	.637	-1.858	.700
Equal variances not assumed			-.923	23.697	.365	-.579	.627	-1.874	.716

Table 5.7 Comparison Scores of Large and Medium Size Firms

Questions	Nos of Companies	
	Large Firms	Medium Firms
Q2 Does the firm specify the objectives for holding or issuing derivative instruments?	32	8
Q24 Does the firm provide other disclosures related to their use of derivative instruments?	23	10
Q9 Does the firm disclose the Principal, stated, face, or other similar amount of derivative instruments?	19	6
Q10 Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?	18	1
Q22 Does the firm specify the existence of derivative features in its compound financial instruments?	16	7
Q19 Does the firm disclose the net market value for derivative instruments?	15	5
Q17 Does the firm disclose the fair value of derivative instruments?	14	5
Q4 Does the firm specify the accounting policies for derivative instruments?	11	6
Q18 Does the firm disclose the carrying amount of derivative instruments?	6	0
Q6 Does the firm specify how they monitor and manage the risks associated with derivative instruments?	4	0
Q20 Does the firm specify the methods in determining the value of derivative instruments?	4	1
Q7 Does the firm discuss any changes to the above disclosures from the previous reporting period?	3	0
Q23 Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?	3	3
Q5 Does the firm specify its hedging policy?	2	2
Q8 Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?	2	0
Q1 Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?	1	0
Q3 Does the firm specify the associated risks provided by derivative instruments?	0	0
Q11 Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?	0	0
Q12 Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?	0	0

Q13 Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?	0	0
Q14 Does the firm disclose the effective interest rates of derivative instruments?	0	0
Q15 Does the firm specify to whom they have credit risk exposures?	0	0
Q16 Does the firm provide the estimated maximum credit risk exposures at the reporting date?	0	0
Q21 Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?	0	0
Total	39	14

5.3.3 Amounts

The mean value of the amount of disclosures by large and medium firms, as shown in Table 5.8, is 0.9680 and 0.9824 per cent respectively, which implies that medium size companies disclosed more information than big ones in terms of their use of derivative instruments but as discussed in the section of 5.1.2, the disclosure amount by Chinese listed companies is far less than the evidence from mature economies. Concerning about the individual question, the two categories of firms nearly have the same disclosure trend. For example, although Q24, Q22, Q2, NoFairValue and Fairvalue are the top five of most amount of derivative information provided by both groups, there is one difference existing between the two groups. Compared with large firms, medium firms have four more questions (i.e., Q1, Q6, Q7 and Q8) with the mean of zero as these questions were not mentioned by any sample medium companies. Table 5.9 demonstrates the statistical results by comparing the means of the amount of information related to the use of derivatives disclosed by big and medium companies. Although medium firms disclosed more derivative related information than the large, the difference is not statistically significant as the t-test of the mean values of total disclosure amount shows that the p value is 0.954 that is

bigger than the significance level of 0.05. Furthermore, the t-test of the difference of means regarding to any individual question indicates that for every derivative related question, the amount of disclosures provided by large and medium firms is statistically indifference as the p value is bigger than 0.05 and in other word, the derivative related disclosures provided by Chinese listed companies are not significantly affected by the difference of corporate size. This finding is pretty interesting as it is contrary to the large quantity of evidence from developed countries as discussed in Section 5.3.1, arguing that the firm's size is a key determinant of disclosures level and bigger ones generally provide more information than the smaller but this controversial phenomenon could be explained as follows:

Firstly, there are two external factors that have joint contributions to this phenomenon.

1. The availability of derivative instruments is pretty limited in the Chinese securities market. As discussed in Chapter III, there were only three major types of derivatives - commodity futures, warrants and convertible bonds available in the year of 2006 and companies therefore had fewer choices for the use of derivative products. As a result, firms were likely to adopt the same derivatives and provided the similar information in their annual reports. Otherwise, if various derivative instruments are available for companies' needs, different types of derivative related information could be disclosed. For instance, firms that get involved in interest swaps business are likely to provide disclosures such as the aim of using such derivatives, fair value, possible outcomes to future cash flows and sensitivity to the change of market interests, and to be different, those using convertible bonds might disclose information about the existence of derivative features in its compound financial instruments, date of conversion and so on.
2. The regulations for the use of derivatives were largely absent in the Chinese accounting and reporting system. Under the voluntary reporting framework, the derivative related information was discretionarily disclosed so listed companies

were probably reluctant to provide more disclosures about their use of derivative products. Evidence from a large number of western-based studies as discussed in Chapter II (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) suggests that the compulsory accounting and reporting regulations related to the use of derivative products have promoted listed firms to disclose more information about their derivative activities although the compliance with relevant requirements is mixed.

Hence, the limited types of derivative instruments together with the absence of regulations impeded Chinese quoted companies to provide more quantity and diversified of information regarding to their use of derivative products.

Secondly, agency theory could help to explain why the level of derivative disclosures amount by Chinese listed companies is much lower as the trading of derivative instruments is likely to adversely affect the corporate value so managers may have incentives to withhold such value-relevant unfavourable information and gamble that subsequent corporate events will allow them to 'bury' the 'negative' news (Nagar, 1999; Nagar et al., 2003). This can be an interesting research issue for further study to examine whether there is a difference between larger and smaller firms in terms of managers' motivations to disclose derivative related information in a transitional economy.

Thirdly, the limitations of the study may contribute to this controversial finding.

1. This study only emphasises on the derivative disclosure patterns by large and medium listed companies as evidence (e.g., Bodnar et al, 1996; Grant and Marshall, 1997; El-Masry, 2006) shows that the larger firms are more likely to use derivative products. Due to the small sample size, it is unable to conduct regression models to analyse the relationship between the company size and

quality of derivative related disclosures in this study and it leaves an interesting research area for following ups to examine the determinants of derivative disclosures by Chinese listed companies when the sample is adequate to carry out statistical regression analysis.

2. In this study, the company size is measured at the year-end market value. However, corporate size can be represented by many different indicators such as annual sales, total assets, number of employees, capital employed etc. and prior studies (e.g., Akhtaruddin, 2005) illustrate that some indicators of corporate size, for instance, the capital employed and sales, do have little impact on the disclosure of information. Hence, it is necessary for future researchers to use different measures of company size to analyse the association between the quality of derivative disclosures and firm size.

Last but not least, the finding that there is no relationship between corporate size and derivative disclosures is likely to challenge the adaptability of voluntary disclosure theories, which include agency theory, signalling theory, political process theory and proprietary costs, on Chinese equity market. They all insist that company size plays a vital role for reporting companies to provide more voluntary information and larger firms tend to disclose more than smaller ones. However, those theories are related to voluntary information disclosure in general terms, while this concept embodies several attributes or dimensions. The study provides evidence that the disclosure of a specific information attribute (e.g., derivative related information) might be different to the rationale. When the sample is adequate, it is an interesting area for following up studies to examine the determinants of derivative related disclosures in China and find out whether there are some unique factors such as ownership structure, culture etc. can have influence on the derivative disclosure patterns presented by Chinese listed companies.

Table 5.8 Amount of Derivative Related Information (Percentage of Annual

Report) Disclosed by Large and Medium Size Companies

Questions	Mean (%)	
	Large Firms	Medium Firms
Q24 <i>Does the firm provide other disclosures related to their use of derivative instruments?</i>	0.2528	0.2471
Q22 <i>Does the firm specify the existence of derivative features in its compound financial instruments?</i>	0.2312	0.4077
Q2 <i>Does the firm specify the objectives for holding or issuing derivative instruments?</i>	0.1166	0.09292
<i>NoFairValue*</i>	0.1087	0.07424
<i>FairValue**</i>	0.07875	0.05843
Q8 <i>Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk, and market risk)?</i>	0.07358	0
Q4 <i>Does the firm specify the accounting policies for derivative instruments?</i>	0.06289	0.03619
Q5 <i>Does the firm specify its hedging policy?</i>	0.01589	0.03064
Q23 <i>Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?</i>	0.01387	0.03526
Q7 <i>Does the firm discuss any changes to the above disclosures from the previous reporting period?</i>	0.008437	0
Q6 <i>Does the firm specify how they monitor and manage the risks associated with derivative instruments?</i>	0.004852	0
Q1 <i>Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?</i>	0.0004389	0
Q3 <i>Does the firm specify the associated risks provided by derivative instruments?</i>	0	0
Q15 <i>Does the firm specify to whom they have credit risk exposures?</i>	0	0
Q16 <i>Does the firm provide the estimated maximum credit risk exposures at the reporting date?</i>	0	0
Q21 <i>Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?</i>	0	0
Total	0.9680	0.9824

Notes: * NoFairValue includes Q9 'Does the firm disclose the Principal, stated, face, or other similar amount of derivative instruments?', Q10 'Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?', Q11 'Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?', Q12 'Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?' principal amount', Q13 'Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?' and Q14

'Does the firm disclose the effective interest rates of derivative instruments?'

** FairValue includes Q17 'Does the firm disclose the fair value of derivative instruments?', Q18 'Does the firm disclose the carrying amount of derivative instruments?', Q19 'Does the firm disclose the net market value for derivative instruments?' and Q20 'Does the firm specify the methods in determining the value of derivative instruments?'

Table 5.9 Independent Samples Test for Derivative Disclosure Amount by Large and Medium Size Companies

Questions	Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Q1	Equal variances assumed	1.496	.227	-.595	51	.554	-4.389E-6	-1.919E-5	1.041E-5
	Equal variances not assumed			-1.000	38.000	.324	-4.389E-6	-1.327E-5	4.496E-6
Q2	Equal variances assumed	.631	.431	-.539	51	.592	-2.369E-4	-1.119E-3	6.449E-4
	Equal variances not assumed			-.635	32.757	.530	-2.369E-4	-9.963E-4	5.226E-4
Q4	Equal variances assumed	1.223	.274	-.515	51	.609	-2.671E-4	-1.308E-3	7.736E-4
	Equal variances not assumed			-.794	49.502	.431	-2.671E-4	-9.425E-4	4.084E-4
Q5	Equal variances assumed	.783	.380	.528	51	.600	1.475E-4	-4.133E-4	7.083E-4

	Equal variances not assumed			.517	22.149	.610	1.475E-4	-4.437E-4	7.387E-4
Q6	Equal variances assumed	5.216	.027	-1.080	51	.285	-4.852E-5	-1.387E-4	4.165E-5
	Equal variances not assumed			-1.814	38.000	.078	-4.852E-5	-1.027E-4	5.614E-6
Q7	Equal variances assumed	4.026	.050	-.954	51	.345	-8.437E-5	-2.620E-4	9.323E-5
	Equal variances not assumed			-1.602	38.000	.117	-8.437E-5	-1.910E-4	2.226E-5
Q8	Equal variances assumed	2.909	.094	-.815	51	.419	-7.358E-4	-2.548E-3	1.076E-3
	Equal variances not assumed			-1.369	38.000	.179	-7.358E-4	-1.824E-3	3.522E-4
NoFairValue*	Equal variances assumed	1.275	.264	-.755	51	.454	-3.446E-4	-1.262E-3	.0005722
	Equal variances not assumed			-.882	32.211	.384	-3.446E-4	-1.140E-3	.0004510
FairValue**	Equal variances assumed	.447	.507	-.417	51	.678	-2.032E-4	-1.181E-3	7.749E-4
	Equal variances not assumed			-.479	30.946	.635	-2.032E-4	-1.067E-3	6.611E-4

Q22	Equal variances assumed	5.308	.025	1.425	51	.160	1.764E-3	-7.208E-4	4.249E-3
	Equal variances not assumed			1.222	18.084	.237	1.764E-3	-1.268E-3	4.796E-3
Q23	Equal variances assumed	3.298	.075	1.041	51	.303	2.139E-4	-1.987E-4	6.265E-4
	Equal variances not assumed			.813	16.214	.428	2.139E-4	-3.431E-4	7.709E-4
Q24	Equal variances assumed	.073	.788	-.051	51	.960	-5.705E-5	-2.304E-3	2.190E-3
	Equal variances not assumed			-.053	24.850	.958	-5.705E-5	-2.272E-3	2.158E-3
Total	Equal variances assumed	.000	1.000	.058	51	.954	1.439E-4	-4.817E-3	5.105E-3
	Equal variances not assumed			.060	24.236	.953	1.439E-4	-4.815E-3	5.102E-3

Notes: * NoFairValue includes Q9 'Does the firm disclose the Principal, stated, face, or other similar amount of derivative instruments?', Q10 'Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?', Q11 'Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?', Q12 'Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?' principal amount', Q13 'Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?' and Q14 'Does the firm disclose the effective interest rates of derivative instruments?'.

** FairValue includes Q17 'Does the firm disclose the fair value of derivative instruments?', Q18 'Does the firm disclose the carrying amount of derivative instruments?', Q19 'Does the firm disclose the net market value for derivative instruments?' and Q20 'Does the firm specify the methods in determining the value of derivative instruments?'.

In summary, the derivative related disclosures by Chinese listed companies in terms

of both scores and amount are not significantly affected by corporate size that is opposite to a number of western evidence (e.g., Firth, 1979; Verrecchia, 1983; Skinner, 1994; Wallace et al., 1994; Depoers, 2000; Latridis, 2008; Elsayed and Hoque, 2010). Both large and medium firms have the similar tendency in terms of the quantity of disclosed questions and related amount of information about their use of derivatives. Several factors, such as the limited availability of derivative products, large absence of derivative related regulations, agency problems and limitations of the study, are possible to explain such abnormal phenomenon in China's equity market.

5.4 Information Content of Derivative Disclosures

This section intends to find out what kind of information provided by Chinese quoted companies in relation to their use of derivative instruments. The study firstly classifies derivative disclosures following the requirements of IFRS and IAS and then adopts the t-test to examine whether there is a statistical significance between different types of information, and finally some examples with reference to quotations in companies' annual report will be presented.

5.4.1 Nature of Derivative Disclosures

In order to gain additional information regarding to how companies communicated to the users of financial statements about their use of derivatives, a breakdown of the nature of derivative related disclosures is necessary (Dunne et al., 2007). In the accounting literature, a number of U.S. based studies (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Lopes and Rodrigues, 2008) usually sort the disclosed information into two categories – qualitative and quantitative following corresponding derivative

related rules imposed by the U.S. regulators. The results generally illustrate that the derivative related regulations have enhanced reporting companies to disclose more information concerning their use of derivatives. Firms provide both qualitative and quantitative disclosures following basic requirements of accounting and reporting standards but many detailed requirements such as the assumptions of applied quantitative techniques and description of corporate derivative management activities are often incomplete or lacking in companies' annual reports. Since one of the research's objectives is to identify the degree and information content of derivative disclosures by Chinese listed companies complying with relevant regulations proposed by IASB, this study, however, intends to adopt IFRS and IAS requirements to classify the nature of derivative related disclosures reported by Chinese quoted firms. IFRS 7 '*Financial Instruments: Disclosures*' (IASB, 2005) requires the reporting entity to provide two main categories of disclosures in its annual report:

1. the information about the significance of financial instruments for the entity's financial position and performance; and
2. the information about the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date, and how the entity manages those risks. The qualitative disclosures describe management's objectives, policies and processes for managing those risks. The quantitative disclosures provide information about the extent to which the entity is exposed to risk, based on information provided internally to the entity's key management personnel. Together, these disclosures provide an overview of the entity's use of financial instruments and the exposures to risks they create.

Paragraphs 7 – 29 of IFRS 7 are detailed requirements for companies to report the first type of information regarding their use of derivative instruments while paragraphs 33 – 42 are those related to the second type. For questions in FDDI, as shown in Table 5.10, Questions 1, 4, 5, 17, 18, 19, 20, 22 and 23 are related to the first type of disclosures and incorporated into a new group – V1, whereas Questions 2, 3, 6,

7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 21 are sorted into the second type of information and combined to V2³⁷.

Table 5.10 A Breakdown of Information Content of Derivative Disclosures

Questions	Reference in IFRS 7	Categories of Information
Q1 <i>Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?</i>	Paragraphs 8, 20 and 22	V1
Q4 <i>Does the firm specify the accounting policies for derivative instruments?</i>	Paragraph 21	
Q5 <i>Does the firm specify its hedging policy?</i>	Paragraph 22, 23 and 24	
Q17 <i>Does the firm disclose the fair value of derivative instruments?</i>	Paragraph 25	
Q18 <i>Does the firm disclose the carrying amount of derivative instruments?</i>	Paragraph 8	
Q19 <i>Does the firm disclose the net market value for derivative instruments?</i>	Paragraph 20	
Q20 <i>Does the firm specify the methods in determining the value of derivative instruments?</i>	Paragraph 27, 28 and 29	
Q22 <i>Does the firm specify the existence of derivative features in its compound financial instruments?</i>	Paragraph 17	
Q23 <i>Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?</i>	Paragraph 17	
Q2 <i>Does the firm specify the objectives for holding or issuing derivative instruments?</i>	Paragraph 33	
Q3 <i>Does the firm specify the associated risks provided by derivative instruments?</i>	Paragraph 33	
Q6 <i>Does the firm specify how they monitor and manage the risks associated with derivative instruments?</i>	Paragraph 33	
Q7 <i>Does the firm discuss any changes to the above disclosures from the previous reporting period?</i>	Paragraph 33	
Q8 <i>Does the firm segregate information by risk</i>	Paragraph 33	

³⁷ Q24 'Does the firm provide other disclosures related to their use of derivative instruments?' is not included in the classification as it refers to the derivative related information voluntarily disclosed by reporting companies but not required by IFRS and IAS.

<i>categories (i.e. credit risk, liquidity risk, and market risk)?</i>		
<i>Q9 Does the firm disclose the Principal, stated, face, or other similar amount of derivative instruments?</i>	Paragraph 34	
<i>Q10 Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?</i>	Paragraph 34	
<i>Q11 Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?</i>	Paragraph 34	
<i>Q12 Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?</i>	Paragraph 34	
<i>Q13 Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?</i>	Paragraph 34	
<i>Q14 Does the firm disclose the effective interest rates of derivative instruments?</i>	Paragraph 34	
<i>Q15 Does the firm specify to whom they have credit risk exposures?</i>	Paragraph 36	
<i>Q16 Does the firm provide the estimated maximum credit risk exposures at the reporting date?</i>	Paragraph 36	
<i>Q21 Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?</i>	Paragraphs 40, 41 and 42	

5.4.2 Results

Table 5.11 illustrates that the mean value of V1 and V2 is 0.45 and 0.27 per cent respectively. The difference of 0.173 per cent, as shown in Table 5.13, is statistically significant as the p value of the t-test is 0.04 less than the significance level of 0.05. The result indicates that Chinese listed companies report significantly higher amount of information about the impact of derivative instruments on their financial position and performance than those related to risks arising from using derivatives with respect

to those of disclosures following IASB derivative regulations. It also confirms the speculation in Section 5.2.1 that Chinese quoted corporations seemed not to be willing to provide much information in relation to potential risks as a result of using derivative instruments in their annual reports. Among total 14 questions of V2, up to eight questions i.e., all of 'Rarely Disclosed Questions' discussed in Section 5.2.1, including Q3 '*Does the firm specify the associated risks provided by derivative instruments?*', Q11 '*Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?*', Q12 '*Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principal amount?*', Q13 '*Does the firm disclose the interest, dividends, or other periodic returns on principal and their timing related to derivative instruments?*', Q14 '*Does the firm disclose the effective interest rates of derivative instruments?*', Q15 '*Does the firm specify to whom they have credit risk exposures?*', Q16 '*Does the firm provide the estimated maximum credit risk exposures at the reporting date?*' and Q21 '*Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and loss and equity?*', are hardly mentioned by the sample companies. To be contrary, all 11 questions within V1 were addressed in firms' annual reports. Consistent with discussions in Section 5.2, the agency problem, large absence of derivative related reporting requirements under China's Accounting and Reporting System as well as unimportance of risks arising from the use of derivative instruments to the company's financial performance are likely to be major factors contributing to this phenomenon.

Table 5.11 Paired Samples Statistics (Percentage of Annual Report) for Information Content of Derivative Disclosures

		Mean (%)	N	Std. Deviation (%)	Std. Error Mean (%)
Pair 1	V1	.45	53	.464	.064
	V2	.27	53	.354	.049

Table 5.12 Paired Samples Correlations for Information Content of Derivative Disclosures

		N	Correlation	Sig.
Pair 1	V1 & V2	53	-.043	.761

Table 5.13 Paired Samples Test for Information Content of Derivative Disclosures

		Paired Differences					t	df	Sig. (2-tailed)
		Mean (%)	Std. Deviation (%)	Std. Error Mean (%)	95% Confidence Interval of the Difference				
					Lower (%)	Upper (%)			
Pair 1	V1 - V2	.173	.596	.082	.009	.337	2.111	52	.040

Among total nine questions of V1, Q22 ‘Does the firm specify the existence of derivative features in its compound financial instruments?’ was discussed by a large number of companies in terms of the score (23) and mean value of disclosed amount (0.278%) as presented in Section 5.2. The following quotations provide typical examples of these disclosures.

Approved by CSRS, the company issued 8.80 million convertible bonds to the public with the nominal value of 100.00 RMB per note and total amount of 880 million RMB on 15 April 2004. Approved by SHSE, the company’s convertible bonds were traded on SHSE with the trading code of ‘110418’ and abbreviation of ‘Jianghuai Zhuan Zhai’ on 29 April 2004. The duration periods of these convertible bonds are five years and the converting periods with the most recent converting price of 3.50 RMB per share will be between 15 October 2004 and 14 April 2009 (ANHUI JIANGHUAI AUTOMOBILE CO., LTD, 2007).

The convertible bonds of the firm were issued on 18 July 2003. The issuing quantities were two million valued at 100.00 RMB per note and two billion RMB in terms of total issuing amount. These convertible bonds were listed on SHSE on 1 August 2003. The converting periods are five years (valid from the issuing date). The nominal interest rates are: 1st year-0.8%, 2nd year-1.1%, 3rd year-1.8%, 4th year-2.1% and 5th year-2.5%. The initial converting price was 10.55 RMB per share. The converting periods will last from 18 January 2004 to 17 July 2008. The convertible bonds started to be executed on 18 January 2004 (GD POWER DEVELOPMENT CO., LTD, 2007).

By contrast, Q1 '*Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?*' was merely disclosed by one company with the least amount of 0.0003 per cent as discussed in Section 5.2 and these disclosures could be illustrated by reference to the following quotations from JIANGXI COPPER CO., LTD.

Due to the adjustment of fair values of financial derivative instruments, the shareholder's equity was increased by 19,449,950 RMB on 31 December 2006, including 38,747,100 RMB earning related to the use of financial derivatives which is eligible to standards of highly effective hedging while 19,297,150 RMB loss that is not according with standards of highly effective hedging (JIANGXI COPPER CO., LTD, 2007).

Referring to questions of V2, Q2 '*Does the firm specify the objectives for holding or issuing derivative instruments?*' was mentioned by most of firms in terms of the score (40) and mean value of disclosed amount (0.110%) following the discussion in Section 5.2. Some examples of these disclosures are provided as follows with reference to quotations in companies' annual reports.

The group is mainly engaged in export sales. In order to avoid foreign exchange risk, the group has got involved in foreign currency forwards business with several banks. In addition, the group borrowed long-term loans with floating interest rates from a number of banks. The risk arising from the movement of interest rates was eliminated by agreeing and signing interest swaps with banks (SHANGHAI ZHENHUA PORT MACHINERY CO.,LTD).

The shareholder's conference discussed and approved the project of firm's shareholding reform in December 2005. Holders of outstanding shares obtained six warrants provided by the company as well as 1.9 shares paid by overall holders of non-tradable shares for every 10 outstanding shares and as a result, holders of non-tradable shares paid discounted 76,000,000 shares of equity in total. This shareholding reform finished in December 2005. The total shares of the company were still 1,000,000,000 but previously non-tradable shares held by company promoters became restricted tradable ones that were falling from 60 to 52.4 per cent in terms of holding percentage. On 20 December 2006, a part of restricted tradable shares achieved the deadline required by the shareholding reform's project that these shares were not allowed to be traded or transferred within at least 12 months after the project was executed and since these shares were traded in the market, the percentage of restricted tradable shares held by company promoters was down from 52.40 to 50.304 per cent (GUANGZHOU BAIYUN INTERNATIONAL AIRPORT CO., LTD, 2007).

The funds raised by issuing convertible bonds were used to the payment of purchasing Wenhou Expressway and Jiuqing Expressway (JIANGXI GANYUE EXPRESS CO., LTD, 2007).

In summary, the results confirm the hypothesis in Section 5.2 by demonstrating that Chinese listed companies provided relatively more information about the significance of using derivative instruments for their financial position and performance than those

of disclosures related to potential risks arising from the use of derivatives and the difference is statistically significant. In line with arguments in Section 5.2, three major factors which are the agency problem, huge absence of derivative related accounting and reporting regulations and unimportance of risks as a result of using derivatives to the entity's financial performance have possible contributions to this phenomenon.

5.5 Disclosures of Different Types of Derivatives

This section intends to provide an argument that whether there is a difference in terms of disclosures related to various types of derivative instruments. It begins with the categorisation of derivatives employed by Chinese listed companies, followed by a discussion of statistical results and a summary will be provided in the end.

5.5.1 Classification of Derivative Instruments

Derivative products can be categorised by several ways. For instance, they can be sorted to forwards, options and swaps by the relationship between the underlying asset and the derivative; equity derivatives, foreign exchange derivatives, interest rate derivatives, commodity derivatives or credit derivatives by the type of underlying asset; and exchange-traded or OTC derivatives by the market in which they trade (Chance, 1995). In this section, the study plans to classify derivative instruments used by sample companies based upon the type of underlying asset because equity derivatives (e.g., warrants), as discussed in the previous chapter, were widely used by Chinese listed companies during the transition of the shareholding reform, so this section is seeking to find out whether there is a difference of disclosures between derivatives with different types of underlying asset. Three companies, including ANHUI CONCH CEMENT CO., LTD, HUADIAN POWER INTERNATIONAL

CORPORATION and SHANGHAI AUTOMOTIVE CO.,LTD, were not considered during the analysis as they did not clearly mention what kind of derivative instruments they used and eventually the final sample of 50 firms, as shown in Table 5.14, can be sorted into three groups in accordance of types of derivatives they employed. Table 5.14 illustrates that nearly two thirds of companies (32 out of 50) merely used equity derivatives (e.g., warrants or convertible bonds), followed by those that adopted derivative instruments rather than equity derivatives (14 out of 50) and only five employed both types of derivatives. The finding verifies the speculation discussed in Section 5.2.3 that Chinese listed companies were more likely to use derivatives that might affect the structure of equities than other types of derivative instruments in 2006. In Group0, there are ten entities for merely using convertible bonds, eleven for warrants and the rest eleven for both derivatives. Six companies of Group1 employed foreign exchange or interest rate derivatives (e.g., foreign currency forwards/swaps or interest swaps) while another seven got involved in commodity derivatives' business (e.g., commodity futures/options/swaps). Group2 is comprised by five firms which employed derivative instruments mentioned in Group0 and 1 simultaneously.

Table 5.14 Categorisation of Companies by Using Different Types of Derivatives

Group *	Companies	Derivatives Employed
0	ANHUI BBKA BIOCHEMICAL CO., LTD	Convertible Bonds
	ANHUI JIANGHUI AUTOMOBILE CO.,LTD	Convertible Bonds
	BEIJING GEHUA TV NETWORK, INC	Convertible Bonds
	BEIJING YANJING BREWERY CO.,LTD	Convertible Bonds
	GUANGXI GUIGUAN ELECTRIC POWER CO.,LTD	Convertible Bonds
	HEBEI JINNIU ENERGY RESOURCES CO., LTD	Convertible Bonds
	NANJING WATER TRANSPORT INDUSTRY CO.,LTD	Convertible Bonds
	SHANDONG CHENMING PAPER HOLDINGS LIMITED	Convertible Bonds
	SHANDONG HAIHUA CO., LTD	Convertible Bonds

	TCL CORPORATION	Convertible Bonds
	BEIJING CAPITAL CO.,LTD	Warrants
	CHINA YANGTZE POWER CO., LTD	Warrants
	GUANGZHOU BAIYUN INTERNATIONAL AIRPORT CO., LTD	Warrants
	HUANENG POWER INTERNATIONAL, INC	Warrants
	KWEICHOW MOUTAI CO., LTD	Warrants
	QINGDAO HAIER CO., LTD	Warrants
	QINGHAI SALT LAKE POTASH CO., LTD	Warrants
	SHANGHAI INTERNATIONAL AIRPORT CO., LTD	Warrants
	SHENZHEN ENERGY INVESTMENT CO., LTD	Warrants
	WULIANGYE YIBIN CO.,LTD	Warrants
	YANTAI WANHUA POLYURETHANES CO.,LTD	Warrants
	ANGANG STEEL CO., LTD	Convertible Bonds & Warrants
	CHINA UNITED TELECOMMUNICATIONS CORPORATION LIMITED	Convertible Bonds & Warrants
	CHINA VANKE CO., LTD	Convertible Bonds & Warrants
	GD POWER DEVELOPMENT CO., LTD	Convertible Bonds & Warrants
	HANDAN IRON & STEEL CO.,LTD	Convertible Bonds & Warrants
	HUNAN VALIN STEEL TUBE & WIRE CO., LTD	Convertible Bonds & Warrants
	INNER MONGOLIA BAOTOU STEEL UNION CO.,LTD	Convertible Bonds & Warrants
	JIANGXI GANYUE EXPRESS CO.,LTD	Convertible Bonds & Warrants
	MAANSHAN IRON & STEEL CO., LTD	Convertible Bonds & Warrants
	PANZHIHUA NEW STEEL & VANADIUM CO., LTD	Convertible Bonds & Warrants
	WUHAN IRON AND STEEL CO., LTD	Convertible Bonds & Warrants
Subtotal of Group0	32	

1	CHINA INTERNATIONAL MARINE CONTAINERS (GROUP) CO., LTD	Foreign Currency Swaps
	CHINA SHIPPING DEVELOPMENT CO., LTD	Foreign Currency Swaps
	CHONGQING CHANGAN AUTOMOBILE CO., LTD	Foreign Currency Forwards
	CSG HOLDING CO.,LTD	Foreign Currency Swaps
	SHANGHAI ZHENHUA PORT MACHINERY CO.,LTD	Foreign Currency Forwards & Interest Swaps
	TSINGTAO BREWERY CO., LTD	Foreign Currency Forwards
	AIR CHINA LIMITED	Aviation Oil Options & Swaps
	JIANGXI COPPER CO., LTD	Copper Futures
	SHENZHEN ZHONGJIN LINGNAN NONFEMET CO., LTD	Commodity Futures
	TBEA CO.,LTD	Commodity Futures
	YUNNAN ALUMINIUM CO., LTD	Commodity Futures
	YUNNAN COPPER CO.,LTD	Commodity Futures
	YUNNAN TIN CO., LTD	Commodity Futures
Subtotal of Group1	13	
2	BAOSHAN IRON &STEEL CO., LTD	Foreign Currency Forwards, Interest Swaps & Warrants
	CHINA MERCHANTS PROPERTY DEVELOPMENT CO., LTD	Foreign Currency Forwards & Convertible Bonds
	CHINA SOUTHERN AIRLINES CO., LTD	Aviation Oil Futures and Swaps & Warrants
	SHANGHAI ELECTRIC POWER CO., LTD	Foreign Currency Swaps & Convertible Bonds
	SINOCHEM INTERNATIONAL CORPORATION	Rubber Futures, Warrants & Convertible Bonds
Subtotal of Group2	5	
Total	50	

Notes: * Group0 contains companies that only used equity derivatives (e.g., warrants or convertible bonds); Group1 includes those which adopted derivative instruments other than equity derivatives (e.g., foreign exchange derivatives, interest rate derivatives, commodity derivatives or credit derivatives); and Group2 is comprised by firms that used equity derivatives mentioned in Group0 as well as other types of derivatives mentioned in Group1.

5.5.2 Results

In previous sections, the t-test was mainly employed to analyse whether the means of two groups were statistically different from each other. However, the study adopts the analysis of variance (ANOVA) to examine whether the means are statistically equal between Group 0, 1 and 2 in this section as ANOVA can generalise t-test to more than two groups and is therefore useful in comparing two, three or more means. The results by using one-way ANOVA are proven to be reliable under following three assumptions:

- The values in each of the groups (as a whole) follow the normal curve
- With possibly different population averages
- Equal population standard deviations

The third assumption, that the populations' standard deviations are equal, is particularly important in principle (Yu and He, 2003). The result of testing homogeneity of variance between three groups as presented in Table 5.15, demonstrates that the p value of 0.142 is higher than the confidence level of 0.05 which indicates that the standard deviations between group 0, 1 and 2 are equal and they are therefore eligible for ANOVA test. As shown in Table 5.16, the result of F-test is 1.790 but the corresponding p value is 0.178 bigger than 0.05 implying that the variances of any two groups are statistically insignificant and in other words, disclosures related to different types of derivative instruments are not significantly different. The findings are supported by further evidence from Table 5.17, which illustrate that the p value of any two groups is greater than the confidence level of 0.05.

Table 5.15 Test of Homogeneity of Variances for Group 0, 1 and 2

Total Amount of Disclosures			
Levene Statistic	df1	df2	Sig.
2.036	2	47	.142

Table 5.16 ANOVA Test for Group 0, 1 and 2

Total Amount of Disclosures					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	2	.000	1.790	.178
Within Groups	.003	47	.000		
Total	.003	49			

Table 5.17 Multiple Comparisons of Means Between Group 0, 1 and 2

Dependent Variable: Total Amount of Disclosures					95% Confidence Interval		
(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound	
LS D	0	1	.004835028666	.0025559210 73	.06 5	-3.06821306438E -4	9.97687863817E -3
		2	.001266518081	.0037370483 58	.73 6	-6.25145350311E -3	8.78448966561E -3
	1	0	-4.835028665865E -3	.0025559210 73	.06 5	-9.97687863817E -3	3.06821306438E -4
		2	-3.568510584615E -3	.0040894737 17	.38 7	-1.17954705403E -2	4.65844937107E -3
	2	0	-1.266518081250E -3	.0037370483 58	.73 6	-8.78448966561E -3	6.25145350311E -3
		1	.003568510585	.0040894737 17	.38 7	-4.65844937107E -3	1.17954705403E -2

Although no significant differences exist between various categories of derivatives in

terms of disclosure quantities, some exist in terms of detailed presentations of derivative instruments. The following quotations provide typical cases of different disclosures by companies using equity or other types of derivatives with reference to Q2 '*Does the firm specify the objectives for holding or issuing derivative instruments?*'.

The program of the shareholding reform was discussed and approved in the firm's shareholders' conference held on 10 April 2006. Meanwhile the group sent nine European-style put warrants with the executing price of 4.39 RMB and valid periods of 12 months to outstanding shareholders who were registered on the date of the implementation of the shareholding reform for every 10 outstanding equities. The group had sent 607,361,050 put warrants in total. The registration of shares to be conducted for the firm's shareholding reform (including sending bonus shares and warrants) was taken place on 15 May 2006 and the resumption of trading shares and listing of consideration shares were started on 17 May 2006 (QINGDAO HAIER CO., LTD, 2007).

TCL Group and TCL Multimedia were endeavour to improve the debt structure by using various measures, including the private equity issue and other financing ways (e.g., TCL Communication has issued 27 million US dollars convertible bonds until now with the target of 45 million US dollars in total). TCL Multimedia was also trying to adopt a number of ways to improve its debt structure. We are confident to enable the debt structure of the whole group improved in the near future (TCL CORPORATION, 2007).

In order to ensure the production and management of the factory to be smoothly operated without the influence of sharp ups and downs in prices, the company had got involved in the forward trading business as a hedging tool to lock profits since June 2005. The main variety of commodity futures used in the hedging business was Tin Ingot (YUNNAN TIN CO., LTD, 2007).

A few questions such as Q23 '*Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?*' were mainly addressed by firms that used equity derivatives and others like Q17 '*Does the firm disclose the fair value of derivative instruments?*' were, however, primarily discussed by those with the use of derivative instruments other than equity derivatives. Some examples of disclosures regarding these two questions are provided as follows with reference to quotations in companies' annual reports.

The corporation issued the separation of trading convertible bonds with the total value of 5.5 billion RMB at SHSE on 13 November 2006 and meanwhile, the purchasers of these bonds freely obtained warrants with the total quantities of 1.265 billion that were issued by the firm as well. These warrants had been valid in 24 months since they were issued and the executing price of a warrant was 3.40 RMB. If all holders of warrants executed their warrants, there would be an increase of 1.265 billion in A shares. Following the New Accounting Standards No. 37 '*Presentation of Financial Instruments*', these separation of trading convertible bonds were recognised as embedded compound financial instruments mixed with liability and equity components ... Accordingly, the equity component of these separation of trading convertible bonds was recognised as 714,253,399 RMB on 31 December 2006 and there were, therefore, an increase of 714,253,399 RMB in shareholders' equity of the parent company on 1 January 2007 (MAANSHAN IRON & STEEL CO., LTD, 2007).

The outstanding principal amount of the foreign currency forwards contracts was 197,074,000 US dollars and the fair value of them was -21,321,497 RMB on 31 December 2006 (CHINA MERCHANTS PROPERTY DEVELOPMENT CO., LTD, 2007).

In summary, the study finds that the equity derivatives (e.g., warrants or convertible

bonds) were adopted by the majority of firms which reconfirms the speculation in Section 5.2.3 stating that Chinese quoted companies are likely to prefer the use of derivatives that would have impacts on their structure of shares rather than other types of derivative products (e.g., foreign currency forwards/swaps, interest swaps or commodity futures/options/swaps). However, the results of ANOVA test illustrate that the amount of disclosures between different categories of derivatives is not significantly different although there are some distinguishments within the detailed presentations of different derivative instruments.

5.6 Summary

By using the content analysis method to compare the IFRS and IAS based disclosure index (i.e., FDDI) with relevant information provided by Chinese listed entities, several findings are reached as follows:

Firstly, the degree of complying with IFRS and IAS derivative related regulations by Chinese quoted companies was generally low.

Secondly, sample firms preferred to use equity derivative instruments (e.g., warrants or convertible bonds) that may affect the structure of shares than other categories of derivatives (e.g., foreign currency forwards/swaps, interest swaps or commodity futures/options/swaps) as they presented greater amount of information related to the use of derivatives in the section of Change of Shares and Shareholders' Information. The difference of disclosures within different types of derivatives is, however, not statistically significant.

Thirdly, the corporate size does not have significant impacts on the amount of derivative related disclosures by Chinese quoted companies which is contrary to much

western evidence (e.g., Firth, 1979; Verrecchia, 1983; Skinner, 1994; Wallace et al., 1994; Depoers, 2000; Latridis, 2008; Elsayed and Hoque, 2010). There is a similar tendency within both large and medium firms in providing information about their use of derivative instruments and a number of factors, such as the limited availability of derivative products, large absence of derivative related regulations, agency problems and limitations of the study, have possible contributions to such abnormal phenomenon in China's equity market.

Fourthly, derivative related disclosures in relation to the significance of using derivatives for corporate financial position and performance are statistically greater than those of information related to potential risks arising from the use of derivative instruments and three major factors, including the agency problem, huge absence of derivative related accounting and reporting regulations and unimportance of risks resulted from the use of derivatives to the company's financial performance, are likely to provide explanations to this finding.

Chapter VI Interview Results and Discussions

Chapter VI Interview Results and Discussions

6.1 Introduction

This chapter intends to complete the second phase of the study by answering following research questions:

- What is the response of equity market participants to derivative related disclosures?
- Do they treat disclosing more about derivatives' activities as useful information when making investment decisions?
- Are they satisfied with the current accounting and reporting treatment of derivative activities?
- What are their opinions as to the future development in derivative related reporting standards?

It includes the results of the in-depth interviews conducted with 10 investment managers and 11 professional analysts from a mutual funds management company as well as a securities company. The primary objective of this chapter is to examine the equity market participants' perceptions, attitudes and opinions towards the usefulness of derivative related disclosures provided by Chinese listed companies.

The chapter is structured as follows: it commences by the discussions related to the interviewees' opinions about information contents of derivative disclosures, followed by the assessment of their views about the usefulness of derivative disclosures, the analysis and arguments in relation to their perceptions about accounting and reporting policies for derivatives and it ends up with a summary of findings and discussions.

6.2 Interviewees' Opinions about Information Contents of Derivative Disclosures

In order to get insight into opinions about what types of derivative disclosures really needed by market participants, interviewees initially were asked Q1 *'To your best knowledge, for a nonfinancial company, what kind of information about its use of derivatives should be disclosed?'*, then Q5 *'For the disclosures related to the use of derivatives, what kind of information you most concern?'* followed up and Q3 *'How do you get such information about the use of derivatives? (What is your source to get such information?)'* was finally to be asked so as to understand the information channels for interviewees to obtain the information related to the use of derivatives.

6.2.1 Q1 *'To your best knowledge, for a nonfinancial company, what kind of information about its use of derivatives should be disclosed?'*

Table 6.1 presents a summary of issues addressed by interviewees about Q1 *'To your best knowledge, for a nonfinancial company, what kind of information about its use of derivatives should be disclosed?'*. Among total 24 issues, 'Scale' and 'Purpose' are the most popular topics mentioned by interviewees. Over three quarters of them, which are 16 out of 21 (76.19%), indicated that the scale of derivatives' business should be reported by a nonfinancial entity if it was engaged in and almost half which are 10 of 21 (47.62%) stated that it was necessary for a reporting company to disclose the purpose of using derivative instruments. In addition, nearly one in five interviewees pointed out that the users of derivatives had responsibility to provide information to discuss issues such as 'Qualitative Description of Derivative Products' (23.81%), 'Risk' (19.05%), 'Direction' (14.29%), 'Price' (14.29%), 'Earnings/Losses' (14.29%) and 'Terms' (14.29%). There are up to two thirds of total topics (i.e., 16 out of 24) associated with the disclosures of using derivatives, including 'Confidentiality',

'Depend on Views of Investors/Companies', 'Tenure', 'No Idea', 'Supervisory Bodies' Responsibility', 'Valuation', 'Impacts', 'Accounting Recognition/Measurement', 'Fair Value', 'Decision-making Mechanism', 'Value Chain', 'Currencies', 'Deposit', 'Counter Party', 'Qualification' and 'Unnecessary to Disclose Information', merely mentioned by less than ten per cent of total interviewees. Referring to the individual interviewees' group, managers and professional analysts have similar tendency regarding the information contents of derivative disclosures with a few differences as follows:

Firstly, although 'Purpose' is the second hottest topic addressed by both groups, it is obvious that managers paid more attention to this issue than analysts as up to 60 per cent of managers mentioned the need to disclose the purpose of using derivative instruments which is much higher than that of analysts (36.36%).

Secondly, despite of 'Scale' and 'Purpose' themes like 'Qualitative Description of Derivative Products' and 'Earnings/Losses' discussed by a certain portion of managers (i.e., 30% and 20% respectively) were not attracted much insight from analysts' group as its corresponding proportion was only 18.18 and 9.09 per cent respectively. Instead, nearly 30 per cent of analysts separately emphasised on whether firms had provided information related to the risk or terms of their derivative products.

Thirdly, there are nine out of 24 topics which contains 'Tenure', 'Decision-making Mechanism', 'Value Chain', 'Currencies', 'Deposit', 'Counter Party', 'Qualification' and 'Unnecessary to Disclose Information', not addressed by managers while six, including 'No Idea', 'Supervisory Bodies' Responsibility', 'Valuation', 'Impacts', 'Accounting Recognition/Measurement' and 'Fair Value', were not discussed by analysts.

With respect to the topic of 'Scale', interviewees insisted that reporting entities ought

to disclose information concerning the quantities, positions or proportion of derivative instruments as showing in the following examples with reference to quotations by three investment managers.

Major information about the use of derivatives should include for instance...their holding quantities...I mainly concerned this kind of information when I was investigating the hedging business of staple commodities conducted by listed companies (Interviewee (IV) 17).

From the view of our demanding...then the information about positions of derivatives held by the firm is useful for us as it surely had greater impacts on the corporate performance (IV 09).

The company should describe...the proportion of derivative products in its entire asset (IV 08).

One of analysts provides an example to illustrate why he believed there was a need for firms to discuss the purpose of using derivatives as follows:

In the domestic market, financial derivative products mainly refer to commodity futures. First of all, organisations must report whether they got involved in derivatives business and rigorously disclose that the use of such instruments was aiming for either hedging or speculating because many listed companies initially targeted to hedging but conducted some investment businesses later on and finally suffered huge derivative-related losses (IV14).

Three managers and two analysts demonstrated that it was necessary for quoted companies to provide detailed qualitative disclosures about their use of derivatives and in this regard, one of managers stated:

Some large Chinese companies owned by the central government would take part in derivatives trading in overseas market. Although the supervisory body - State-owned Assets Supervision and Administration Commission (SASAC) stipulated that all state-owned enterprises were only allowed to get involved in the hedging businesses, previous experience told us that there were still a number of firms engaged in speculating rather than hedging businesses by using derivative instruments. From this viewpoint, I think listed companies should prepare some qualitative disclosures to strictly report the details of their holding derivatives, such as the investing types, OTC or Exchange based and positions of those products (IV 18).

It is interesting that one of interviewees from each group addressed the issue of 'Confidentiality' and argued that although as investors they wanted to know everything about companies' derivative activities, it is impossible for enterprises to disclose all information particularly those in confidential related to their use of derivatives to the public. They provided the following arguments:

...It is difficult to say that what kind of derivative related information should be disclosed and it depends. From the view of investors, they certainly hope reporting enterprises to provide more detailed disclosures. From the view of companies, however, they are likely to keep some confidential information if they got involved in forwards or futures businesses. Hence, it is impossible to just consider one aspect rather than another and I think the supervisory bodies have responsibility to decide what derivative related information should be reported. More disclosures are certainly beneficial for investors to make decisions but probably not good for enterprises' operation (IV 01).

The principle of corporate governance is to ensure the maximum of shareholders interests. Thus, it is necessary for companies to disclose those of information which would influence the shareholders particularly minority stockholders'

interests...Every firm has its own situations. For instance, an industrial enterprise used its own funds to invest in commercial futures that are highly related to its major businesses. In principle, the firm should provide more information in greater depth and details but if the information was associated with its operational confidentiality such as possible to leak its costs, the company needs to seriously consider the balance between the principle and confidentiality. All in all, the most vital principle is to protect investors (IV 16).

Table 6.1 Issues in Relation to Q1 Addressed by Interviewees

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Scale	8	80	8	72.73	16	76.19
Purpose	6	60	4	36.36	10	47.62
Qualitative Description of Derivative Products	3	30	2	18.18	5	23.81
Risk	1	10	3	27.27	4	19.05
Direction	1	10	2	18.18	3	14.29
Price	1	10	2	18.18	3	14.29
Earnings/Losses	2	20	1	9.09	3	14.29
Terms	0	0	3	27.27	3	14.29
Confidentiality	1	10	1	9.09	2	9.52
Depend on Views of Investors/Companies	1	10	1	9.09	2	9.52
Tenure	0	0	2	18.18	2	9.52
No Idea	1	10	0	0	1	4.76
Supervisory Bodies' Responsibility	1	10	0	0	1	4.76
Valuation	1	10	0	0	1	4.76
Impacts	1	10	0	0	1	4.76
Accounting Recognition/Measurement	1	10	0	0	1	4.76
Fair Value	1	10	0	0	1	4.76
Decision-making Mechanism	0	0	1	9.09	1	4.76
Value Chain	0	0	1	9.09	1	4.76
Currencies	0	0	1	9.09	1	4.76

Deposit	0	0	1	9.09	1	4.76
Counter Party	0	0	1	9.09	1	4.76
Qualification	0	0	1	9.09	1	4.76
Unnecessary to Disclose Information	0	0	1	9.09	1	4.76

6.2.2 Q5 ‘For the disclosures related to the use of derivatives, what kind of information you most concern?’

Table 6.2 summarises issues addressed by interviewees in relation to Q5 ‘*For the disclosures related to the use of derivatives, what kind of information you most concern?*’ and different with Q1, Q5 primarily aims to identify what kind of derivative related information is important for interviewees to make investment decisions. There are total 16 issues mentioned by interviewees regarding the importance of information contents of derivative disclosures. Among them, 13 issues, including ‘Scale’, ‘Purpose’, ‘Price’, ‘Direction’, ‘Risk’, ‘Impacts’, ‘Terms’, ‘Qualitative Description of derivative Products’, ‘No Idea’, ‘Earnings/Losses’, ‘Tenure’, ‘Currencies’ and ‘Valuation’, were also discussed in Q1 which indicates that from interviewees’ perspective, these issues should be not only disclosed but also important to company’s derivative disclosures and three new topics – ‘Cost’, ‘Leverage’ and ‘Trading Place’ which were not addressed in Q1 are also believed to be of importance to the understanding of derivative related information provided by nonfinancial entities. Although many topics were discussed by interviewees in both Q1 and Q5, the frequencies of individual issues in Q5 are inconsistent with those in Q1 and the differences are as follows:

Firstly, similar with the results of Q1, ‘Scale’ and ‘Purpose’ are still top two topics addressed in Q5 which implies that the derivative information related to these two issues are most vital to interviewees. As discussed in Chapter V, the majority of sample firms (40 out of 53) disclosed the objectives for the use of derivatives in their

2006 annual reports and, therefore, it can be argued that most Chinese listed companies are able to disclose information for equity market participants to understand the purpose of using derivative products. However, referring to the frequencies, the proportion of either topic is sharply declined from 76.19 (16 interviewees) and 47.62 (10) per cent in Q1 to 47.62 (10) and 33.33 (7) per cent respectively which indicates that although more interviewees believe that the reporting company should provide information associated with the scale or purpose of using derivative instruments, these kinds of information are not necessary to be most concerned with the evaluation of derivative disclosures.

Secondly, issues of 'Price' and 'Direction' attract more attention in Q5 as the quantities of interviewees of either topic in Q5 (6 and 5 respectively) are almost twice as much as those of Q1 (3 and 3 respectively) which means that from market participants' view, the disclosures in relation to the price or movement of derivatives are likely to be much of significance. By contrast, the numbers of interviewees who mentioned 'Qualitative Description of Derivative Products' and 'Earnings/Losses' are dramatically down from five and three in Q1 to two and one in Q5 separately which implies that the information related to these two issues seems not to be important to interviewees although they believe that firms should report the use of derivatives regarding these two topics.

Last but not least, it should be noticed that the issue of 'Risk' attracted much of insights in both Q1 and Q5 as nearly one out five interviewees addressed this topic in both questions. However, as discussed in Chapter V, none of sample companies provided the information related to risks arising from using of derivatives in their annual reports and, hence, it can be argued that there is a need for Chinese listed firms to discuss the risks associated with derivative instruments in their public reports so as to satisfy the information needs of institutional investors.

With respect to the issue of 'Price', some interviewees stressed the importance of

derivatives' price to the assessment of derivative products used by companies and this view is clearly stated as the following quotations by a manager and an analyst:

Currently, the derivative disclosures are commonly referred to warrants embedded in convertible bonds. For warrants, I mainly concern the converting percentage and price because these are associated with the space of arbitrage...(IV 19).

I mainly care about the information related to the quantities and price in short terms, and purpose, risk control mechanisms etc. in long term (IV 03).

Five interviewees pointed out that the operating direction of the derivatives business was quite vital to the users' financial performance. In this regard, one manager stated:

... I primarily care about whether the direction of derivative instruments is correct when companies got involved in OTC businesses as I have doubts with the current ability of Chinese nonfinancial enterprises to operate OTC derivative products...(IV 20).

Another analyst further provided supportive statements as follows:

I mainly concentrate on the operating direction of derivative instruments. Its operating direction is fundamentally important for me to judge the price trend of objects under derivative contracts in the near future and the subsequent effects to a firm's profits (IV 12).

One manager and three analysts emphasised on the impact of risks arising from the transactions of derivatives when making investment decisions as showing in the following quotations by one analyst:

For me, I seriously concern the risk exposures of derivative products. How huge is

the potential risk? Is there a cap or bottom? It would have a great effect if you issue a put warrant (IV 10).

Table 6.2 Issues in Relation to Q5 Addressed by Interviewees

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Scale	5	50	5	45.45	10	47.62
Purpose	2	20	5	45.45	7	33.33
Price	2	20	4	36.36	6	28.57
Direction	1	10	4	36.36	5	23.81
Risk	1	10	3	27.27	4	19.05
Impacts	2	20	0	0	2	9.52
Terms	1	10	1	9.09	2	9.52
Qualitative Description of Derivative Products	1	10	1	9.09	2	9.52
No Idea	1	10	0	0	1	4.76
Cost	1	10	0	0	1	4.76
Earnings/Losses	1	10	0	0	1	4.76
Tenure	0	0	1	9.09	1	4.76
Currencies	0	0	1	9.09	1	4.76
Leverage	0	0	1	9.09	1	4.76
Trading Place	0	0	1	9.09	1	4.76
Valuation	0	0	1	9.09	1	4.76

6.2.3 Q3 'How do you get such information about the use of derivatives? (What is your source to get such information?)'

In order to find out the channels for investors to obtain the information related to the use of derivative instruments by listed companies, interviewees were subsequently asked Q3 'How do you get such information about the use of derivatives? (What is your source to get such information?)' and Table 6.3 provides a summary of

information channels addressed by interviewees. As shown, the use of public reports such as quarterly, semi-annual or annual reports produced by quoted companies is the most prevalent method to gather derivative related information as almost every interviewee except one manager mentioned the adoption of public reports as a source to collect information. There are up to 80.95 per cent of interviewees (17 out of 21) regarded the way of conducting surveys like communication with listed companies in private as a major channel for the collection of information. Eight interviewees including four managers and four analysts as well suggested the employment of other public information like internet or media. Lastly, only less than ten per cent of interviewees (2 out of 21) pointed out that they obtained such information associated with the use of derivatives through the reports produced by professional analysts.

Interviewees were further asked about which way they most preferred to collect derivative related information and the results are presented in Table 6.4. It is quite interesting that no more than half of interviewees (47.62%) considered the use of public reports to be the primary way to gather derivative information whereas it was mentioned by almost every interviewee in Table 6.3 which indicates that although the adoption of public reports is a major information source in Chinese equity market, institutional investors still have other important channels to collect the information associated with the use of derivatives by listed companies. Some interviewees who preferred to use public reports demonstrated that the information received from public reports was relatively reliable which is showing in the following examples with reference to quotations by an investment manager:

I think the use of public reports is the main information channel as it is not easy to control the authenticity and reliability of surveys (IV 07).

Other supporters expressed their worries about the effectiveness of other information source like surveys as firms sometimes might not provide any more information beyond those in public reports due to the consideration of confidentiality and this

view is argued as following statements by two analysts:

...I think doing surveys does have much of effect because the companies have to avoid the risk related to disclosures of information (IV 11).

I believe the use of public reports is more vital because conducting survey has greater uncertainties as companies sometimes could answer your questions but sometimes not (IV 13).

As shown in Table 6.4, there are eight (38.10%) interviewees who insisted that they were more likely to choose other information channels rather than 'Public Reports' which includes four for 'Other Public Information', three for 'Surveys' and one for 'Analysts' Reports'. Moreover, three of them (14.29%) did not manifest their preference to different ways of gathering derivative related information. For interviewees who preferred the adoption of surveys, some argued that the inadequacy of derivative disclosures by Chinese listed companies was the major reason for not using public reports and this view is discussed as the following examples with reference to quotations by one manager and analyst respectively:

I think conducting surveys is the most important information channel. It is an opportunity to have a deep and straight-out communication with listed companies as the current information disclosure by domestic companies is incomplete and in many cases, the information which should be disclosed in public reports seems not to be reported in practice (IV 17).

...The other method is to directly contact firms to ask whether they have got involved in derivatives businesses. I think the direct communication with quoted companies is a little bit more straightforward. The use of public reports produced by firms is another way to obtain information but public reports contain too much information not mainly focused on derivative issues. Even if you categorise the

information in reports, it still needs to be verified by contacting reporting entities. In my opinion, the information provided by many Chinese companies in their public reports is not adequate and therefore, it would be more effective to directly communicate with listed firms (IV 04).

Four interviewees considered the employment of other public information like news on internet or media to be prior over either public reports or surveys and for instance, one manager and analyst separately provided some arguments for this as follows:

Conducting surveys must be good because you could acquire first hand information. However, the problem is that at present, a lot of derivative transactions are treated as off-balance sheet items and therefore, you are unable to figure out the consequences of such businesses before they are finally settled and delivered. Hence, the conduction of surveys must be good but has limited effects on the acquirement of derivative related information. As for my experience, the most vital channel is the information platform on internet (IV 21).

The major channel is to get information from some financial websites such as sina (www.sina.com.cn), eastmoney (www.eastmoney.com) etc. They have specialised subjects particularly to financial derivatives like futures (IV 12).

Table 6.3 Issues in Relation to Q3 Addressed by Interviewees

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Public Reports	9	90	11	100	20	95.24
Surveys	8	80	9	81.82	17	80.95
Other Public Information	4	40	4	36.36	8	38.10
Analysts' Reports	1	10	1	9.09	2	9.52

Table 6.4 Preference of Information Channels by Interviewees

Information Channels	Nos. of Interviewees	Percentage in Total Interviewees (%)
Public Reports	10	47.62
Other Public Information	4	19.05
Surveys	3	14.29
Preference Not Clearly Mentioned	3	14.29
Analysts' Reports	1	4.76

In summary, with regard to the information contents of derivative disclosures, the information in relation to the scale and purpose of derivative businesses was perceived to be greatest of importance to the sample institutional investors. In addition, the disclosures concerning the price and direction of derivative transactions were also believed to be vital to the understanding of derivative disclosures provided by Chinese listed companies. Last but not least, the information related to the risk arising from the use of derivatives which was not reported by any sample companies as discussed in Chapter V has attracted considerable attentions from interviewees implying a necessity for the users of derivatives to produce discussions associated with risks accompanying with employing derivative instruments in their annual reports so as to meet the expectation of equity market participants.

Referring to the channels of obtaining information, although the use of public reports provided by reporting entities was the most popular method, it was merely chosen by less than 50 per cent of interviewees to be the primary way to collect derivative related information while there were a quite number of interviewees who tend to mainly employ other ways such as surveys and internet/media to gather information. In interviewees' opinions, the reliability of disclosures was thought to be the major reason to be prior to using public reports whereas the inadequacy of derivative disclosures by Chinese listed companies was mainly contributed to the adoption of other information channels.

6.3 Interviewees' Opinions about the Usefulness of Derivative Disclosures

This section intends to provide a discussion about the usefulness of derivative related disclosures perceived by Chinese equity market participants. It begins with the presentations and arguments of interviewees' responses to Q2 *'Have you ever used the information related to the use of derivatives when evaluate a corporate performance or risk profile? (If no, why?)'*, followed by Q4 *'Do you think the information about the use of derivatives is useful or not when making investment decisions? Why?'*, Q6 *'In your view, is it much more useful if a company discloses more information about its use of derivatives?'*, Q7 *'Generally, are you satisfied with current derivative-related disclosures provided by listed companies? Do you think the information disclosed by companies is adequate or not? If not, what kind of information you would like companies to disclose?'* and a summary of findings and discussions will be provided in the end.

6.3.1 Q2 *'Have you ever used the information related to the use of derivatives when evaluate a corporate performance or risk profile? (If no, why?)'*

Table 6.5 summarises the results associated with Q2 *'Have you ever used the information related to the use of derivatives when evaluate a corporate performance or risk profile? (If no, why?)'*. As shown, the majority which are over three quarters of interviewees (76.19%) have ever used derivative related disclosures provided by Chinese listed companies when assessing the value of a firm, however, it should be noticed that there are still a certain portion of interviewees which are nearly a quarter (23.81%) including one manager and four analysts stating that they have never or hardly employed such disclosures in the process of evaluation. With regard to the

reasons for not adopting derivative related information, one manager and two analysts argued that derivative instruments were seldom employed by their focused companies within particular industries and this view is illustrated in the following quotations:

Almost not (used derivative disclosures). Generally speaking, the scale of derivative businesses is relatively small which is mainly concentrated on foreign exchange products with few futures, and it takes very little in total assets or liabilities. As a result, the use of derivatives is unlikely to be treated as a significant risk to corporate performance (IV 10).

I think the assessment of the derivatives trading is one of important aspects to evaluate a company's risk profile but different industry has different situations. I emphasise on the petroleum and petrification industry and as my experience, the domestic petroleum and petrification firms are usually seldom involved in financial derivative transactions as based upon previous experience, they know that the fluctuation of petroleum is greatly huge which is not easy to be controlled or predicted (IV 04).

My focused enterprises which are mainly within the paper making industry have never used derivative related instruments because the derivative products specialised to this industry are currently not available in the domestic market (IV 13).

Another two analysts highlighted the inadequacy and incompleteness of derivative related information reported by quoted companies is the vital reason for not employing such disclosures and they provided some discussions as follows:

... never used derivative related disclosures as the formation related to the use of derivatives is not fully disclosed by listed firms. Previously, I tried to seek such information but never found. For instance, the prices of staple commodities such

as non-ferrous metal, crude oil etc. have been heavily fluctuated in recent years, however, I really cannot understand why companies closely associated with such commodities like airlines did not use derivative products to hedge their price risk because in my memory, they never report such derivative activities in public reports. Finally, I knew that they got involved in derivatives trading and suffered a huge loss. Hence, it is impossible for me to use such inadequate derivative related information as the users did not tell you anything about when they conducted such businesses but the consequences came out at end (IV 14).

I seldom use derivative disclosures in practice. In the real world, such disclosures are usually not adequately, completely and timely reported by quoted companies. I think the derivative related information is too little to make a judgment (IV 16).

Table 6.5 Issues in Relation to Q2 Addressed by Interviewees

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Ever Used Derivative Disclosures	9	90	7	63.64	16	76.19
Never/Hardly Used Derivative Disclosures	1	10	4	19.05	5	23.81

6.3.2 Q4 'Do you think the information about the use of derivatives is useful or not when making investment decisions? Why?'

In this section, the interviewees' opinions about the usefulness of derivative related disclosures is examined by asking Q4 'Do you think the information about the use of

derivatives is useful or not when making investment decisions? Why?'. Different with previous sections, the study mainly emphasises on interviewees who have employed the disclosed derivative information by listed companies when making investment decisions and therefore, the final sample in this section are 16 in total where five interviewees containing one manager and four analysts are not included. Generally, all of 16 interviewees reached a consensus that the information provided by quoted companies about their use of derivative instruments was useful and helpful to make investment decisions. This finding is consistent with a great many western studies mainly based on the U.S. and UK's scenarios (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) which provided empirical evidence to prove that the derivative related disclosures following corresponding regulations contain useful information to users of financial statements, particularly to investors and therefore, they are value relevant to investors' assessment of the corporate value.

However, they had different views in terms of the significance of derivative disclosures in the process of decision making which is summarised in Table 6.6. Most of interviewees which are seven out of 16 (43.75%) considered derivative related disclosures only as the complementary information, followed by five (31.25%) with the view of the role of such information subject to different situations and only a quarter of interviewees insisted that the derivative information disclosed by Chinese listed firms played a major role when making investment decisions. Referring to individual interviewees groups, managers have different preference with analysts with regard to the importance of derivative disclosures. The supplementary effect of derivative disclosures was favoured by over half of managers (55.56%) whereas the major role was suggested by most of analysts (42.86%). The findings are likely to provide a possible reason to explain the result found in Chapter V that the degree of disclosures complying with IFRSs and IASs derivative related regulations is generally

low in Chinese equity market as reporting entities are possible to be encouraged to disclose the information highly concerned by market participants rather than those considered as supplements in assisting investment decision. This can be an interesting topic for further studies to analyse the incentives of derivative users to provide corresponding information to the public.

Interviewees were further asked why they believed derivative related disclosures to be major, complementary or subject to different cases and the results are presented in Tables 6.6, 6.7 and 6.8. As shown in Table 6.7, among interviewees who treated the derivative related information as the major basis to decide investments, three quarters including one manager and two analysts claimed that they thought such disclosures were highly related to the valuation of a company and they expressed this view by stating:

I think it (the derivative disclosure) is the major information for valuation of a firm. For example, JIANGXI COPPER CO., LTD suffered great losses in terms of derivative transactions and this kind of losses would directly affect the valuation of the company. Thus, I feel that the information related to the use of derivative products is not assistant and supplementary while it is very vital to influence your judgment about the corporate value (IV 18).

As many experiences, derivative disclosures reported by listed companies are quite important to make investment decisions as the trade of derivative instruments on the one hand, may have significant impacts on a enterprise's profits or earnings; on the other hand, it also reflects the prediction of the firm regarding the future movement of the market where it is operated (IV 05).

Derivative disclosures are much of importance for me to decide investments because the prices of derivative products particular staple commodities would largely affect the prices of products a firm produced and eventually, affect the

share prices. At present, the share prices of domestic listed companies are particularly highly related to derivatives like staple commodities. As a result, when the prices of staple commodities go up, the share prices of quoted companies would be changed simultaneously (IV 12).

In addition, an analyst provided the following arguments to illustrate the significance of using derivative related information in helping judge the direction of investment decisions:

I think there would be a huge difference in terms of your decisions whether the information related to the use of derivatives is available. At least, with such information, it is able to make the decisions in a right direction although you cannot get an accurate answer due to the incompleteness of such derivative disclosures (IV 03).

As shown in Table 6.8, the majority of interviewees (71.43%) who considered derivative related disclosures as complementary information argued that such disclosures were mainly used to evaluate the corporate risk profiles and comparatively, the main body disclosures like information related to profits, assets, liabilities etc. were primarily much of importance to make investment decisions. In this regard, some examples with reference to quotations by two managers and one analyst are shown as follows:

The information about the use of derivative instruments is a sort of complementary information and we mainly look at the information related to an enterprise's assets, liabilities and profits. To invest a company or not is still based on its fundamental businesses. The derivative related information is only a supplementary explanation without decisive effect and it is merely to be employed to evaluate corporate risks (IV 07).

It (the derivative disclosure) is a kind of complementary information. We look at derivatives and actually pay attention to whether the use of derivative products can cause a huge risk to a firm. If its strategy of employing derivatives is to be complemented with fundamental businesses with the primary aim to fix costs, the derivative businesses would have large influence on fundamental businesses and therefore, the risk is easily to be estimated (IV 09).

The information (in relation to the derivative usage) is useful to evaluate market risks as the evaluation of investment risks is one of aspects to make investment decisions (IV 02).

The small scale of derivative transactions in total businesses mentioned by 28.57 per cent of interviewees is the second popular factor contributing to the minor role of derivative disclosures in the valuation of a company and a manager stated:

In my opinion, it (the derivative disclosure) is the supplementary information because as far as I know, the quantities of derivative instruments used by domestic firms would not be very huge and as a result, the derivative transactions are not likely to have significant impacts on companies' whole businesses (IV 08).

Another manager expressed the similar view as shown in the following paragraphs:

I think the derivative related information is complementary. After all, mainland listed companies can only employ very few derivative products and the scale of derivative businesses is quite limited as well. In addition, the use of derivatives is merely an aspect of a firm's operation and therefore, it cannot be treated as primary but only as supplementary aspect (IV 21).

An analyst indicated the complementary effect of derivative disclosures on evaluating corporate governance:

The disclosures in relation to the use of derivatives have a certain complementary role on the valuation of a company's stock prices. It (the derivative disclosure) is one of factors with reference to corporate governance. If it (the derivative disclosure) was disclosed in time, the reporting firm must be trusted and there would be less uncertain in terms of its stock price (IV 15).

Referring to interviewees who believed derivative related disclosures to be depending on specific situations as shown in Table 6.9, the vast majority (80%) of the interviewees insisted that the significance of such disclosures should be subject to the impact of using derivatives on a company's financial status. The following quotations from one manager and analyst respectively provided typical examples to illustrate this view:

I think the importance of derivative related information should depend on the quantities of derivative businesses. If they are greatly invested, it would be possible to cause a large rise and fall in short term earnings and in this case, the derivative disclosures would be vital for evaluating the firm. Otherwise, the impact of derivative transactions would be immaterial and therefore, such disclosures would not be likely to be temporarily considered (IV 19).

It (the significance of derivative disclosures) relies on the scale of derivative instruments and further, their impacts on the corporate financial performance. If the scale is too small, derivative disclosures should not be focused. For instance, if a company with billions RMB of net profits has hundreds of millions RMB of derivative products, the impact of derivatives would not be hugely affected its financial status as it only has a percentum effect on corporate profits even though the company suffers derivative related losses. Otherwise, if derivative transactions enormously affect the firm's financial performance, such disclosures should be paid much attention (IV 06).

Table 6.6 Issues in Relation to Q4 Addressed by Interviewees

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Complementary Information	5	55.56	2	28.57	7	43.75
It Depends	3	33.33	2	28.57	5	31.25
Major Information	1	11.11	3	42.86	4	25

Table 6.7 Reasons for Believing Derivative Disclosures as ‘Major Information’

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Closely Related to Corporate Value	1	100	2	66.67	3	75
Direction of Judgment	0	0	1	33.33	1	25

Table 6.8 Reasons for Believing Derivative Disclosures as ‘Complementary Information’

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Focus on Main Body Disclosures	4	80	1	50	5	71.43
Small Scale	2	40	0	0	2	28.57
Depending on Your Own Judgment	1	20	0	0	1	14.29
Corporate Governance	0	0	1	50	1	14.29

Table 6.9 Reasons for Believing Derivative Disclosures as ‘It Depends’

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Impact on Corporate Financial Performance	2	66.67	2	100	4	80
Terms	1	33.33	0	0	1	20

6.3.3 Q6 ‘In your view, is it much more useful if a company discloses more information about its use of derivatives?’

In order to get insight into the perceptions of investors about disclosing more derivative information by listed companies, interviewees were asked Q6 ‘*In your view, is it much more useful if a company discloses more information about its use of derivatives?*’. Overall, all of 21 interviewees agreed that it was more of use and help to make investment decisions if a quoted firm provided more derivative related disclosures and they also explained the reasons for welcoming the disclosure of more derivative information as shown in Table 6.10. The majority of analysts which are seven out of eleven (63.64%) argued that it was helpful to facilitate their investment decisions by getting better understanding of the risk profile of a company if it reported more derivative disclosures and this view is illustrated as following examples with reference to quotations by two analysts:

It (the more derivative disclosure) must be helpful. By using more derivative related information, I could make clear awareness about a firm’s risk profile at least. Although I have little knowledge about risks related to the use of financial derivatives, if the reporting entity provided more detailed disclosures, I can understand their inherent risks by consulting some specialists (IV 04).

It (the more derivative disclosure) is useful as the more information you obtained, the more likely to measure risks a company faced and furthermore, the more comprehensive understanding of risks, the more ability to make accurate valuation (IV 14).

Different with the analysts, most of the managers (40%) treated the provision of more derivative disclosures as the improvement of information transparency which can contribute to make better investment decisions. For instance, two of them provided some discussions as follows:

...It is possible to give some premiums on listed firms with more derivative disclosures because they are more transparent and welcomed (IV 09).

It (the more derivative disclosure) is useful. Firstly, disclosing more information at least indicates the reporting enterprise is more open and transparent in terms of information disclosures and also shows that it is responsible for shareholders. Secondly, disclosing more derivative information is beneficial for me to analyse the details of derivative instruments adopted by the company. I believe the transparency of a quoted firm to external investors is greatly significant (IV 17).

Nearly a quarter of interviewees (23.81%) did not specifically address the contributions related to the disclosure of more derivative related information. In addition, almost one fifth (19.05%) including three managers and one analyst suggested that other issues like the improved management level were likely to be perceived accompanied with reporting more derivative information and in this regard, one manager stated:

It (the more derivative disclosure) must help. It may reflect the management level of a listed company by disclosing more information in relation to the use of

derivatives...and therefore, the more, the better (IV 10).

Interviewees were further asked about whether they made favoured valuation on firms with more derivative disclosures when deciding investments and the responses are summarised in Table 6.11. Generally speaking, two thirds of interviewees demonstrated that they were likely to positively value companies with more provision of derivative related information while up to one third insisted that it was not necessary to make positive valuation for those with more derivative disclosures. With regard to reasons for not making favoured assessments, as shown in Table 6.12, almost all of interviewees which are six out of seven (85.71%) achieved the consensus that they would not be able to give positive valuation unless companies with more derivative disclosures provided relevant information to their appraisal of investments which is showing as following examples with reference to quotations by two analysts:

...However, I think the disclosed derivative information should be relevant. Listed firms need to prepare more information related to their essential operations such as why you used those derivatives and what impacts would have on the company's operation if you employed other products as substitutes rather than those about the explanation of mathematics and financial theories like how to price by using BS Model (Black-Scholes Option Pricing Model³⁸). I pay more attention on the virtual effect of derivative products on an enterprise other than theoretical background knowledge (IV 02).

...It is useful to decide investments if more information is available. Nevertheless, these information must be useful for our concerns such as the derivatives' scale, price and any adjustment for an increase or decrease after the disclosure (IV 03).

³⁸ The Black - Scholes Option Pricing Model is an approach for calculating the value of a stock option. In the early 1970's, Myron Scholes, Robert Merton, and Fisher Black made an important breakthrough in the pricing of complex financial instruments by developing what has become known as the Black-Scholes model. In 1997, the importance of their model was recognised worldwide when Myron Scholes and Robert Merton received the Nobel Prize for Economics. The Black-Scholes model displayed the importance that mathematics plays in the field of finance. It also led to the growth and success of the new field of mathematical finance or financial engineering (MacKenzie, 2003).

Besides, a manager provided an argument that the positive assessment should depend on the consequence of using derivative instruments by stating following paragraphs:

It (making favoured valuation) is not necessary. Even if the company disclosed more information, it did not well operate its derivative businesses like hedging and in other words, its risk exposures were otherwise increased by employing derivatives, and therefore, disclosing more derivative related information is not necessary for me to make positive investment valuation (IV 21).

Table 6.10 Benefits for Disclosing More Derivative Related Information

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Risks	1	10	7	63.64	8	38.10
Not Clearly Mentioned	2	20	3	27.27	5	23.81
Information Transparency	4	40	0	0	4	19.05
Others	3	30	1	9.09	4	19.05

Table 6.11 Interviewees' Perception about Whether Making Positive Valuation on Companies with More Derivative Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Positive Valuation	8	80	6	54.55	14	66.67
Not Necessary	2	20	5	45.45	7	33.33

Table 6.12 Reasons for Not Making Positive Valuation on Companies with More Derivative Disclosures

Issues	Nos. of	Percentage in	Nos. of	Percentage	Total	Percentage in
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	Managers	Total Managers (%)	Analysts	in Total Analysts (%)		Total Interviewees (%)
Relevant Information	1	50	5	100	6	85.71
Consequence	1	50	0	0	1	14.29

6.3.4 Q7 ‘Generally, are you satisfied with current derivative-related disclosures provided by listed companies? Do you think the information disclosed by companies is adequate or not? If not, what kind of information you would like companies to disclose?’

The study intends to examine the satisfaction of equity market participants to derivative related disclosures by asking interviewees about Q7 ‘*Generally, are you satisfied with current derivative-related disclosures provided by listed companies? Do you think the information disclosed by companies is adequate or not? If not, what kind of information you would like companies to disclose?*’. At the beginning, they were asked about whether they were satisfied with current derivative disclosures by Chinese quoted firms and their opinions are summarised in Table 6.13. Among total 21 interviewees, the great majority (85.71%) including eight managers and ten analysts claimed that they were not satisfied with the present provisions of derivative related information by listed organisations whereas only one manager expressed the satisfaction with those disclosures as following quotations:

The disclosure of information is not decided by individual companies. For example, CSRC has specialised mechanisms regarding the provision of information related to firms’ tombstone advertisements and raised funds’ instructions. I think the basic information has been fully disclosed and it is pretty enough (IV 19).

In addition, two interviewees had no clear awareness about derivative related disclosures and this view was explained by an analyst as the absence of using derivatives by some companies. He stated:

The firms I faced have never been involved in derivative transactions and as a result, they did not disclose any derivative related information in public reports or other public documents. Thus, I have no idea about whether I am satisfied with them (IV 04).

Then 18 out of 21 interviewees who were claimed to be unsatisfied with derivative disclosures by listed companies were further asked about questions '*Why are you not satisfied with current provisions of derivative disclosures?*' and '*What kind of information you would like companies to disclose?*', and the responses are demonstrated in Tables 6.14 and 6.15 respectively. As shown in Table 6.14, the issue of 'Insufficient Disclosures' was perceived by two thirds of interviewees as the primary factor associated with the dissatisfaction of derivative related disclosures and in this regard, some examples are provided as following quotations made by a manager and analyst separately:

It (the derivative disclosure) is not adequate. The key issue is the degree of details about the disclosed information related to derivative transactions. Some listed companies usually provided very general disclosures without detailed analyses (IV 18).

I am not satisfied with the derivative related information in A shares market as the disclosures are not enough. Generally, the enterprise just disclosed the result of hedging – how much it earned or lost but did not tell you the quantities of derivatives and reasons for losses. Consequently, the information was too little to be used to make judgments or predictions (IV 05).

Up to nine interviewees (50%) argued that the lack of timely disclosures about the use of derivative instruments was much of significance for their dissatisfaction and for instance, one manager noted this view as follows:

It (the derivative disclosure) must be inadequate. For example, if a company conducts a hedging business by employing derivative products, no one would know until it suffered a huge loss and in my opinion, it should provide some discussions in its quarterly reports at least (IV 21).

A similar discussion was also provided as following quotations with reference to an analyst:

...Information lag. Basically, we all know when a firm suffered derivative related losses but could not comprehensively understand the information such as when it bought derivatives (IV 16).

As shown in Table 6.15, disclosures about the scale and purpose of using derivative instruments are top two popular types of information that interviewees expected listed companies to greatly disclose and this finding reconfirms the conclusion achieved in Section 6.2.2 that the information associated with the scale and purpose of a firm's derivative businesses were most concerned by sample equity market participants. It should be noticed that nearly two thirds of managers which are five out of eight (62.5%) suggested that the users of derivative products should timely disclose derivative related information in periodical as well as temporary reports and this view is illustrated as following examples with reference to quotations by two managers:

It (the derivative related disclosure) needs to be disclosed and when a grave change incurs in the market, the relevant information ought to be timely disclosed (IV 17).

...I feel that it is necessary to forward a suggest to supervisory bodies that once a quoted company gets involved in derivative transactions especially for those engaged in overseas OTC businesses, it must be required to constantly provide relevant information in temporary reports (IV 20).

Last but not least, two analysts argued that it was impossible for reporting entities to fully disclose the derivative related information as they had to carefully balance the risk of leaking something in confidential and the information needs of the public and they stated:

...Sometimes it is impossible to get what you want. For instance, if the derivative information is related to the company's trade secret, it is unnecessary for listed firms to provide detailed disclosures. Although investors wish it to be reported, it is not objective and realistic (IV 13).

Investing in financial derivative products may actually refer to key elements of an enterprise's operation. There might be different goals between enterprises and the public in terms of disclosing derivative related information. It should be found an appropriate balance and it is not able to ask listed companies to tell everything in order to satisfy the public (IV 16).

Table 6.13 Satisfaction about Current Derivative Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Unsatisfied	8	80	10	90.91	18	85.71
No Idea	1	10	1	9.09	2	9.52
Satisfied	1	10	0	0	1	4.76

Table 6.14 Issues for Unsatisfied

Issues	Nos. of	Percentage	Nos. of	Percentage	Total	Percentage in
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	Managers	in Total Managers (%)	Analysts	in Total Analysts (%)		Total Interviewees (%)
Insufficient Disclosures	5	62.5	7	70	12	66.67
Lack of Timeliness	5	62.5	4	40	9	50
Confidentiality	2	25	0	0	2	11.11
Complexity of Derivatives	0	0	1	10	1	5.56
Information Cost	0	0	1	10	1	5.56

Table 6.15 Issues in Relation to More Derivative Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Scale	3	37.5	4	40	7	38.89
Purpose	3	37.5	3	30	6	33.33
Timely Disclosure	5	62.5	0	0	5	27.78
Direction	2	25	2	20	4	22.22
Price	1	12.5	1	10	2	11.11
Qualitative Description of Derivative Products	2	25	0	0	2	11.11
Trading Place	1	12.5	1	10	2	11.11
Tenure	1	12.5	1	10	2	11.11
Confidentiality	0	0	2	20	2	11.11
Cost	1	12.5	0	0	1	5.56
Fair Value	1	12.5	0	0	1	5.56
Impacts	0	0	1	10	1	5.56
Currencies	0	0	1	10	1	5.56
Risks	0	0	1	10	1	5.56
Fundamentals	0	0	1	10	1	5.56
Brief Summary of Financial Statements	0	0	1	10	1	5.56

In summary, the derivative related disclosures provided by Chinese listed companies

have ever been employed by most of institutional investors to facilitate their investment decisions as 16 out of 21 sample interviewees claimed the use of such information when evaluating the corporate financial performance. The hardly involvement of derivative transactions by focused firms and inadequacy of the provision of derivative related information are major reasons asserted by investors without using derivative disclosures.

Chinese institutional investors generally treated derivative disclosures as useful and helpful information when making investment decisions as the usefulness of such disclosures for deciding investments was affirmed by all of 16 interviewees who ever employed derivative related information and this finding is coincident with a large number of empirical studies mainly based on western mature economies (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) which prove the usefulness and relevance of derivative disclosures following respected regulations to be value relevant to the assessment of companies made by users of financial statements. However, the investors' perceptions about the significance of derivative related disclosures are no of consistence. Firstly, the use of derivative related disclosures just played a minor role in facilitating investment decisions because most of sample equity market participants (43.75%) claimed to consider such information to be supplementary to the assessment of the corporate value. The derivative information was believed to be majorly served as the supplementary information for the investors' judgement of firms' risk profile whereas the main body disclosures related to the corporate fundamental businesses such as profits, assets and liabilities were thought to be of priority to make investment decisions. Secondly, a significant portion of sample investors (31.25%) argued that the importance of derivative disclosures should rely on the impact of derivative instruments on the corporate financial status. Thirdly, the derivative related information was believed to be primarily significant by the majority of professional

analysts (42.86%) as it was claimed to be closely related to the valuation of a listed company.

The provision of more derivative related information by quoted organisations was deemed to be more useful and helpful in facilitating investment decisions by sample interviewees. The better understanding of the corporate risk profile as well as the improvement of information transparency was separately considered by most of analysts and managers as the major factor for welcoming more derivative disclosures. Two thirds of interviewees claimed that companies with more derivative disclosures were more likely to be received positive valuation while the rest argued that they were unnecessary to be positively assessed unless those disclosures contained the relevant information to their evaluation of the corporate performance.

Overall, the derivative related disclosures by Chinese quoted firms were not satisfied by equity market participants as the large majority of sample interviewees (85.71%) expressed their dissatisfaction with the current reporting status. Two major factors including the insufficient information and the lack of timely disclosures were claimed to be contributed to the dissatisfaction of reporting information related to the use of derivatives. In addition, disclosures about the scale and purpose of employing derivative instruments were expected to be greatly discussed and the provision of timely disclosure was addressed by most of managers as the improvement of the status quo.

6.4 Interviewees' Opinions about Accounting and Reporting Policies for Derivatives

In this section, with the purpose to get equity market participants' views on the accounting and reporting policies for derivatives in China, interviewees were firstly

asked Q8 '*Do you think the reporting for derivatives should be compulsory or voluntary? Why?*', followed by Q9 '*What is your view on current accounting and reporting (IFRS-based requirements) for derivatives? Do you think it is easily to be understood?*' and Q10 '*Do you think the reporting for derivatives should whether continue to comply with IFRS requirements, or set up relevant requirements based upon Chinese scenario, or no need to set up any requirements? What is your suggestion for the future development of reporting for derivatives?*' was discussed at last.

6.4.1 Q8 'Do you think the reporting for derivatives should be compulsory or voluntary? Why?'

The study proposed to gain insight into sample interviewees' preference of patterns of reporting for derivatives by asking Q8 '*Do you think the reporting for derivatives should be compulsory or voluntary? Why?*' and Tables 6.16 and 6.17 provided summaries of interviewees' answers. As illustrated in Table 6.16, the great majority of interviewees which are 18 out of 21 (85.74%) claimed that the information concerning the use of derivative instruments ought to be mandatorily disclosed by listed companies which indicates the strong desire of equity market participants to improve the previously voluntary reporting framework for derivatives. Nevertheless, a manager as well as an analyst suggested that the patterns of derivative disclosures should depend on the scale of derivative transactions in a firm's overall financial performance and they provided arguments as follows:

The reporting for derivatives should depend on the scale of such products. For instance, a company buys a standardised option contract and in the worst situation, it would just suffer a loss no more than an option premium. Thus, it is not necessary to disclose derivative related information if the premium is so small.

However, if a company involves in an OTC business with huge scale as a tool to hedge its future transactions, it should mandatorily report its derivative activities as such businesses are possible to have a big strike on the firm's operations (IV 20).

It (reporting for derivatives) is subject to the scale of derivative instruments. The derivative transactions which remarkably affect the corporate earnings must be compulsorily and detailed disclosed. Otherwise, those with little scale and impacts could be voluntarily reported. It (reporting for derivatives) mainly relies on the significance of using derivatives on firms' financial performance (IV 05).

Besides, another analyst believed the patterns of reporting for derivatives to be subject to the risk arising from the use of derivative instruments as showing in the following statements:

The information is usually reported to the exchanges and supervisory bodies at the beginning. I think the exchanges need to set up a 'line' and the derivative related information have to be mandated disclosed when derivative businesses over the 'line'. The 'line' refers to the risk which means the losses generated by the risk exposures of financial derivative products (IV 16).

Table 6.17 summarises the reasons addressed by 18 interviewees for their preference of compulsory derivative disclosures. As shown, almost half of interviewees which are eight out of 18 argued that under the mandated reporting framework, quoted companies would be less discretionary in deciding what kind of derivative related information should be disclosed and eventually it contributes to reduce the possibility of hiding certain information deliberated by some reporting entities. Two managers stated:

...The voluntary disclosure grants a very large discretion to reporting enterprises.

As a responsible company, it may disclose sufficient and comprehensive information. By contrast, an irresponsible firm is likely to viciously modify some terms so as to violate investors' interests and if investors do not pay much attention, they could suffer some losses (IV 19).

...Since the accounting and reporting for derivatives such as the valuation of fair values is too complex and tremendous, under the voluntary disclosure framework, many listed firms could be unwilling to deal with them. In addition, as off-balance sheet items, the reporting for derivative instruments is pretty flexible and consequently, reporters are able to hide much information not or little to be disclosed (IV 21).

Four managers along with four analysts demonstrated that the derivative related information must be compulsorily disclosed by quoted companies mainly due to the consideration of the potentially huge financial losses caused by risks embedded in the use of derivatives and this view is clearly illustrated in the following examples with reference to quotations by a manager and an analyst respectively:

...Given the enormous risk possibly associated with employing derivatives, if the derivative related information is not forced to be reported, it is quite easy for the management to do something immoral which may result in an increase in moral costs. In many cases, the management may take away the earnings of derivative transactions but the shareholders have to afford the losses generated from such businesses (IV 10).

...Just like a bomb, a derivative product is so dangerous that might be exploded at any time. When the market is normally fluctuated, derivatives appear to be unharmed, however, when the price is slumped or sharply raised in the market, they could have significant impacts on a company's profits even its survival. Hence, I believe the information related to the use of derivative instruments must

be mandatorily disclosed as in some cases, such information would be crucial to make investment decisions (IV 03).

Nearly a quarter of interviewees (22.22%) claimed that the compulsory regulations about accounting and reporting for derivatives were helpful to enhance the quality of disclosures and eventually lead to an increase in the corporate value and for instance, one manager stated:

...Actually from the other perspective, the mandated provision of derivative disclosures is also contributed to the promotion of a firm's value as a large number of empirical studies prove that investors may give additional premiums on the valuation of companies with higher quality of information disclosure (IV 18).

Table 6.16 Interviewees' Opinions about Reporting for Derivatives

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Compulsory Disclosure	9	90	9	81.82	18	85.74
It Depends	1	10	2	18.18	3	14.29

Table 6.17 Reasons for Choosing Compulsory Rather Than Voluntary Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Less Discretion	5	55.56	3	33.33	8	44.44
Risk	4	44.44	4	44.44	8	44.44
Valuation	2	22.22	2	22.22	4	22.22

6.4.2 Q9 ‘What is your view on current accounting and reporting (IFRS-based requirements) for derivatives? Do you think it is easily to be understood?’

In this section, the investors’ opinions about the current derivative related accounting and reporting treatments largely based upon IFRS and IAS regulations were addressed by initially asking the question ‘*What is your view on current accounting and reporting (IFRS-based requirements) for derivatives?*’ and interviewees’ responses are summarised in Table 6.18. It is interesting that the majority of interviewees which are 15 out of 21 (71.43%) appeared to have little knowledge on the subject matter as a manager stated:

I have little understanding about the accounting and reporting standards about derivatives and did not pay much attention because the derivative related accounting and reporting regulations were just implemented and therefore, they are quite new subject for me (IV 09).

The finding is likely to imply the fact that the current derivative related accounting and reporting regulations imposed by Chinese policy makers are far away from being comprehensively understood by external investors as it can be argued that if institutional investors focused in this study who are generally perceived to be better understanding of accounting and reporting policies were even basically believed to be unfamiliar with regulations related to the treatment of derivatives, personal investors are possible to be hardly understood such requirements. In this case, it should be suggested that as long as the derivative related regulations were implemented, there was a strong necessity for Chinese policy makers such as MOF and CASC to pay more attention and spend much time to educate equity market participants, particularly investors, to be familiar with the new requirements about accounting and reporting for derivatives.

Nearly a quarter of interviewees (23.81%) including four managers and one analyst clearly showed their positive attitude towards IFRS and IAS based accounting and reporting requirements. For instance, a manager supported the adoption of the fair value measurement in the current derivative related treatments as illustrating in the following quotation:

The historical cost method is a relatively static measurement after all and it has little meaning to measure the current value of a derivative. However, the fair value method is much useful and helpful to measure the derivative's current value (IV 10).

By contrast, a manager expressed his confusion about current derivative related treatments and advantages of the historical cost method for making investment decisions as shown in statements as follows:

I really do not like the current accounting and reporting treatments for derivatives. According to the current treatments, losses or earnings of derivative transactions must be recognised in current earnings but in practice, the new treatment is more ambiguous and unclear to investors. For example, a company bought tons of crude oil this year and got involved in hedging businesses last year. It is supposed that the price of this year was \$60 per barrel and the price would be fixed at the last year end level, saying about \$40 per barrel. If it accrued expense, the firm had a little loss last year but some earnings this year. If you did not know the distribution of its settlements, you could not figure out how much the loss was indeed as there were new transactions available this year. Nevertheless, if it used the historical costing method, I should be clearer about the realistic situations as I knew the cost was \$60 per barrel if it did nothing and otherwise, it was \$40 if it employed derivatives. Once it disclosed how much it locked, I should make clear about its financial status. Personally, I feel compared with the fair value, the historical cost is much more of benefit to us (IV 03).

Interviewees were further asked about their feelings about the derivative information disclosed following the new reporting regulations compared with those under the previous disclosure framework and the results are illustrated in Table 6.19. As shown, up to half of interviewees which are 10 out of 21 (47.62%) insisted that they felt that the information provided by listed companies following the current reporting standards was not easier to be understood or indifferent compared with those disclosed previously. As shown in Table 6.20, the inadequacy and vagueness of information reported by firms is the most primary reason argued by many interviewees (seven out of eight) attributed to their perceptions about not easily understanding derivative disclosures under the current regulations and this view is clearly stated in following examples of quotations from two analysts:

It (derivative related information following current reporting standards) is not easily understood. Reporting entities are merely able to achieve the written paragraphs of those standards but do not realise its essence that is to disclose useful information. The disclosed information is too ambiguous. For instance, if a company involves in futures transactions, according to the current requirements, the information about these businesses should disclose in the column of securities investments. However, the detailed information such as what transactions are related to futures in securities investments, how much reserved for such transactions, how much deposit paid and the price of a future contract including the cost and market price, is not disclosed and therefore, we all are not clear (IV 02).

The currently disclosed information is easily to make simple question to be complex and vague and there are more of things in specious sometimes like 'have grave impacts on assets' (IV 11).

Following the above findings, it can be argued that from the perspective of users of

financial statements, it has been little effective for the implementation of new IFRS and IAS based requirements in terms of accounting and reporting for derivatives since 2007 as they still believed the current derivative disclosures to be insufficient, vague and less detailed. In addition, these findings provide evidence from the view of equity market participants to reconfirm the results discussed in Chapter V that the provision of derivative information by Chinese listed companies is generally low compliance with IFRS and IAS related requirements. Last but not least, these findings also leave a question for Chinese accounting and reporting policy makers - *Does the implementation of newly compulsory derivative related regulations achieve their expectation?* Theoretically, from the policy makers' perspective, the enhancement of mandated derivative related reporting standards will force quoted companies to provide more and useful information and further help investors to make better investment decisions, however, the findings indicate that in the real world, such derivative information under new reporting regulations was hardly informative to investors which is contrary to the policy makers' expectation. Thus, it is strongly suggested that the policy makers should start to review the effectiveness of current derivative related reporting framework that to what extent, those requirements achieved the expectations from policy makers themselves, listed companies and investors. What is more important, they should try to find out the reasons why listed companies do not report much more information related to their use of derivatives and what kind of information really needed by external investors.

Table 6.18 Interviewees' Opinions about IFRS and IAS Based Regulations for Derivatives

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Unfamiliar	6	60	9	81.82	15	71.43
Welcome	4	40	1	9.09	5	23.81
Dislike	0	0	1	9.09	1	4.76

Table 6.19 Interviewees' Understanding about Current Derivative Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Not Easy	2	20	6	54.55	8	38.10
Easy	2	20	3	27.27	5	23.81
No Idea	2	20	2	18.18	4	19.05
Indifferent	2	20	0	0	2	9.52
It Depends	2	20	0	0	2	9.52

Table 6.20 Reasons for Not Easily Understanding of Current Derivative Disclosures

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
Insufficient, Vague Disclosures	2	100	5	83.33	7	87.5
Complex Nature of Derivatives	0	0	1	16.67	1	12.5

6.4.3 Q10 'Do you think the reporting for derivatives should continue to comply with IFRS requirements, or set up relevant requirements based upon Chinese scenario, or no need to set up any requirements? What is your suggestion for the future development of reporting for derivatives?'

Table 6.21 provides a summary of interviewees' ideas about the adoption of derivative related reporting regulations in China. Over half of the interviewees which are 11 out of 21 (52.38%) believed that the Chinese reporting policies should continue to be converged with IFRS derivative related regulations and in this regard, some examples

are shown as following statements with reference to quotations by a manager and analyst respectively:

...First of all, I think the harmonisation of reporting for derivatives with international regulations is a general trend. Initially, there were no derivative products available in China and then they were brought in from overseas markets. As a result, the provisions and regulations associated with derivatives were setup according to the international standards and therefore, it should also follow the international mechanisms when you consider the reporting of derivatives (IV 19).

It (reporting for derivatives) should be integrated with IFRS requirements. At the beginning, you can make some amendments based upon the Chinese conditions as an interim but since you are not isolated as you are under the globalised background, the standards must be fully converged with the IFRS' in the end. In the short term, China may need a transition but in the long term, it (reporting for derivatives) still needs to be converged with the IFRS' (IV 15).

Four interviewees (36.36%) including two managers as well as two analysts suggested that the derivative reporting practice in China should follow the IFRS framework and meanwhile, it needs to include specialised and detailed requirements particularly based on Chinese scenarios and this view is separately demonstrated by following quotations from a manager and an analyst:

...I think the treatments related to derivatives' recognition, how to affect assets/liabilities and how to affect profits should be unified in the worldwide, however, referring to the degree of the detailed information, there is a need to set up more detailed regulations based upon Chinese real situations (IV 07).

Given the short time of the development of derivatives in China, it (reporting for derivatives) should firstly employ overseas techniques for reference and then

based on our national conditions, it needs to be enhanced in terms of information disclosures and supervisions. I think the supervision of derivative instruments should be more detailed and specific than that of stocks, bonds and mutual funds (IV 12).

The establishment of derivative reporting standards solely in line with Chinese scenarios is only supported by two interviewees and one analyst argued:

With the development of derivatives market, more and more companies may get involved in derivative businesses and as a result, there should be a specialised standard based upon Chinese scenarios. In my opinion, the circumstance of developing derivatives in China which contains the general perceptions about derivatives, specific products and so on is totally different with other countries' and therefore, there is a necessity to make changes for accounting and reporting practice (IV 02).

Interviewees were further asked '*What is your suggestion for the future development of reporting for derivatives?*' and their answers are various. For instance, a manager mentioned the reporting policies for derivatives should be depending on the development of derivatives and he stated:

...Basically, the current derivative products used by Chinese listed companies are pretty simple. I think when the Chinese derivatives market is developed to a certain level i.e., we have such products unavailable in overseas markets, there is likely to a need to set up our own information disclosure regime (IV 10).

Another analyst believed the accounting and reporting for derivatives to be more rigorous in the future which is illustrated as follows:

...In the future, the disclosure of derivatives will be getting more rigorous. It

depends on different phases, it can be a little loosed if the corporate governance is generally good. Nevertheless, the current corporate governance of domestic listed firms is usually no good, so it should be better to be more rigorous (IV 06).

Table 6.21 Interviewees' Opinions about the Adoption of Methods of Reporting for Derivatives in China

Issues	Nos. of Managers	Percentage in Total Managers (%)	Nos. of Analysts	Percentage in Total Analysts (%)	Total	Percentage in Total Interviewees (%)
IFRS	6	60	5	45.45	11	52.38
IFRS Combined with Chinese	2	20	2	18.18	4	36.36
No Preference	1	10	2	18.18	3	14.29
Chinese	1	10	1	9.09	2	9.52
No Idea	0	0	1	9.09	1	4.76

In summary, the compulsory accounting and reporting framework for derivatives was welcomed by overwhelming majority of sample institutional investors and under such mandated regulatory circumstance, listed companies were believed to be imposed more restraints and as a result, would have less discretion in deciding the types and quantities of derivative related information to the public. In addition, the worry about the potential financial losses arising from the use of derivative instruments was another important factor addressed by interviewees attributed to their preference of the compulsory reporting framework.

Chinese investors seemed to be unfamiliar with the current derivative related accounting and reporting policies as most of sample institutional investors (71.43%) appeared to have little knowledge on the subject matter which implies that Chinese policy makers such as MOF and CASC should not merely focus on the establishment and implementation of derivative related regulations and what is more important, they

need to pay more attention on the education of equity market participants to be adapted with the new reporting environment. The derivative information provided under the current disclosure framework was claimed by many investors to be not easier to be understood as such information was primarily believed to be insufficient, ambiguous and less detailed. This finding on the one hand enhances the argument discussed in Chapter V that derivative disclosures reported by Chinese listed companies are generally low complying with IFRS and IAS related regulations by providing evidence from the investors' perspective. On the other hand, it indicates that from the view of equity market participants, the implementation of new IFRS and IAS based accounting and reporting standards since 2007 was appeared to have little effect on derivative reporting practice by Chinese quoted firms. Hence, there is a strong necessity for policy makers to enhance the communication with reporting entities as well as market participants to seek reasons why reporters do not disclose more derivative information and what information really wanted by investors. It is possible for policy makers to make some amendments about current derivative disclosure regulations by balanced considering the interests of information providers and users.

Referring to the path associated with the adoption of derivative reporting rules in China, the convergence with IFRS related provisions which was currently imposed by supervisory bodies was generally accepted and welcomed by the majority of sample participants, followed by the employment of IFRS based requirements along with the inclusion of some specialised and detailed regulations particularly to Chinese scenarios and the way of the establishment of unique Chinese reporting standards was the last option favoured by the least of interviewees.

6.5 Summary

The purpose of this chapter is to examine equity market participants' perceptions,

attitudes and opinions towards the usefulness of derivative related disclosures provided by Chinese listed companies and by interviewing 21 institutional investors which include 10 investment managers and 11 professional analysts, several findings are achieved as follows:

1. The information related to the use of derivative instruments disclosed by quoted companies is useful to help investors facilitate their investment decisions and this finding is consistent with a great number of western studies (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009). This study provides empirical evidence to prove that the derivative disclosures in line with corresponding accounting and reporting regulations are informative and useful for investors to make better investment decisions.
2. The significance of derivative disclosures for making better investment decisions is inconsistently perceived by investors. The derivative related information is generally believed to play a minor role in deciding investments. Such derivative disclosures are only served as the supplementary information contributed to investors' assessment of a corporate risk profiles while the main body disclosures concerning a company's fundamental businesses such as profits, assets and liabilities are deemed to be crucial to make investment decisions. In addition, the notion that the importance of derivative disclosures should depend on the impact of derivative products on the corporate financial status is also considered by a significant portion of investors. Lastly, the primary significance of derivative disclosures in facilitating investment decisions is admitted by the majority of analysts who claimed that such information was closely related to their valuation of a listed firm.

3. The provision of more derivative related disclosures is largely welcomed by the participants as it is believed to be more useful and helpful in understanding the corporate risk profiles and also a symbol of improved information transparency. Furthermore, listed firms with more disclosures of derivative activities are more likely to be positively valued by most of institutional investors.
4. The current derivative disclosures provided by Chinese quoted entities are not satisfied by most of sample investors as they are widely regarded as the insufficiency of information as well as lack of timely disclosures.
5. The disclosures about the scale and purpose of derivative transactions are considered as the greatest important information for investors while the information related to the risk arising from the use of derivative instruments which was largely absent in companies' derivative related disclosures as discussed in Chapter V has also attracted much of consideration from investors.
6. Although the employment of public reports released by listed companies is the most prevalent channel for investors to obtain derivative related information, other ways such as surveys and internet/media are also preferred by a quite number of investors mainly due to the worry about the inadequate derivative information available in public reports.
7. The adoption of a compulsory framework for accounting and reporting for derivatives is praised and accepted by the large majority of sample institutional investors mainly because the mandated accounting and reporting framework is claimed to have contributions to regulate and restrain the companies' reporting behaviours which is likely to reduce the discretion for reporting entities to decide the contents and quantities of derivative disclosures. In addition, the view regarding the path of the choice of derivative reporting standards in China is dominated by the convergence with IFRS related regulations currently enhanced

by supervisory bodies, followed by the combination of IFRS requirements and specialised provisions based upon Chinese national conditions and the setup of unique reporting standards in China is least agreed and accepted by investors.

8. The accounting and reporting policies currently imposed by regulators appear to be little understood by Chinese investors and the disclosed information under the present reporting environment is believed to be difficult to understand mainly due to its insufficiency and ambiguity perceived by many sample investors. By providing the evidence from the view of information users, these findings reconfirm the discussions in Chapter V that in Chinese equity market, the compliance with IFRS and IAS related requirements in terms of derivative disclosures reported by listed companies is generally low. Last but not least, it should be argued that from the market participants' perspective, the implementation of the new regulations largely based on IFRS and IAS provisions since 2007 has been little effective to improve the derivative reporting practice made by quoted firms. Therefore, there should be a strong necessity for Chinese policy makers such as MOF and CASC to pay more attention training and communications with reporting entities and investors in order to implement the new reporting standards and if necessary, it is possible to make some changes about current disclosure requirements by the balanced consideration of interests of information providers as well as its users.

Chapter VII Summary, Conclusions, and Future Research

Chapter VII Summary, Conclusions, and Future Research

7.1 Introduction

The core aim of this chapter is to bring together and highlight the primary conclusions related to the research objectives set out in Chapter 1. A summary of the research motivations, overall aims and objectives, research designs and the approaches adopted in achieving these aims and objectives are outlined at the beginning. Then the conclusions and discussions of the main findings of the research are summarised. Next, the contributions to the literature and policy implications for Chinese regulators are discussed followed by identifying key limitations of the study. Finally, further areas that could potentially be explored comprise the section of future research.

7.2 Summary

7.2.1 Motivations

In the recent decade, the world witnessed the growing use of derivative instruments. However, as the derivatives' usage grows, many high profile derivative related losses happened around the world. There has been rising public concern about the use of derivatives and associated risks. The supervisory bodies all over the world have recently paid much attention to the establishment of effective control systems including the release of financial reporting standards for companies to disclose their derivative activities. The usefulness of the mandated derivative related disclosure requirements has attracted considerable attention with a focus on the cases of

developed economies. There is a dearth of academic studies conducted in emerging countries. Currently, no study has specifically addressed accounting and reporting for derivatives in China and examined the usefulness of derivative disclosures of Chinese listed companies. China as the largest developing economy has made remarkable progress in its economic development as well as its accounting reform over the last three decades. The recent convergence of CASs with IFRSs makes China an interesting case to examine the issues associated with the application of derivatives accounting rules. Hence, this study has conducted an exploratory research to reveal the degree of the compliance with accounting and reporting requirements as to derivative activities of Chinese listed companies and also examine the response of equity market participants to the derivative related disclosures. The motivation of the present research is to fill the research gap in the existing literature by providing the assessment of accounting and reporting practices for derivatives in China. It is expected to enhance the understanding of the usefulness of derivative related disclosures not only in developed economies but also developing countries, and it provides the valuable insight to the development of derivative reporting standards by generating more policy implications particularly to developing economies.

7.2.2 Prior Studies

In order to get better understanding of the research area, the study at the beginning comprehensively reviews the existing literature in the area of the value relevance of derivative related disclosures and some findings are summarised as below:

Firstly, the effectiveness of derivative related accounting and reporting policies have attracted considerable academic attention in the recent decades which is following two major research streams. Studies in the first stream (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili

and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) assess the disclosure quality regarding derivative related information from the view of listed companies. They mainly employ the content analysis to reveal the degree of quoted companies complying with associated derivative related regulations. Those researchers usually compare the quality of information contents before and after the implementation of derivative related standards by producing a disclosure checklist with reference to corresponding derivative accounting and reporting requirements. Findings of these studies generally demonstrate that the compulsory derivative regulations have improved the quality of information by enhancing listed companies to provide more information about their use of derivatives in annual reports. However, the compliance with relevant derivative related requirements is mixed. The basic rules of corresponding derivative standards are met as quoted firms are generally able to prepare the qualitative as well as quantitative information related to their derivative activities while many of detailed requirements (e.g., the assumptions of applied quantitative techniques and the description of corporate derivative management activities) are not achieved due to the lack of adequate and detailed disclosures.

Secondly, the second types of studies specially examine the market response to derivative disclosures from the view of market participants, particularly investors. These studies primarily aim to test whether disclosures about the use of derivatives are value relevant to investors when making decisions. By using quantitative methods like the establishment of regression models, they mainly concentrate on the extent to which mandated derivative disclosures are informative to firms' exposure, or sensitive to change of equity price, or value relevant to market participants' risk judgments and assessments. Generally speaking, the findings of these studies are mixed and to some extent even contrary. Some researchers (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) provide the empirical evidence to prove that the compulsory accounting and reporting

requirements for derivatives are value relevant to investors' assessment of the corporate risk profiles. The disclosed derivative information following corresponding standards is significantly relevant to market responses such as the change of equity price, equity return, trading volume etc., which indicates that the information required by mandated derivative related provisions have offered the new and useful information to the users of financial statement, especially to investors. Thus, such information is contributed for investors to evaluate the corporate financial performance and impacts of associated derivative activities, and further helps to facilitate their investment decisions. Nevertheless, a number of researchers propose that the mandated accounting and reporting rules for derivatives have caused difficulties for investors to assess risk and to value corporate financial performance. Some empirical studies (e.g., Nelson, 1996; Wang et al., 2005; Chipalkatti and Datar, 2006; Perignon and Smith, 2010) illustrate that there is no relationship between the disclosed derivative related information and the market response. Some (e.g., Lehn, 1997; AICPA, 1998; Hodder et al., 2001; Kawaller, 2004; Reinstein and Lander, 2000) argue that the sophisticated requirements as to the accounting and reporting treatment for derivatives have caused difficulties for investors in valuating corporate derivative activities, and even a few studies (e.g., Logan and Montgomery, 1997; Koonce et al., 2005) point out that the disclosures following the compulsory derivative related requirements have been misunderstood and negatively affected investors' assessments in company's risk profiles and associated derivative activities. In addition, the restrictive and complex derivative related standards, such as SFAS 133, have led to difficulties for reporting entities to follow and resulted in a series of significant problems in the use of derivatives and smooth earnings volatility (e.g., Osterland, 2000; AFP, 2001; Barton, 2001; Leib, 2001; Richie et al., 2005). Such mixed and contrary results underline the findings achieved in the first stream that the compliance with derivative related standards is mixed and the standard's 'desired level of financial transparency on the use of derivative financial instruments is not being adequately achieved' (Bhamornsiri and Schroeder, 2004, p. 680).

7.2.3 Overall Aims and Objectives

The primary aim of the research is to assess the usefulness of derivative related disclosures by Chinese listed companies.

In order to achieve the overall aim, this study has four specific objectives as follows:

1. To reveal the level of derivative disclosures made by Chinese listed companies;
2. To identify information contents of derivative disclosures provided by Chinese listed companies;
3. To examine the response of equity market participants (e.g., institutional investors and professional analysts) to the derivative-related disclosures with a view to assessing the usefulness of derivative disclosures in the case of China, an emerging market where derivatives are still new phenomena;
4. To suggest the future direction in the development of derivative reporting standards particularly for emerging economies.

7.2.4 Research Design

The study is divided into two major stages and the specific purposes, research questions, research approaches and data collection of each stage are summarised as follows:

7.2.4.1 Stage One

Purpose

The first stage primarily aims to evaluate the degree of derivative related disclosures provided by Chinese listed companies.

Research Questions

In this stage, two research questions have been formulated:

- What is the level of derivative related disclosures made by Chinese listed companies?
- What is the information content of derivative related disclosures provided by Chinese listed companies?

Research Methods and Data Collection

The content analysis method is mainly employed in this stage as the technique is widely adopted by the vast of researchers (e.g., Edwards and Eller, 1996; Roulstone, 1999; Blankley et al., 2000, 2002; Bhamornsiri and Schroeder, 2004; Lajili and Zeghal, 2005; Dunne et al., 2007; Lopes and Rodrigues, 2008) to address the information quality of derivative disclosures reported by quoted firms. The corporate annual report is adopted as the sampling unit for observation and analysis because it is widely perceived as an important vehicle for financial communication between reporting companies and their stakeholders. In addition, the number of page is used as the unit of analysis. For each annual report, the amount of disclosures regarding the use of derivatives was firstly noted on a special record sheet and then the contents of

this record sheet were transferred to an Excel spreadsheet. Since Chinese regulators have enhanced the convergence of its accounting and reporting policies with IFRS and IAS regulations, a disclosure checklist – FDDI mainly based upon IFRS and IAS derivative related provisions which is different from many indices used in the existing literature on the basis of U.S. reporting requirements was developed as a benchmark to be compared with the relevant disclosures in Chinese quoted firms' annual reports. A pilot sample of reports were analysed and a number of procedures were followed to ensure the reliability and validity of the disclosure measurement.

Financial institutions are not included in the sample as the study only emphasises on derivative disclosures provided by non-financial entities. Annual reports of Chinese listed companies in 2006 are considered as the sampling unit for observation and analysis. All sample companies are selected from the CSI 100 and 200 representing large and medium firms in Chinese domestic A-share market as evidence (e.g., Bodnar et al, 1996; Grant and Marshall, 1997; El-Masry, 2006) shows that the large companies are more likely to use derivative products. The final sample consists of 53 companies including 39 large firms and another 14 medium companies.

7.2.4.2 Stage Two

Purpose

The second phase of the study mainly intends to examine the usefulness of derivative disclosures perceived by equity market participants.

Research Questions

Four major research questions have been addressed in this stage:

- What is the response of equity market participants to derivative related disclosures?
- Do they treat disclosing more about derivatives' activities as useful information when making investment decisions?
- Are they satisfied with the current accounting and reporting treatment of derivative activities?
- What are their opinions on the future development in derivative related reporting standards?

Research Methods and Data Collection

The quantitative research method which was employed by most of previous researchers is not applied in the current study mainly due to the absence of large sample. In order to gain some insight of market participants concerning derivative disclosures, semi-structured interviews have been adopted as the most appropriate research technique to gather information in this stage.

The study mainly concentrates on two equity market participants groups - institutional investors and professional analysts as they are widely perceived to have a better understanding of the complex nature of derivatives and associated disclosures. The sample includes 21 interviewees in total which contains ten investment managers and another eleven professional analysts from a mutual funds management company as well as a securities firm. There are twelve questions available for each interviewee and every interview lasted about 40 minutes.

7.3 Conclusions and Discussions

7.3.1 China's Derivatives Market and Accounting for Derivatives

By critically reviewing the development of China's domestic derivatives market and accounting and reporting practice for derivatives, the study has found:

Firstly, the development of China's derivatives market is fairly falling behind its rapid economic growth over last three decades. The market can only provide limited investment options far less than others in matured economies. In history, the Chinese domestic derivatives market was circuitously evolved and the only availability of three commodity futures exchanges which are DCE, SHFE and ZCE has been lasted for around ten years since the closeout of all financial derivatives markets by the central government in 1995 after a notorious manipulation scandal – 'Contract 327 Affair'.

Secondly, with the employment of the Fratzscher's framework, three crucial factors including the inappropriate product design, poor market infrastructure and inadequate governance and control, are identified as the main contributes for the slow and tortuous development in China's derivatives market. China has started to gradually progress its derivatives market by the rebuilding of the financial derivatives market since 2005. The reintroduction of the trading of warrants, especially the reopen of CFFEX, is a remarkable progress in the development of China's derivatives market. Due to the worries of the abuse of derivative instruments appeared in the history, the Chinese government has been quite cautious about the introduction of new financial derivative products and therefore, there is just one financial derivative contract – CSI

300 index futures currently being traded at CFFEX.

Thirdly, the disclosure of the use of derivatives was mainly reported voluntarily by listed companies in the past as the accounting and reporting practice for derivatives was largely absent in Chinese regulatory framework over a long period. With the enhancement of integrating China's accounting and reporting standards with IFRS and IAS regulations since 2005, the situation has been progressively improved. The release and implementation of the 'New Accounting Standards' in 2007 was an era in the evolvement of derivative related regulations in China because it was fully converged with IFRS and IAS accounting and reporting treatments for the use of derivative instruments which stands for the shift of the derivative disclosure from a voluntary to mandatory basis.

7.3.2 Level and Contents of Information Related to Derivative Disclosures

By using the content analysis approach to compare the information disclosed in companies' annual reports regarding their use of derivative instruments with disclosure index (i.e., FDDI) which is largely based upon IFRS and IAS provisions, the study, in the first stage, draws following findings about the degree and nature of derivative related information provided by Chinese listed companies:

Firstly, the level of the compliance with IFRS and IAS derivative regulations by Chinese quoted companies is generally low and this finding is further supported by the discussion in Chapter VI that was based on the views of equity market participants. The derivative related information provided following the current derivative accounting and reporting policies are insufficient, ambiguous and difficult to understand.

Secondly, Chinese listed companies are likely to prefer the use of equity derivative products like warrants or convertible bonds that may influence the structure of shares rather than other types of derivatives such as foreign currency forwards/swaps, interest swaps or commodity futures/options/swaps as the results show that there is much information in relation to the use of derivatives disclosed in the section of Change of Shares and Shareholders' Information. Nevertheless, the variance of amount of disclosures within different types of derivative instruments is statistically insignificant.

Thirdly, the corporate size seems not to significantly affect the amount of derivative related disclosures by Chinese quoted companies which is contrary to much of western evidence (e.g., Firth, 1979; Verrecchia, 1983; Skinner, 1994; Wallace et al., 1994; Depoers, 2000; Latridis, 2008; Elsayed and Hoque, 2010). Both large and medium firms have a similar tendency in reporting the employment of derivative instruments and this abnormal phenomenon is possible to be attributed to a number of factors such as the limited availability of derivative products, large absence of derivative related regulations, agency problems and limitations of the study.

Fourthly, the amount of derivative disclosures about the significance of using derivative products for the company's financial position and performance is significantly greater than that of information in relation to potential risks arising from the use of derivative instruments and this finding is likely to be explained by three major factors which include the agency problem, huge absence of derivative related accounting and reporting regulations and unimportance of risks resulted from the use of derivatives to the company's financial performance.

7.3.3 The Usefulness of Derivative Disclosures Perceived by Equity Market Participants

In the second stage, the study conducted in-depth interviews with 21 institutional investors which contain 10 investment managers and 11 professional analysts and a number of findings and discussions have been achieved regarding the market participants' perceptions, attitudes and opinions towards the usefulness of derivative related disclosures provided by Chinese listed companies as follows:

Firstly, the disclosed information about the use of derivative instruments by quoted firms is believed to be useful and helpful in facilitating investment decisions and the finding is coincident with many empirical studies primarily conducted in developed countries (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009) which prove that the derivative disclosures following corresponding accounting and reporting regulations contain useful and relevant information for investors to make better investment decisions.

Secondly, the investors' perceptions about the significance of derivative disclosures for deciding investment decisions are mixed. The information related to the use of derivatives is generally thought to play a minor role in facilitating investment decisions and such information is believed to be treated as the complementary information used to assess the corporate risk profiles whereas the main body disclosures related to firms' core operations such as profits, assets and liabilities are deemed to be of most importance to achieve investment decisions. A percentage of the participants held the idea that the significance of derivative disclosures should rely on the impact of derivative products on the corporate financial position. Last but not least,

the crucial importance of derivative related information in facilitating investment decisions is agreed and acknowledged by the majority of analysts as such information is believed to be closely related to their valuation of a quoted company.

Thirdly, the disclosure of more information about using derivative products is largely welcomed by investors as on the one hand, it is deemed to be more useful and helpful in understanding the corporate risk profiles and on the other hand, it symbolises the improvement of information transparency. Furthermore, listed firms with more disclosures of derivative activities are more likely to obtain positive valuation from most of institutional investors.

Fourthly, the current provisions of derivative related information by Chinese quoted entities are generally unsatisfied by most of institutional investors as they are widely regarded as the inadequacy of information as well as lack of timely disclosures.

Fifthly, the disclosures in relation to the scale and purpose of derivative transactions are considered as the most vital information for investors while the information concerning the risk arising from the use of derivative instruments which was largely absent in companies' derivative disclosures as discussed in Chapter V has also attracted considerable investors' attentions.

Sixthly, publicly available annual reports provided by listed companies are the most common channel for investors to obtain derivative related information, however, other means such as conducting surveys and reading news from the internet/media are also preferred by a quite number of investors mainly due to the worry about the inadequate derivative information available in the reports.

Seventhly, the adoption of compulsorily regulatory framework for accounting and reporting for derivatives is welcomed and accepted by the overwhelming majority of investors mainly because the mandated accounting and reporting environment is

deemed to contribute to regulate and restrain the companies' reporting behaviours, which is likely to reduce the discretionary activities commenced by reporting entities. Besides, the convergence with IFRS related regulations currently promoted by supervisory bodies is widely perceived as the major choice of derivative reporting standards in China, followed by the combination of IFRS based requirements and specialised provisions based upon Chinese scenarios and the establishment of unique Chinese reporting regulations is barely agreed and accepted by sample investors.

Eighthly, the current accounting and reporting policies imposed by regulators seem to be very difficult to understand for Chinese investors. The derivative related information provided under the present reporting environment is perceived to be insufficiency and ambiguity by many interviewed investors. These findings provide the evidence from the view of information users to reconfirm the arguments in Chapter V that in Chinese equity market, the compliance with IFRS and IAS related provisions in terms of derivative disclosures by listed companies is generally low. Last but not least, it should be argued that from the market participant perspective, the implementation of the newly IFRS and IAS based regulations since 2007 has little effect on the improvement of the derivative reporting practice made by quoted firms. Therefore, it is strongly suggested that Chinese policy makers such as MOF and CASC should pay more attention to the training and communications with reporting entities and external investors in order to adapt with the new reporting environment and it should make some necessary changes about current disclosure regulations by considering the interests of both information providers and users.

7.4 Contributions

The present thesis contributes to the existing theories and literature in several ways listed as follows:

Firstly, the current study provides evidence to challenge the adaptability of voluntary disclosure theories in China. The voluntary information disclosure theories, including agency theory, signalling theory, political process theory and proprietary costs, believe that the corporate size has vital influence on voluntarily disclosed information. By contrast, the research found that there was no significant association between company's size and the amount of derivative related information voluntarily disclosed by reporting entities. The finding indicates that it might be different to the rationale when analyse the determinants of a specific information disclosure attribute (i.e., derivative related disclosure).

Secondly, since prior studies about the usefulness of derivative related disclosures are mostly based upon the sample from developed countries with mature financial derivative markets, the current study fills up the research gap by providing an evaluation of the accounting and reporting practices for derivatives in China. It extends the understanding of the value relevance of derivative disclosures in the context of developing countries.

The study enhances our understanding of the reporting quality for derivatives in emerging economies by examining the degree and nature of information in relation to the use of derivative instruments reported by Chinese listed companies.

Thirdly, the findings that the derivative related disclosures are generally perceived by sample investors to be useful to help facilitate investment decisions are contributed to confirming the claims about the usefulness and relevance of these types of information for investors in their investment decision-makings (e.g., McAnally, 1996; Barth et al., 1996; Eccher et al., 1996; Venkatachalam, 1996; Schrand, 1997; Rajgopal, 1999; Seow and Tam, 2002; Jorion, 2002; Linsmeier et al., 2002; Ahmed et al., 2004; Liu et al., 2004; Eric et al. 2004; Wang et al., 2005; Ahmed et al., 2006; Ameer, 2009; Zhang, 2009).

The research enhances our knowledge about the significance of derivative disclosures in achieving investment decisions from the view of Chinese equity market participants. It indicates that such disclosures are considered by most of the investors only as a supplementary role in making investment decisions whereas the main body disclosures referred to a company's fundamental businesses such as profits, assets and liabilities are crucial to make investment decisions.

Fourthly, the present study provides a critical assessment of the development of China's derivatives market. It is the first attempt to analyse the factors attributed to the circuitous evolution of derivatives market in China by employing Fratzscher's propositions about the foundations of the successful development of derivatives. It shows the inappropriate product design, poor market infrastructure and inadequate governance and control are the major factors that block and slow the progress of developing derivatives in China

Last but not least, the study also makes following contributions to the research methodology:

First, the disclosure index employed in the content analysis is largely based upon IFRS and IAS accounting and reporting practices for derivatives which is totally different from those adopted by other researchers mainly in line with U.S. requirements with the primary consideration of the enhancement imposed by Chinese regulators of converging its national accounting and reporting standards with IFRS and IAS regulatory framework. This index can be widely acknowledged and accepted as a checklist which is mainly used to identify the derivative related disclosure level and information contents provided by companies regulated under IFRS and IAS accounting and reporting framework.

Also, the qualitative research method (i.e., interviews) was applied in the second

phase of the study with a view to examining the equity market participants' opinions about the usefulness of derivative related disclosures. The use of interview method is more effective in directly examining the investors' attitude, perceptions and opinions towards derivative related information and as a result, it is more appropriate to investigate the reasons for considering derivative disclosures as useful or otherwise in facilitating investment decisions.

In conclusion, the present study has made a positive contribution to expand our current understanding of accounting and reporting practices for derivatives and contributed to the growing debate on the usefulness of derivative related disclosures.

7.5 Policy Implications

In this study, the derivative disclosures provided by Chinese listed companies are generally believed to be useful and helpful in facilitating investment decisions but such information is mainly claimed to be served as a complementary role in making investment decisions. The main body disclosures related to the corporate core operations such as profits, assets and liabilities are deemed to be more significant. In addition, the derivative related information under the current reporting environment is claimed to be difficult to be understood as such information is largely insufficient and vague to many investors. It can be argued that from the view of information users, the implementation of new accounting and reporting regulatory framework largely based upon IFRS and IAS provisions since 2007 has little effect on the improvement of derivative reporting practice made by Chinese listed companies. These findings leave a question for Chinese accounting and reporting policy makers – *Is it necessary to setup derivative related regulations at present?*

If the answer is 'Yes', there is a strong need for policy makers such as MOF and

CASC to review whether the current accounting and reporting practices for derivatives are achieved the expectations from regulators themselves, reporting entities and equity market participants and what is more important, regulators should try to find out the reasons for reporters' unwillingness to make adequate derivative disclosures that are really needed by investors. Compared with the rapid convergence with international regulatory framework, the Chinese policy makers should pay more attention to educating and training information providers as well as its users to be accommodated with the new derivative accounting and reporting regulations.

If the answer is 'No', it should be argued that Chinese regulators should focus their attention in the future to the enhancement of accounting standards related to the disclosure of core elements in financial statements rather than derivative related disclosures. However, given the strong expectations of equity market participants for the adoption of the mandated reporting framework largely based on IFRS and IAS derivative provisions as discussed in the research, it is possible for policy makers to progressively impose a mandated accounting and reporting agenda for derivatives. Meanwhile, the training and education of reporting companies and market participants are still to be much of significance in the process of establishment of derivative related reporting framework.

7.6 Limitations

As every piece of research, this study also has its own limitations listed as below which have to be considered when interpreting the results:

Firstly, since the study only used limited annual reports as sampling units, it is possible that the findings can be altered if a large sample size was studied.

There are only 53 large and medium nonfinancial firms in the sample due to the low usage of derivatives by Chinese listed companies, so it is impossible to carry out the meta-quantitative analysis to test the economic effect of derivative related disclosures.

Secondly, this study has focused on the derivatives disclosure, but it did not look into the level of disclosure itself in comparison with the level of total financial information disclosed by the sample listed firms. It can be argued that the extent of derivative disclosure is associated with the level and the quality of overall financial information disclosure made in a country. The future research can investigate the possible link and offer an insight into the development of financial information and derivatives disclosures

Thirdly, the research employs a sample of 21 institutional investors to examine the usefulness of derivative related disclosures perceived by equity market participants. However, it should be admitted that the robustness of the findings is likely to be weak as the results are possibly to be changed if different sample of interviewees were chosen. Also, it is possible that individual investors held different views from these interviewees from funds management and securitises firms, which might lead to different conclusions.

Fourthly, this study has adopted contents analysis as the research method for the first major research objective. The limitations inhered in this particular research method remain in this study as well, including the count units, check index, and possible errors in interpreting the meanings of written information.

7.7 Future Research

Although this study has achieved its research objectives, many issues related to

derivatives disclosure remain to be answered. Given the current changes in accounting and capital markets, many new questions in the topic area will emerge which require further research.

Firstly, there is a need to conduct further research to analyse the impact of new IFRS and IAS standards (e.g., fair value measurement) on the derivative disclosures and the increasing capital market regulations. Particularly, the imposition of corporate governance and risk controls by authorities across the world would expect to have impacts on the financial reporting behaviours of corporations, including derivative disclosures. Further research into the impacts can enhance our understanding of the derivatives disclosure patterns and behaviours.

Secondly, there is a need to carry out empirical studies to examine the value relevance and determinants of derivative disclosures in the setting of Chinese capital market once the derivative instruments are widely used by Chinese listed companies with the development of Chinese derivatives market. Both value relevance and determinants of derivative disclosure research was largely carried out in developed markets, it would be interesting to know whether the findings that were based on western developed markets apply to the case of China, the largest developing economy.

Thirdly, it is necessary for following up studies to examine whether the voluntary disclosure theories such as agency theory, signally theory, political process theory and proprietary costs, can be applicable in the Chinese context. It would be an interesting area to examine factors that can influence the information voluntarily disclosed by Chinese list companies. Furthermore, it would be curious to find out whether there are some distinctive elements in China like the ownership structure, culture etc. can have impact on the level of voluntary information disclosure.

Fourthly, since the present research merely examines the response of users of financial statements concerning derivative disclosures, the future research would be

required to examine the incentives and cost implications to the reporting companies for the provision of information related to their use of derivative instruments. Such a research would enhance our understanding of benefits and costs associated with the disclosures of derivatives related information and particularly the quality of the disclosures as they are very much related to the characteristics and ability of the providers.

Last but not least, the comparability of derivative disclosures across countries is another potential area for future research. Future research could compare the derivative disclosures provided by companies in China and other economies in line with the development of internationalisation of financial reporting.

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Appendices

Appendix I: Financial Derivatives Disclosures Index (FDDI)

Themes	Reference in IFRS 7, IAS 32 and 39	Score*	Amount of Information (How many pages in a firm's annual report)	Disclosed Sections in A Firm's Annual Report
<i>Significance of Financial Instruments for the Entity's Financial Position and Performance</i>				
Q1 <i>Does the firm sort its derivative instruments into appropriate financial instruments' category (held for trading or hedging instruments)?</i>	IFRS 7**, P (Paragraph) 8, 20, 22; IAS 39, P 9,45	1 (0)		
Q4 <i>Does the firm specify the accounting policies for derivative instruments?</i>	IFRS 7, P 21	1 (0)		
Q5 <i>Does the firm specify its hedging policy?</i>	IFRS 7, P 22, 23, 24	1 (0)		
Q17 <i>Does the firm disclose the fair value of derivative instruments?</i>	IFRS 7, P 25	1 (0)		
Q18 <i>Does the firm disclose the carrying amount of derivative instruments?</i>	IFRS 7, P 8	1 (0)		
Q19 <i>Does the firm disclose the net market value for derivative instruments?</i>	IFRS 7, P 20	1 (0)		
Q20 <i>Does the firm specify the methods in determining the value of</i>	IFRS 7, P 27, 28, 29	1 (0)		

<i>derivative instruments?</i>				
Q22 Does the firm specify the existence of derivative features in its compound financial instruments?	IFRS 7, P 17; IAS 32, P 94	1 (0)		
Q23 Does the firm separately provide information for embedded derivatives and liability component of a compound financial instrument?	IFRS 7, P 17; IAS 32, P 28	1 (0)		
Nature and Extent of Risks Arising from Financial Instruments				
Q2 Does the firm specify the objectives for holding or issuing derivative instruments?	IFRS 7, P 33	1 (0)		
Q3 Does the firm specify the associated risks provided by derivative instruments?	IFRS 7, P 33	1 (0)		
Q6 Does the firm specify how they monitor and manage the risks associated with derivative instruments?	IFRS 7, P 33	1 (0)		
Q7 Does the firm discuss any changes to the above disclosures from the previous reporting period?	IFRS 7, P 33	1 (0)		
Q8 Does the firm segregate information by risk categories (i.e. credit risk, liquidity risk and market risk)?	IFRS 7, P33; IAS 32, P 52	1 (0)		
Q9 Does the firm disclose the Principle, stated, face, or other similar amount of derivative instruments?	IFRS 7, P 34; IAS 32, P 60, 63	1 (0)		

Q10 Does the firm disclose the date of maturity, expiry, or execution of derivative instruments?	IFRS 7, P34; IAS 32, P 60, 63	1 (0)		
Q11 Does the firm disclose the early settlement and conversion options, including details of their exercise of derivative instruments?	IFRS 7, P34; IAS 32, P 60, 63	1 (0)		
Q12 Does the firm disclose the amount and timing of scheduled future cash flows related to derivatives' principle amount?	IFRS 7, P34; IAS 32, P 60, 63	1 (0)		
Q13 Does the firm disclose the interest, dividends, or other periodic returns on principle and their timing related to derivative instruments?	IFRS 7, P34; IAS 32, P 60, 63	1 (0)		
Q14 Does the firm disclose the effective interest rates of derivative instruments?	IFRS 7, P34; IAS 32, P 60, 63	1 (0)		
Q15 Does the firm specify to whom they have credit risk exposures?	IFRS 7, P 36	1 (0)		
Q16 Does the firm provide the estimated maximum credit risk exposures at the reporting date?	IFRS 7, P 36	1 (0)		
Q21 Does the firm use the sensitivity analysis to demonstrate the impact of possible movements in each market risk variable on profit and	IFRS 7, P 40, 41, 42	1 (0)		

<i>loss and equity?</i>				
Voluntary Disclosures				
Q24 <i>Does the firm provide other disclosures related to their use of derivative instruments?</i>	Voluntary Disclosures by Companies	1 (0)		
Total Score		24 (0)		

*Notes: *Item scored at 1 means that the reporting entity provided information related to corresponding question in their annual reports. Item scored at 0 contains two situations: firstly, the reporting companies did not disclose any information in relation to corresponding question; secondly, the question (s) was not applicable in China. Q15 'Does the firm specify to whom they have credit risk exposures?' and Q16 'Does the firm provide the estimated maximum credit risk exposures at the reporting date?' are applicable in the second situation as unlike mature economies such as the U.S. and UK, there were no any credit related derivatives such as CDS available in the Chinese securities market at the time. Chinese listed companies were not permitted to get involved in the trade of credit related derivative instruments.*

***IFRS 7 Financial Instruments: Disclosures requires the reporting entity to provide two main categories of disclosures in its annual report:*

- 1. the information about the significance of financial instruments for the entity's financial position and performance; and*
- 2. the information about the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date, and how the entity manages those risks.*

Among total 24 questions, Questions 1, 4, 5, 17, 18, 19, 20, 22 and 23 are related to the first type of disclosures, whereas q Questions 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 21 are sorted into the second type of disclosures.

Disclosure requirements in relation to the FDDI

IAS 39 requires financial assets to be classified in one of the following categories:

[IAS 39, P 45]

Financial assets at fair value through profit or loss

Available-for-sale financial assets

Loans and receivables

Held-to-maturity investments

Those categories are used to determine how a particular financial asset is recognised and measured in the financial statements.

Financial assets at fair value through profit or loss. This category has two subcategories:

Designated. The first includes any financial asset that is designated on initial recognition as one to be measured at fair value with fair value changes in profit or loss.

Held for trading. The second category includes financial assets that are held for trading. **All derivatives (except those designated hedging instruments)** and financial assets acquired or held for the purpose of selling in the short term or for which there is a recent pattern of short-term profit taking are held for trading. [IAS 39, P 9]

Qualitative disclosures

For each type of risk arising from financial instruments, an entity shall disclose:

[IFRS 7, P 33]

a) the exposures to risk and how they arise;

- b) its objectives, policies and processes for managing the risk and the methods used to measure the risk; and
- c) any changes in 33(a) or (b) (see above) from the previous period.

Accounting policies

In accordance with paragraph 108 of IAS 1 *Presentation of Financial Statements*, an entity discloses, in the summary of significant accounting policies, the measurement basis (or bases) used in preparing the financial statements and the other accounting policies used that are relevant to an understanding of the financial statements. [IFRS 7, P 21]

[IFRS 7, B 5] Notes:

Accounting policies that are relevant to the understanding of the financial statements include:

- a) for financial assets or financial liabilities designated at fair value through profit or loss:
 - i) the nature of the financial assets or financial liabilities the entity has designated at fair value through profit or loss;
 - ii) the criteria for so designating such financial assets or financial liabilities on initial recognition; and
 - iii) how the entity has satisfied the criteria in paragraphs 9, 11A and 12 of IAS 39 for such designation including, where appropriate, a narrative description of the circumstances underlying the measurement or recognition inconsistency that would otherwise arise, or how designation at fair value through profit or loss is consistent with the entity's documented risk management or investment strategy;
- b) the criteria for designating financial assets as available-for-sale;
- c) whether regular way purchases and sales of financial assets are accounted for at trade date or at settlement date;

- d) when an allowance account is used to reduce the carrying amount of financial assets impaired by credit losses;
 - i) the criteria for determining when the carrying amount of impaired financial assets is reduced directly (or, in the case of a reversal of a write-down, is increased directly) and when the allowance account is used; and
 - ii) the criteria for writing off amounts charged to the allowance account against the carrying amount of impaired financial assets;
- e) how net gains or net losses on each category of financial instruments are determined, for example, whether the net gains or net losses on items at fair value through profit or loss include interest or dividend income;
- f) the criteria the entity uses to determine that there is objective evidence that an impairment loss has occurred; and
- g) when the terms of financial assets that would otherwise be past due or impaired have been renegotiated, the accounting policy for financial assets that are the subject of renegotiated terms.

Hedge accounting

An entity shall disclose the following separately for each type of hedge described in IAS 39 *Financial Instruments: Recognition and Measurement* (i.e. fair value hedges, cash flow hedges, and hedges of net investments in foreign operations): [IFRS 7, P 22]

- a) a description of each type of hedge;
- b) a description of the financial instruments designated as hedging instruments and their fair values at the reporting date; and
- c) the nature of the risks being hedged.

For cash flow hedges, an entity shall disclose: [IFRS 7, P 23]

- a) the periods when the cash flows are expected to occur and when they are expected

- to affect profit or loss;
- b) a description of any forecast transaction for which hedge accounting had previously been used, but which is no longer expected to occur;
 - c) the amount that was recognised in equity during the period;
 - d) the amount that was removed from equity and included in profit or loss for the period, showing the amount included in each line item in the income statement; and
 - e) the amount that was removed from equity during the period and included in the initial cost or other carrying amount of a non-financial asset or non-financial liability whose acquisition or incurrence was a hedged highly probable forecast transaction.

An entity shall disclose separately: [IFRS 7, P 24]

- a) in fair value hedges, gains or losses:
 - i) on the hedging instrument; and
 - ii) on the hedged item attributable to the hedged risk;
- b) the ineffectiveness recognised in profit or loss that arises from cash flow hedges; and
- c) the ineffectiveness recognised in profit or loss that arises from hedges of net investments in foreign operations.

[IAS 32, P 52] The detailed disclosures required under IAS 32 (see below) should provide information to assist users of financial statements in assessing the extent of risk related to financial instruments.

Notes: [IAS 32, P 52]

Transactions in financial instruments may result in an entity assuming or transferring to another party one or more of the following financial risks – market risk, credit risk, liquidity risk and cash flow interest rate risk.

- a) Market risk includes the following three types of risk:
- i) currency risk is the risk that the value of a financial instrument will fluctuate due to changes in foreign exchange rates;
 - ii) fair value interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates; and
 - iii) price risk is the risk that the value of a financial instrument will fluctuate as a result of changes in market prices whether those changes are caused by factors specific to the individual security or its issuer, or factors affecting all securities traded in the market.

Market risk embodies not only the potential for loss but also the potential for gain.

- b) Credit risk is the risk that one party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss.
- c) Liquidity risk (also referred to as funding risk) is the risk that an entity will encounter difficulty in raising funds to meet commitments associated with financial instruments. Liquidity risk may result from an inability to sell a financial asset quickly at close to its fair value.
- d) Cash flow interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. In the case of a floating rate debt instrument, for example, such fluctuations result in a change in the effective interest rate of the financial instrument, usually without a corresponding change in its fair value.

[IFRS 7, P34] For each type of risk arising from financial instruments, an entity shall disclose:

- (a) summary quantitative data about its exposure to that risk at the end of the reporting period. This disclosure shall be based on the information provided internally to key management personnel of the entity (as defined in IAS 24 Related Party Disclosures), for example the entity's board of directors or chief executive officer.
- (b) the disclosures required by paragraphs 36–42, to the extent not provided in

accordance with (a).

(c) concentrations of risk if not apparent from the disclosures made in accordance with (a) and (b).

[IAS 32, P 60] a) For each class of financial asset, financial liability and equity instrument, both recognised and unrecognised, an entity shall disclose information about the extent and nature of the financial instruments, including significant terms and conditions that may affect the amount, timing and certainty of future cash flows.

[IAS 32, P 63] Notes:

1) When financial instruments held or issued by an entity, either individually or as a class, create a potentially significant exposure to the risks (i.e. market risk, credit risk, liquidity risk and cash flow interest rate risk), terms and conditions that warrant disclosure include:

- the principal, stated, face or other similar amount, which, for some derivative instruments, such as interest rate swaps, might be the amount (referred to as the notional amount) on which future payments are based;
- the date of maturity, expiry or execution;
- early settlement options held by either party to the instrument, including the period in which, or date at which, the options can be exercised and the exercise price or range of prices;
- options held by either party to the instrument to convert the instrument into, or exchange it for, another financial instrument or some other asset or liability, including the period in which, or date at which, the options can be exercised and the conversion or exchange ratio(s);
- the amount and timing of scheduled future cash receipts or payments of the principal amount of the instrument, including installment repayments and any sinking fund or similar requirements;
- stated rate or amount of interest, dividend or other periodic return on principal and

the timing of payments;

- collateral held, in the case of a financial asset, or pledged, in the case of a financial liability;
- in the case of an instrument for which cash flows are denominated in a currency other than the entity's functional currency, the currency in which receipts or payments are required;
- in the case of an instrument that provides for an exchange, similar information for the instrument to be acquired in the exchange; and
- any condition of the instrument or an associated covenant that, if contravened, would significantly alter any of the other terms (for example, a maximum debt-to-equity ratio in a bond covenant that, if contravened, would make the full principal amount of the bond due and payable immediately).

Credit risk

The entity shall disclose by class of financial instrument: [IFRS 7, P 36]

- a) the amount that best represents its maximum exposure to credit risk at the reporting date without taking account of any collateral held or other credit enhancements (e.g. netting agreements that do not qualify for offset in accordance with IAS 32 *Financial Instruments: Presentation*) (see also IFRS 7, B 9 and B 10);
- b) in respect of the amount disclosed in 36(a) (see above), a description of collateral held as security and other credit enhancements;
- c) information about the credit quality of financial assets that are neither past due nor impaired; and
- d) the carrying amount of financial assets that would otherwise be past due or impaired whose terms have been renegotiated.

[IFRS 7, B 9]

- 1) For a financial asset, the entity's maximum exposure to credit risk is typically the

gross carrying amount net of any amounts offset in accordance with IAS 32 and any impairment losses recognised in accordance with IAS 39.

[IFRS, B 10]

2) Activities that give rise to credit risk include, inter alia, granting loans and receivables, placing deposits, granting financial guarantees, making irrevocable loan commitments and entering into derivative contracts. Further guidance for determining the maximum credit exposure in each of these instances is included in IFRS 7.B10.

Fair value

[IFRS 7, P 25] Except as set out in paragraph 29 of IFRS 7 (see below), for each class of financial assets and financial liabilities, an entity shall disclose the fair value of that class of assets and liabilities in a way that permits it to be compared with its carrying amount.

Balance sheet

Categories of financial assets and financial liabilities

The carrying amounts of each of the following categories, as defined in IAS 39 *Financial Instruments: Recognition and Measurement*, shall be disclosed either on the face of the balance sheet or in the notes: [IFRS 7, P 8]

a) financial assets at fair value through profit or loss, showing separately:

- i) those designated as such upon initial recognition; and
- ii) those classified as held for trading in accordance with IAS 39;

b) held-to-maturity investments;

c) loans and receivables;

d) available-for-sale financial assets;

e) financial liabilities at fair value through profit or loss, showing separately:

- i) those designated as such upon initial recognition; and

- ii) those classified as held for trading in accordance with IAS 39; and
- f) financial liabilities measured at amortised cost.

Items of income, expense, gains or losses

An entity shall disclose the following items of income, expense, gains or losses either on the face of the financial statements or in the notes: [IFRS 7, P 20]

a) net gains or net losses on:

- i) financial assets or financial liabilities at fair value through profit or loss, showing separately those on financial assets or financial liabilities designated as such upon initial recognition, and those on financial assets or financial liabilities that are classified as held for trading in accordance with IAS 39 *Financial Instruments: Recognition and Measurement*;
 - ii) available-for-sale financial assets, showing separately the amount of gain or loss recognised directly in equity during the period and the amount removed from equity and recognised in profit or loss for the period;
 - iii) held-to-maturity investments;
 - iv) loans and receivables; and
 - v) financial liabilities measured at amortised cost;
- b) total interest income and total interest expense (calculated using the effective interest method) for financial assets or financial liabilities that are not at fair value through profit or loss;
- c) fee income and expense (other than amounts included in determining the effective interest rate) arising from:
- i) financial assets or financial liabilities that are not at fair value through profit or loss; and
 - ii) trust and other fiduciary activities that result in the holding or investing of assets on behalf of individuals, trusts, retirement benefit plans, and other institutions;
- d) interest income on impaired financial assets accrued in accordance with paragraph AG93 of IAS 39 *Financial Instruments: Recognition and Measurement*; and

e) the amount of any impairment loss for each class of financial asset.

Fair value

The entity shall disclose: [IFRS 7, P 27]

a) the methods and, when a valuation technique is used, the assumptions applied in determining fair values of each class of financial assets or financial liabilities;

Note: For example, if applicable, an entity discloses information about the assumptions relating to prepayment rates, rates of estimated credit losses, and interest rates or discount rates.

b) whether fair values are determined, in whole or in part, directly by reference to published price quotations in an active market or are estimated using a valuation technique (see paragraphs AG71–AG79 of IAS 39);

c) whether the fair values recognised or disclosed in the financial statements are determined in whole or in part using a valuation technique based on assumptions that are not supported by prices from observable current market transactions in the same instrument (i.e. without modification or repackaging) and not based on available observable market data; and

d) if paragraph 27(c) of IFRS 7 applies (see above), the total amount of the change in fair value estimated using such a valuation technique that was recognised in profit or loss during the period.

IFRS 7, P 27(c): In the circumstances described in paragraph 27(c) of IFRS 7 (see above), for fair values that are recognised in the financial statements, if changing one or more of those assumptions to reasonably possible alternative assumptions would change fair value significantly, the entity shall state this fact and disclose the effect of those changes.

Note: For this purpose, significance shall be judged with respect to profit or loss, and total assets or total liabilities, or, when changes in fair value are recognised in equity, total equity.

If a difference exists between the fair value at initial recognition and the amount that

would be determined at that date using a valuation technique (see note below), the entity shall disclose, by class of financial instrument:

[IFRS 7, P 28]

- a) its accounting policy for recognising that difference in profit or loss to reflect a change in factors (including time) that market participants would consider in setting a price (see paragraph AG76A of IAS 39); and
- b) the aggregate difference yet to be recognised in profit or loss at the beginning and end of the period together with a reconciliation of changes in the balance of this difference.

[IFRS 7, P 28] Notes: If the market for a financial instrument is not active, an entity establishes its fair value using a valuation technique (see paragraphs AG74–AG79 of IAS 39). Nevertheless, the best evidence of fair value at initial recognition is the transaction price (i.e. the fair value of the consideration given or received), unless the fair value of the instrument concerned is evidenced by comparison with other observable market transactions in the same instrument or based on a valuation technique whose variables included other data from observable markets. It follows that there could be a difference between the fair value at initial recognition and the amount that would be determined at that date using the valuation technique.

Disclosures of fair value are not required: [IFRS 7, P 29]

- a) when the carrying amount is a reasonable approximation of fair value, for example, for financial instruments such as short-term trade receivables and payables;
- b) for an investment in equity instruments that do not have a quoted market price in an active market, or derivatives linked to such equity instruments, that is measured at cost in accordance with IAS 39 *Financial Instruments: Recognition and Measurement* because its fair value cannot be measured reliably; or
- c) for a contract containing a discretionary participation feature (as described in IFRS

4 *Insurance Contracts*) if the fair value of that feature cannot be measured reliably.

In the cases described in paragraphs 29(b) and (c) of IFRS 7 (see above), an entity shall disclose information to help users of the financial statements make their own judgments about the extent of possible differences between the carrying amount of those financial assets or financial liabilities and their fair value, including: [IFRS 7, P 30]

- a) the fact that fair value information has not been disclosed for these instruments because their fair value cannot be measured reliably;
- b) a description of the financial instruments, their carrying amount, and an explanation of why fair value cannot be measured reliably;
- c) information about the market for the instruments;
- d) information about whether and how the entity intends to dispose of the financial instruments; and
- e) if financial instruments whose fair value previously could not be reliably measured are derecognised, that fact, their carrying amount at the time of derecognition, and the amount of gain or loss recognised.

Market risk

Unless an entity complies with paragraph 41 of IFRS 7 (see below), it shall disclose: [IFRS 7, p 40]

- a) a sensitivity analysis for each type of market risk to which the entity is exposed at the reporting date, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date;
- b) the methods and assumptions used in preparing the sensitivity analysis; and
- c) changes from the previous period in the methods and assumptions used, and the reasons for such changes.

[IFRS 7, P 41] If an entity prepares a sensitivity analysis, such as value-at-risk, that reflects interdependencies between risk variables (e.g. interest rates and exchange rates) and uses it to manage financial risks, it may use that sensitivity analysis in place of the analysis specified in paragraph 40 of IFRS 7 (see above).

The entity shall also disclose:

- a) an explanation of the method used in preparing such a sensitivity analysis, and of the main parameters and assumptions underlying the data provided; and
- b) an explanation of the objective of the method used and of limitations that may result in the information not fully reflecting the fair value of the assets and liabilities involved.

[IFRS 7, P 42] When the sensitivity analyses disclosed in accordance with paragraph 40 or 41 of IFRS 7 (see above) are unrepresentative of a risk inherent in a financial instrument (for example because the year-end exposure does not reflect the exposure during the year), the entity shall disclose that fact and the reason it believes the sensitivity analyses are unrepresentative.

Compound financial instruments with multiple embedded derivatives

[IFRS 7, P 17] If an entity has issued an instrument that contains both a liability and an equity component and the instrument has multiple embedded derivatives whose values are interdependent (such as a callable convertible debt instrument), it shall disclose the existence of those features.

[IAS 32, P 94] If an entity has issued an instrument that contains both a liability and an equity component and the instrument has multiple embedded derivative features whose values are interdependent (such as a callable convertible debt instrument), it

shall disclose the existence of those features and the effective interest rate on the liability component (excluding any embedded derivatives that are accounted for separately).

Compound financial instruments

[IAS 32, P 28] The issuer of a non-derivative financial instrument shall evaluate the terms of the financial instrument to determine whether it contains both a liability and an equity component. Such components shall be classified separately as financial liabilities, financial assets or equity instruments in accordance with paragraph 15 of IAS 32.

Notes:

[IAS 32, P 29] 1) An entity recognises separately the components of a financial instrument that

(a) creates a financial liability of the entity and (b) grants an option to the holder of the instrument to convert it into an equity instrument of the entity. For example, a bond or similar instrument convertible by the holder into a fixed number of ordinary shares of the entity is a compound financial instrument. From the perspective of the entity, such an instrument comprises two components: a financial liability (a contractual arrangement to deliver cash or another financial asset) and an equity instrument (a call option granting the holder the right, for a specified period of time, to convert it into a fixed number of ordinary shares of the entity). The economic effect of issuing such an instrument is substantially the same as issuing simultaneously a debt instrument with an early settlement provision and warrants to purchase ordinary shares, or issuing a debt instrument with detachable share purchase warrants. Accordingly, in all cases, the entity presents the liability and equity components separately on its balance sheet.

[IAS 32, P 30] 2) Classification of the liability and equity components of a

convertible instrument is not revised as a result of a change in the likelihood that a conversion option will be exercised, even when exercise of the option may appear to have become economically advantageous to some holders.

[IAS 32, P 31] 3) IAS 39 deals with the measurement of financial assets and financial liabilities.

Equity instruments are instruments that evidence a residual interest in the assets of an entity after deducting all of its liabilities. Therefore, when the initial carrying amount of a compound financial instrument is allocated to its equity and liability components, the equity component is assigned the residual amount after deducting from the fair value of the instrument as a whole the amount separately determined for the liability component. The value of any derivative features (such as a call option) embedded in the compound financial instrument other than the equity component (such as an equity conversion option) is included in the liability component. The sum of the carrying amounts assigned to the liability and equity components on initial recognition is always equal to the fair value that would be ascribed to the instrument as a whole. No gain or loss arises from initially recognising the components of the instrument separately.

[IAS 32, P 32] 4) Under the approach described in paragraph 31 of IAS 32 (see above), the issuer of a bond convertible into ordinary shares first determines the carrying amount of the liability component by measuring the fair value of a similar liability (including any embedded non-equity derivative features) that does not have an associated equity component. The carrying amount of the equity instrument represented by the option to convert the instrument into ordinary shares is then determined by deducting the fair value of the financial liability from the fair value of the compound financial instrument as a whole.

Appendix II: Interview Guide

Part I Cover Letter

Dear Madam or Sir,

This is Zhen Huang, the PhD student at the School of Accounting, Economics and Statistics, Edinburgh Napier University, UK. I currently want to conduct a few interviews to finish my research titled as '*The Usefulness of Derivative Disclosures by Chinese Listed Companies*'. I sincerely hope you to be one of the interviewees. The following is the background of my research.

While the world has witnessed the growing use of derivative instruments and rapid expansion of derivatives markets over the past two decades, the extensive use of derivatives in developed markets, particularly of mortgage-related derivative products has been blamed for the recent credit crisis worldwide. There has been a rising public concern about derivatives trading and associated risks. By far derivatives research has predominately been based on western developed economies; little has been known about reporting and disclosing of derivatives from developing economies. This research aims to fill this gap by looking at derivative-related disclosures and reporting in China - the largest developing economy in the world.

The overall aim of the study is to assess the usefulness of derivative-related disclosures provided by Chinese non-financial listed companies. In my research, a derivative instrument is defined a contract between two parties that specifies conditions – in particular, dates and the resulting values of underlying variables – under which payments, or payoffs, are to be made between the parties, including, for example, the forward contracts, futures, options, swaps and convertible bonds.

I have completed the first stage of the study which found out the level and information content of derivative-related disclosures provided by Chinese non-financial listed companies in their annual reports. Currently, I move to the second stage with the aim to gain some insight of market participants like institutional investors and professional analysts to derivative disclosures. I plan to conduct a few interviews to finish the research.

The interview would take less than one hour and all of your answers are only used to finish my study. Your identity would remain anonymous.

Your participation is invaluable to my research and I am looking forward to having a meeting with you in the future.

Yours sincerely,

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Part II Interview Questions

Section 1 – Interviewee's Details

Interviewee's Code	Location	Gender	Age Group	Job Title	Years of Working in the Field	Highest Education Qualification	Professional Qualification

Section 2 – Key Questions

- 1) To your best knowledge, for a nonfinancial company, what kind of information about its use of derivatives should be disclosed?
- 2) Have you ever used the information related to the use of derivatives when evaluate a corporate performance or risk profile? (If no, why?)
- 3) How do you get such information about the use of derivatives? (What is your source to get such information?)
- 4) Do you think the information about the use of derivatives is useful or not when making investment decisions? Why?
- 5) For the disclosures related to the use of derivatives, what kind of information you most concern?
- 6) In your view, is it much more useful if a company discloses more information about its use of derivatives?
- 7) Generally, are you satisfied with current derivative-related disclosures provided by listed companies? Do you think the information disclosed by companies is adequate or not? If not, what kind of information you would like companies to disclose?
- 8) Do you think the reporting for derivatives should be compulsory or voluntary? Why?
- 9) What is your view on current accounting and reporting (IFRS-based requirements) for derivatives? Do you think it is easily to be understood?
- 10) Do you think the reporting for derivatives should continue to comply with IFRS

requirements, or set up relevant requirements based upon Chinese scenario, or no need to set up any requirements? What is your suggestion for the future development of reporting for derivatives?

- 11) In your view, what is the impact of recent financial crisis to the development of Chinese derivatives market?
- 12) In your view, what is the impact of recent financial crisis to the accounting and reporting for derivatives in China?