UNIVERSITY OF SOUTHERN QUEENSLAND

# EARNINGS MANAGEMENT PRACTICES AND SUBSEQUENT FIRM PERFORMANCE OF COMPANIES LISTING ON THE KUWAIT STOCK EXCHANGE (KSE)

A Dissertation submitted by

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### Abstract

The earnings management around listing phenomenon has been widely discussed in the literature—with conflicting results. However, research surrounding this issue is underdeveloped in relation to the Kuwaiti capital market. Motivated by the lack of research on this issue and the unique combination of listing requirements in the Kuwaiti setting, this study first examines how Kuwaiti Closed Shareholding Companies (KSCCs) manage their pre-listing earnings. Second, it explores whether auditors with a high reputation restrict opportunistic earnings management. Third, it examines the occurrence of earnings management behaviour around the first lockup expiration period. Finally, it seeks to explore the association between pre-listing year earnings management and subsequent firm performance.

The sample firms used in this study (68 KSCCs) consists of all KSCCs listing on the KSE from 1997 through to 2007 excluding banks and regulated industries. Five hypotheses were developed to address the study objectives and research subquestions. For hypotheses testing purposes, the sample was, on occasion, split into different groups and study periods. Testing these hypotheses involve comparing the pre-listing, listing and post-listing year earnings management. Earnings management and auditor reputation, profit requirement change and lockup restrictions are also examined; and the association between earnings management and post-listing performance is investigated. Aggregate accruals are used to estimate earnings management. Six cross-sectional models were chosen for this study to estimate discretionary accruals: three models are based on total accruals and three models are based on current accruals.

Several conclusions can be drawn from the results. With respect to the pre-listing year earnings management, there is some evidence to support the existence of opportunistic earnings management exercised by KSCC issuers in the pre-listing financial year when using current accruals models. However, a significant result was not found when models based on total accruals were used.

The examination of the lockup restriction—mandated by law in the Kuwaiti market—has an interesting implication. This research finds that KSCCs issuers opportunistically advanced total accruals in an attempt to improve earnings during the first lockup expiration period. Additionally, firms which listed after the lockup restrictions were imposed exhibited a significant level of post-listing earnings management compared to firms that listed before the lockup restrictions were imposed. As a result, evidence exists that KSCC issuers used current accruals to manage pre-listing earnings to be able to list on the KSE. Meanwhile, they used total accruals to manage post-listing year earnings to gain wealth from selling the highest portion of their restricted shares at the highest price possible.

Results obtained from testing post-listing stock and accounting performance are inconsistent. Results from testing the stock return performance using BHARs and CARs for all KSCCs sample firms support the managerial opportunism explanation and the existence of a negative association between DCA in the pre-listing year and post-listing stock performance. In contrast, testing accounting performance shows insignificant results. Results from testing the accounting performance using ROA reveals that KSCCs sample firms exhibit a significant subsequent decline in the adjusted-median ROA and in the raw-median ROA in the second post-year period, but not in the other years. However, when the sample firms are split into groups

based on their levels of DCA, result suggests no significant differences observed in the adjusted-median ROA and in the raw-median ROA between groups.

The findings make a number of contributions to the international earnings management literature, Kuwaiti financial market's policy and practice, and Kuwaiti investors. First, this research provides the first known empirical evidence based on the analysis of earnings management behaviour related to close shareholding companies around listing, which represent 90% of companies listed on the KSE in the emerging market, Kuwait. Second, the evolution of the listing requirements imposed by the KSE on the KSCCs in Kuwait between the years 1984 to 2010 for both the official market and the parallel market are documented. Third, the study results are important to investors for improving their decision-making processes and indicate that caution should be exercised when investing in newly-issued firms. Fourth, examination of the lockup restrictions highlight the agency conflict that exists between the agent (KSCCs issuers) and principal (investors) around lockups and alerts Kuwaiti regulators to consider reviewing listing requirements and possibly reassess them in light of these results. Finally, the results also indicate that investors should not interpret the use of high reputation auditors as an indication of reliable financial statements.

### **Certification of Dissertation**

I certify that the ideas, experimental work, results, analyses, software and conclusions reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of Candidate

Date

Date

**ENDORSEMENT** 

Signature of Supervisor/s

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### **Publications arising from this dissertation**

- 1. Algharaballi, E. 2012, 'Listing year discretionary accruals by Kuwaiti Shareholding Companies (KSCCs)', paper presented to the International Conference on Social Sciences, Management, Biotechnology & Environment Engineering, Dubai 7-8 January.
- 2. Algharaballi, E. and Goyen, M. 2012, 'Corporate reporting, security regulation and trading on the Kuwait Stock Exchange (KSE)-institutional implications for research', Journal of Governance and Regulation vol.1, no. 2, PP. 7-23. Contributions made by authors are 75% and 25% respectively.

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## List of Abbreviations

| BHARs | Buy and Hold Abnormal Returns                       |
|-------|---|
| CA    | Current Assets                                      |
| CARs  | Cumulative Abnormal Returns                         |
| CBK   | Central Bank of Kuwait                              |
| CFO   | Cash Flow from Operations                           |
| CL    | Current Liabilities                                 |
| COGS  | Cost of Goods Sold                                  |
| DA    | Discretionary Accruals                              |
| DCA   | Discretionary Current Accruals                      |
| DEP   | Depreciation  |
| EBXI  | Earnings Before Extraordinary Items                 |
| EMH   | Efficient Market Hypothesis                         |
| GAAP  | Generally Accepted Accounting Principals            |
| GCC   | Gulf Corporation Council                            |
| GGI   | General Global Index                                |
| GII   | Global Industry Index                               |
| IAS   | International Accounting Standards                  |
| IFRS  | International Financial Reporting Standards         |
| IMF   | The International Monetary Fund                     |
| IOSCO | International Organization of Securities Commission |
| IPOs  | Initial Public Offerings                            |
| KAAA  | Kuwait Accountants and Auditors Association         |
| KATS  | Kuwait Automated Trading System                     |
| KCC   | Kuwait Clearing Company                             |
| KSCs  | Kuwaiti Public Shareholding Companies               |
| KSCCs | Kuwaiti Closed Shareholding Companies               |
| KSE   | Kuwait Stock Exchange                               |
| MC    | Market Committee                                    |
| MoCI  | Ministry of Commerce and Industry                   |
| MTC   | Mobile Telecommunication Company                    |
| NDA   | Non-Discretionary Accruals                          |
| OTC   | Over-the-Counter                                    |
| PPE   | Property Plant and Equipment                        |
| REV   | Revenues  |
| ROA   | Return on Assets                                    |
| ROE   | Return on Equity                                    |
| SEOs  | Seasoned Equity Offerings                           |
| STD   | Short Term Debts                                    |
| TA    | Total Accruals                                      |
| TR    | Trade Receivables                                   |

## **1.Introduction**

### **1.1. BACKGROUND OF THE STUDY**

The objective of a financial report is to "provide information about the financial position, performance and change in financial position of an entity that is useful to a wide range of users in making economic decisions"(International Accounting Standard Board (IASB) 2001). Accounting practices allow managers considerable discretion, especially regarding accruals. Managers are permitted to exercise judgement in their financial reports—which creates the opportunity for managers to select accounting and reporting methods that could mislead the users of financial statements. This potential for opportunistic behaviour is consistent with the definition of earnings management articulated by Healy and Wahlen (1999, p. 368):

Earnings management occurs when managers use judgment in the financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers.

Healy and Wahlen's (1999) definition focuses on the judgement used by managers in financial reporting. This judgement can be used wisely to create advantages for the users of financial statements, or it can be used in such a way as to create disadvantages for users. This second approach is generally known as opportunistic earnings management (Boubakri, Boyer & Ghalleb 2008; Healy & Wahlen 1999; Jiraporn et al. 2008). The advantages of wise judgement accrue when owners/managers select the appropriate financial reporting and accounting methods to demonstrate the firm's underlying economic performance and to effectively transmit that information to the users of the financial statements. The disadvantages of opportunistic earnings management accrue when owners/managers intentionally select financial reporting and accounting methods to either mislead stakeholders about the underlying economic performance of the firm or to influence contractual outcomes to their benefit (Healy & Wahlen 1999).

Several international studies have documented earnings management practices and find significant abnormal accruals around new issues (for example, DuCharme, Malatesta and Sefcik (2001); Teoh, Welch and Wong (1998b); Rangan (1998); Gajewski and Greese (2006) and Kao, Wu and Yang (2009)). On the other hand, researchers such as Qintao (2007); Ball and Shivakumar (2008); Venkataraman, Weber and Willenborg (2008) and Armstrong, Foster and Taylor (2009) have failed to find evidence of earnings management practices around new issues.

### 1.1 PURPOSE

The purpose of this study is to investigate earnings management practices by Kuwaiti Closed Shareholding Companies (KSCCs) around listing. The research takes an in-depth look at the listing requirements imposed by the Kuwait Stock Exchange (KSE), earnings management practices and subsequent firm performance. Two specific listing requirements are investigated: pre-listing profit and mandatory lockup restrictions<sup>1</sup>. Earnings management practices over three time periods are examined: in the year before listing, in the year of listing and in the year subsequent to listing. A stream of prior studies show that issuers employ income-increasing adjustments to reported earnings around the time of going public. Some researchers documented this behaviour in the pre-listing and listing financial years, while other researchers document it in the post-listing financial years (DuCharme, Malatesta & Sefcik 2001; Shivakumar 2000; Teoh, Welch & Wong 1998b). For KSCCs, meeting the prelisting profit requirement—as well as meeting the expectations of existing shareholders to increase their personal proceeds from the listing-provides incentives to manage earnings. However, the effect of managing earnings in the prelisting financial year is expected to be associated with subsequent firm performance. Many researchers have documented a negative association between the level of earnings management around issue and subsequent firm performance (Aharony, Wang & Yuan 2005; Gajewski & Gresse 2006; Kao, Wu & Yang 2009; Teoh, Welch & Wong 1998b). Conversely, another group of studies has emerged that question the existence of a negative association between earnings management and subsequent firm performance (Armstrong, Foster & Taylor 2009; Ball & Shivakumar 2008).

A major listing requirement, in effect since 1997, mandates that all companies pursuing listing on the KSE must achieve a minimum profit for at least two years prior to listing. Another KSE listing requirement, in effect since 2004, mandates three stages of lockup restrictions on strategic shareholders<sup>2</sup>. A further institutional feature of the Kuwaiti market is that all companies listed on the KSE are required to have not less than two auditors, who must be from separate firms and act as joint auditors (Law No. 51 1994). The unique combination of the pre-listing profit requirements, the three-stage lockup regulations and the requirement for two external auditors for listed KSCCs make the Kuwaiti context an excellent one for examining earnings management behaviour around listing.

### 1.2 RESEARCH OBJECTIVES AND QUESTIONS

Several objectives are identified for this study. First, it examines whether the KSCC listing firms manage their pre-listing earnings. Existing shareholders may engage in earnings management before listing for several reasons: to meet the pre-listing profit requirement, to increase their personal proceeds by selling stocks at the highest price possible and to seize the opportunity to have one external auditor compared to the two external auditors required after listing. Second, it is anticipated that highly reputable auditors tend to restrict opportunistic earnings management, as well as reducing the risk of financial reports containing material misstatements or omissions (Balsam, Krishnan & Yang 2003; Datar, Felthman & Hughes 1991). Therefore, this study tests the prediction of a negative association between auditor reputation and

<sup>&</sup>lt;sup>1</sup>Lockup contracts are agreements that prevent the initial shareholders of listing firms from selling a specific percentage of their shares over a certain period following their admission to the stock exchange. These are frequently voluntary arrangements (Goergen, Renneboog & Khurshed 2006). In the US, lockup contracts are called 'lockup agreements' and most use a 180-day period. In the UK, the contracts are called 'lock-in' agreements', but most of them have no specific expiry date and tie the expiration to a specific event such as the issuance of the financial statements or the firm's results with an average duration to be about 600 days (Espenlaub, Goergen & Khurshed 2001). In Kuwait, lockups are imposed by law for all KSCCs going public and have standardised expiration periods and the same percentage of lockup shares. Therefore, in this research, the term 'lockup restriction' is used rather than 'lockup agreement' (Resolution No.1 2007; Resolution No.3 2004).

pre-listing year earnings management. Third, this study examines the occurrence of earnings management behaviour by restricted KSCCs in the period after listing. Specifically, it focuses on investigating earnings management around the first lockup expiration period. Finally, most prior studies have documented a negative relationship between abnormal accruals and subsequent performance. This research explores this association in the Kuwait setting. Based on these objectives, this study addresses the following research question:

# Do Kuwaiti closed shareholding companies (KSCCs) manage earnings around listing?

To answer the main question, the following sub-questions are posed:

Do KSCCs new listing firms manage earnings in the pre-listing financial year?

Is there a negative association between auditor reputation and pre-listing year earnings management?

Do restricted firms manage earnings in the first post-listing year?

### Is pre-listing earnings management associated with subsequent firm performance?

In the next section, the institutional setting of Kuwait is briefly discussed with an overview of the KSE's listing requirements and accounting and auditing requirements.

### 1.3 THE INSTITUTIONAL SETTING OF KUWAIT

### 1.3.1 Kuwait Stock Exchange (KSE)

The KSE has undergone several development stages that collectively illustrate a significant improvement in the Kuwaiti economy (Aldaihani & Aldeehani 2008; Oxford Business Group 2006b). The year 1983 witnessed the issuance of the Ameri Decree, which facilitated the reorganisation and establishment of the Exchange as an independent financial institution. Article No.10 of the Ameri Decree (1983, p. 13) specified the following entities as members of the KSE:

- 1- Kuwaiti Shareholding Public Companies (KSCs).
- 2- Kuwaiti Shareholding Closed Companies (KSCCs)<sup>3</sup>.
- 3- Middlemen (stockbrokers) of the Stock Exchange.

There are three government bodies that supervise and regulate the KSE. The Ministry of Commerce and Industry (MoCI) is accountable for the licensing of market intermediaries and for the regulation and supervision of the primary market. The Central Bank of Kuwait (CBK) is responsible for supervising banks, investment and exchange companies, and mutual funds (Central Bank of Kuwait 2009); and the Market Committee (MC) of the KSE is responsible for supervising the management of the KSE. The MC issues rules and regulations for the KSE, including those covering the structure of the Stock Exchange, the personnel system, financial

<sup>&</sup>lt;sup>3</sup>KSCCs do not issue shares to the public. However, they may be either listed or unlisted. KSCCs are incorporated by an official document issued by the promoters, of whom there must not be less than five. Shares of the KSCCs are freely transferable, subject to the requirement of Kuwait ownership of at least 51% (Law No. 15 1960). Both the KCSs (or IPOs) and KSCCs are defined as listing companies. IPOs issue shares prior to listing, while KSCCs do not. Instead, existing KSCC shareholders can sell their shares on the day of listing (Law No. 15 1960).

regulations, registration fees, membership, Stock Exchange dealings and annual subscriptions (Ameri Decree 1983).

### **1.3.2 Listing requirements**

The listing requirements of the KSE have been modified several times. On some occasions, the capital requirement has been increased and on other occasions it was reduced. In some cases, certain conditions were placed on strategic shareholders and in other instances they were removed. The most volatile requirement has concerned achieving a specific profit level prior to listing. This requirement started at a minimum of 5% in Resolution No. 1 (1984) in the listing requirements, increased to 6% in Resolution No. 4 (1988), was modified to zero in Resolution No. 1 (1993), and then re-introduced at 5% in Resolution No. 1 (1997). From 2004 until 2008, the profit requirement remained stable at 7.5%, with the only change being that of the base used for calculating the profit percentage<sup>4</sup> (Resolution No.1 1984; Resolution No.3 2004; Resolution No. 2 2008).

Another requirement that has been modified relates to the lockup restriction that was mandated in 2004 in No. 3 of (2004). To protect new shareholders and to guarantee the continuing participation of insiders in the firm, even after going public, restrictions are placed on the sale of shares. The lockup restriction was changed in 2008 by Resolution No. 2 (2008). Resolution No. 3 (2004) defines the strategic shareholder as one who owns, directly or indirectly, 5% or more of the company's capital. The shares of strategic shareholders in a company seeking listing should not be less than 25% of the company's capital. There may be one or more strategic shareholders contributing to the 25% requirement.

### 1.3.3 Accounting and auditing requirements in Kuwait

Kuwait is considered a pioneer in terms of its adoption of International Financial Reporting Standards (IFRS). The MoCI issued Ministerial Resolution No. 18 in 1990 requiring all companies in Kuwait to adopt IFRSs when preparing their financial statements, effective 1 January, 1991(Ministerial Resolution No. 18 1990). The MoCI and the KSE are responsible for ensuring that listed companies comply with IFRS.

KSCs and KSCCs are required under the Commercial Companies Law No.15 (1960) to have an annual audit and to submit their audited financial statements to the MoCI and KSE within three months of the company's year-end (Global Consultants 2006). All companies listed on the KSE are required to have not less than two auditors, who must be from separate firms and act as joint auditors (Law No. 51 1994).

Until February 2008, there were neither regulated auditing standards nor generally accepted auditing standards which were to be followed and enforced in Kuwait. Most auditors were using International Standards of Audit (ISAs) voluntarily (Al-Bannay 2002; Listing consultants Per. Comm 2009). In response to the lack of clearly defined auditing standards, Ministerial Resolution No. 101 (2008)

<sup>&</sup>lt;sup>4</sup>Resolutions No. 1 of (1984) and No. 4 of (1988) do not define the base on which the 5% and the 6% profitability is determined. Resolution No. 1 of (1997) and No.3 of (1998) required the profit to be 5% of paid-in capital. Resolutions No. 3 of (2004) and No.1 of (2007) required the profit to be 7.5% of paid-in capital. Resolution No.2 of (2008) required the profit to be 7.5% of the weighted average of the paid-in capital.

was promulgated, which requires all companies to conduct their audit in accordance with IASs.

### **1.4 MOTIVATIONS**

Given the institutional setting of Kuwait as discussed in section 1.4, there are five main motivations for this research. First, the earnings management around listing phenomenon has been widely discussed in the literature and provides conflicting results. Some results identify the existence of opportunistic earnings management such as those by Teoh, Welch and Wong (1998a) in the U.S. setting, Gramlich and Sorensen (2004) in the Danish setting and Mashayekhi and Azar (2008) in the Iranian setting. Other results challenge the opportunistic perspective on earnings management in favour of the conservative behaviour and information perspective. These studies include those by Venkataraman, Weber and Willenborg (2008) in the U.S. setting, Roosenboom, Van der Goot and Mertens (2003) in the Dutch setting and Ball and Shivakumar (2008) in the U.K. Although the earnings management phenomenon around share issue is well documented, the research surrounding this issue is underdeveloped in relation to the Kuwaiti capital market. Kuwait has been chosen as the focus of this study not only because it is a developing country with an emerging capital market, but also because of the existence of a unique combination of the listing requirements: the pre-listing profit requirement, mandatory lockups and the requirement for two external auditors. It has been documented that the Kuwaiti setting is characterised by the absence of a suitable institutional framework (World Bank & International Monetary Fund 2004), a weak legal environment (El-Temtamy & Chaudhry 2009), a lack of regulatory coordination, and the existence of market manipulation and insider trading (International Monetary Fund 2004). All these characteristics of the Kuwaiti capital market create the motivation to investigate the earnings management behaviour of KSCCs.

Second, testing agency and signalling theories in this type of setting will reveal whether these theories are also applicable to the Kuwaiti market. Most prior studies have applied these theories in more highly regulated markets such as the United States, the United Kingdom and Australia. The Kuwaiti institutional setting provides a suitable environment to test agency and signalling theories of earnings management around share issues and whether these theories hold in a developing country.

This study conducts a close analysis of earnings management practices, paying attention specifically to the pre-listing profit, mandatory lockup restrictions and twoauditor requirements for listed KSCCs imposed by law. As a result, the third motivation for this study is to inform Kuwaiti regulators about the incidence of earnings management and thereby determine if there would be benefits from reviewing their listing requirements, improving the quality of financial reporting and intensifying compliance with the accounting standards, thus ensuring auditors perform a high-quality audit.

The fourth and the fifth motivations are related to KSE investors. Results of this study have the potential to provide a new framework for investors to use when assessing investments in listing KSCCs; thus improving their decision-making processes. If this study provides evidence of earnings management and poor subsequent stock performance, this result should encourage investors to be cautious

when investing in listing KSCC firms and to be discerning when faced with a high magnitude of earnings around the time of issue; thus avoiding potential losses.

Studies conducted in high legal liability markets found that high reputation auditors restrict opportunistic earnings management and serve as a signal of company value (Balsam, Krishnan & Yang 2003; Chang et al. 2008; Datar, Felthman & Hughes 1991). Therefore, the final motivation of this study is to inform investors as to whether the use of high reputation auditors is an indication of reliable financial statements and therefore, provide investors with evidence on the validity of high reputation auditors as a signal for firm quality.

### **1.5 CONTRIBUTIONS**

This research makes a number of contributions to the earnings management literature. Given the apparent conflicting evidence that currently exists in the literature, examining earnings management practices around KSCC listing provides further evidence for the continued debate surrounding the existence of the phenomenon. The investigation in this study is undertaken in a setting that has not been examined by previous literature, where the focus has generally been on earnings management behaviour around IPOs and SEOs. This research is based on the analysis of earnings management behaviour related to closed shareholding companies around listing, which represents 90% of companies listed on the KSE in the emerging market of Kuwait. Kuwait has a system with low transparency, weak accounting regulations and few institutional investors (El-Temtamy & Chaudhry 2009). Moreover, this study provides a contribution to the Kuwaiti capital market literature by documenting the evolution of the listing requirements imposed by the KSE on the KSCCs between the years 1984 to 2010 for both the official market and the parallel market.

In this study, earnings management is estimated using the aggregate accruals approach. Despite the popularity of the aggregate approach, it has been criticised often in the literature. Researchers argue that this approach creates biased and noisy estimates of discretionary accruals that provide mixed results (Dechow, Sloan & Sweeney 1995; Guay, Kothari & Watts 1996; Kang & Sivaramakrishnan 1995; Kothari, Leone & Wasely 2005). Therefore, in an attempt to mitigate the problems associated with this approach, six different variations are chosen to estimate discretionary accruals. The three models based on total accruals are: the modified Jones Model of Dechow, Sloan and Sweeney (1995), the cash flow model of Kasznik (1999) and the adjusted-performance discretionary accruals model of Kothari, Leone and Wasley (2005). The three models based on current accruals are: the current accrual model of Teoh, Welch and Wong (1998a), the cash flow model of Kasznik(1999) and the adjusted-performance discretionary accruals model of Kothari, Leone and Wasley (2005). In addition, most studies of earnings management around share issue have scaled the Jones model and its modifications using lagged total assets (Ball & Shivakumar 2008). Ball and Shivakumar (2008) argue that using low values of the deflator (lagged total assets) produces extreme values of discretionary accruals estimates, since pre-listing total assets are relatively small and not representative of the listing-year or post-listing year total assets. Based on this view, and following Armstrong, Foster and Taylor (2009), average total assets is used as a deflator in this study to mitigate the extremely large estimates of the discretionary accruals and to correct for the small-denominator problem (Ball & Shivakumar 2008). Another scaling issue is that most prior research does not include a constant in the regression equation. Kothari, Leone and Wasley (2005) advocate the inclusion of a constant term to mitigate model mis-specification and problems arising from an omitted size (scale) variable. This research estimates discretionary accruals in a manner consistent with Kothari, Leone and Wasley (2005) and adds a constant term to all models tested. Thus, in an attempt to control mis-specification and to improve the reliability of the discretionary accruals measures, this research adds a new contribution by using a combination of total and current accruals models, scaling the regression equations using average assets and adding a constant term to the regression equations.

This research is also makes contribution to the earning management and auditor reputation literature. Previous studies conducted in high legal liability markets theorise that an auditor's reputation is expected to restrict opportunistic earnings management and serve as a signal of a company's value (Balsam, Krishnan & Yang 2003; Chang et al. 2008; Datar, Felthman & Hughes 1991). Therefore, in light of results from testing the earnings management behaviour of KSCCs that engage highreputation auditors and those that do not, the findings of this research make a contribution by testing this issue in a low legal liability market. In contrast to most countries where lockups are voluntary agreements made by the insiders of stockissuing firms who agree to abstain from selling shares for a specific period of time after the issue (Brau, Lambson & McQueen 2005), markets such as Kuwait and Taiwan have lockup restrictions imposed by law. The lockup restriction should work as a commitment device to alleviate information asymmetry around IPOs and protect potential investors from being misled by insider actions (Espenlaub, Goergen & Khurshed 2001; Goergen, Renneboog & Khurshed 2006). Very few studies have examined the correlation between lockups and earnings-management behaviour around expirations. One that did was a study of Taiwanese IPO firms. Huang and Lin (2007) examined earnings-management behaviour around lockup restriction expiration periods, specifically studying discretionary accruals during the period of issue and subsequent sales of restricted shares. They found positive discretionary accruals around lockup periods and a positive relationship between earningsmanagement in the first lockup period and subsequent sales of restricted shares. Therefore, the examination of the opportunism hypothesis and the agency conflict that exists between the agent (KSCCs issuers) and principal (investors) around the legally-mandated lockup restriction requirement provides another contribution for both international and national literature and for Kuwaiti regulators. As a consequence, Kuwaiti regulators may consider reviewing the lockup restrictions and possibly reassess them in light of these results.

### 1.6 DELIMITATIONS OF SCOPE

There are four main delimitations of scope placed on this study. First, the findings of this study are based on Kuwaiti KSCCs. All of the KSCCs new listing firms (68 firms in total) are included in the sample. However, the sample of this study does not include KSC public companies, which represent 10% of the listing firms during the sample period. The KSCs were excluded from the sample because they have different listing requirements to KSCCs.

Second, this research focuses on a specific geographical region and the sample of this study is limited to new listing KSCCs in Kuwait. Therefore, the results only reflect what was happening in that region in relation to a precise sample of firms within a precise timeframe and cannot be generalised to apply to a broader context. Third, even though certain relationships between variables are calculated when investigating the association between auditor reputation and earnings management, this research will not be examining the complex cause and effect relationships between these variables. This type of analysis falls beyond the scope of this research.

Finally, this study investigates the association between the KSCCs' pre-listing earnings management and post-listing performance using univariate analysis. Investigating the determinants of post-listing performance using regression analysis is beyond the scope of this dissertation. This is because the objective of this study encompasses an examination of the long-run stock and accounting performances rather than investigating the determinants of post-listing performance.

### 1.7 ORGANISATION OF THE DISSERTATION

The remainder of this dissertation is organised as follows. Chapter 2 discusses the institutional setting of Kuwait, the developments and major events of the KSE, and reviews in detail the evolution of the listing requirements of the KSE and its accounting and auditing requirements. This chapter also examines the accounting profession in Kuwait and discusses some deficiencies of the KSE. Chapter 3 provides a review of related research, starting with an overview of the motivations for KSCCs to go public. Definitions of earnings management are presented and a review of the mechanisms and incentives of earnings management are articulated. An evaluation of capital-market incentives is then conducted.

Chapter 4 discusses the theoretical approach used in this dissertation to analyse the existence of earnings management behaviour around listing and develops the hypotheses to be tested. The analysis of companies' earnings management around listing is examined in the context of two theories offered in the relevant literature: signalling theory and agency theory. Both of these theories address management incentives in the context of information asymmetry.

Chapter 5 describes and justifies the research methods employed in this study. It provides an overview of the research design, describes the earnings management measures that will be used and considers some of the issues related to discretionary accruals models. It also describes the long-run performance methodology and discusses measuring long-run performance using market and accounting based approaches.

The analysis of the data generated by the research and results are presented in Chapter 6. Descriptive statistics are presented that provide general observations about the data. This chapter reports the pre-listing year earnings management estimation and the findings. It analyses and compares the pre-listing year and listing year earnings management data. Results from testing the profit requirement change and earnings management are reported. Examinations of earnings management in relation to auditor reputation and regression results are presented. The analysis of the lockup restrictions and earnings management is undertaken; and the association between earnings management and post-listing performance is investigated. Finally, Chapter 7 discusses the results, contributions and implications of the thesis, outlines the limitations of this research and presents opportunities for future study.

### 2.1 INTRODUCTION

The aim of this chapter is to provide an overview of the institutional setting of Kuwait, especially as it pertains to the Kuwait Stock Exchange (KSE). First, a brief history of the Kuwait economy is presented followed by a short account of the major events of the KSE from 1983 until 2010. Next, government bodies that supervise and regulate the KSE are reviewed with particular focus on the conflict among these enforcement bodies. The development of the listing requirements for the KSE Official Market, frequently modified by the Market Committee, is then documented. The accounting and auditing requirements and the accounting profession in Kuwait are then considered, with emphasis on the accounting and auditing standards. Presented last are the International Monetary Fund (IMF) and the World Bank critiques of the KSE institutional framework, especially regarding the administrative powers of the market institutions, insider trading, accounting disclosure and compliance with regulators.

### 2.2 GENERAL INFORMATION ABOUT KUWAIT

Kuwait is a small country with a population of nearly 3 million, located in the northwest section of the Arabian Gulf. Bordered by Iraq to the north, Iran to the east, and Saudi Arabia to the south, Kuwait covers 17,800 square kilometres of mostly flat and hard-sand desert, including 290 kilometres of coastline. The government of Kuwait is a constitutional monarchy; the executive power resides in the Emir as Head of State and Commander in Chief (Political Risk Services Group 2008).

Kuwait broke new ground in the region by establishing a constitution and an elected parliament and it remains one of the most advanced Arab democracies (Doraid 2006, p. 43). The National Assembly of Kuwait is charged with overseeing and monitoring the government's performance, which on occasion it does aggressively. Assembly members serve four-year terms. The first elections to the National Assembly were held in 1963, and only men were allowed to vote (National Bank of Kuwait 2007). On May 16, 2005, the National Assembly legalized women's right to vote and run for office (Political Risk Services Group 2008).

### 2.3 KUWAIT ECONOMY

Kuwait has a small, open economy that depends heavily on oil exports, foreign trade, and expatriate workers (Al-Rashidi 2009). Like other countries in the Gulf Corporation Council (GCC), Kuwait's economy is dominated by the oil industry and is government managed (Al-Yaqout 2006). Kuwait generates a substantial amount of income from foreign investments, which are largely held by the government (National Bank of Kuwait 2007).

The oil industry has functioned as the backbone of the Kuwaiti economy for more than seventy years. In 1938, Kuwait witnessed its first commercial discovery of oil; and in 1946, the first commercial oil shipment took place (National Bank of Kuwait 2007). The subsequent flood of oil revenue transformed all aspects of Kuwaiti life, affecting the country's economic, political, social, legal, environmental, and cultural structures. Indeed, oil fuels the Kuwaiti way of life, and living well became much easier as a result. The discovery of huge amounts of oil enabled Kuwait to build a generous state that, among many other services, provides free education and health services to every citizen (Khouja & Sadler 1979).

Al-Mulla (2006, p. 46) contends that Kuwait's 'massive oil wealth is both a blessing and a curse. It is a blessing in so far as it enables the state to provide for its citizens, but it is a curse so far as it slows the incentive to push hard for domestic reform'. The country would not be where it is today without oil revenues, which have provided infrastructure, spurred business growth, and created an economic powerhouse in a very challenging environment (Al-Mulla 2006).

Kuwait has the fourth-largest proven crude oil reserves in the world (10% of the world's reserves) and ranks among the world's largest oil producers. Crude oil and refined petroleum products account for more than 85% of the government's revenue and between 90 and 95% of its exports (National Bank of Kuwait 2007).

Although oil prices have been volatile, the Kuwaiti government protects the economy by maintaining steady growth irrespective of oil prices. Indeed, government control of the economy has been possible due to the huge revenues the country receives from oil exports; this income is wisely used to avoid deficits (National Bank of Kuwait 2007).

While Kuwait's oil-based economy continues to thrive, business diversification is needed to broaden and strengthen the economy (Oxford Business Group 2006b). Kuwait has been slow to diversify its economy. However, the government is pushing forward diversification efforts in preparation for the day its oil reserves dry up (Shuaib 1998). The government has increased its investment in downstream oil industries, for example, oil refining and petrochemical production.

The public sector plays a key role in the Kuwaiti economy, despite attempts to reduce its influence. The government has successfully boosted activity in the private sector through the privatization of public sector enterprises. In the last 15 years, the government has divested more than 50% of its equity holdings in 28 firms representing sectors such as telecom, investment, business services, banking, and airways (National Bank of Kuwait 2007; Oxford Business Group 2006a; Political Risk Services Group 2008).

# 2.4 KUWAIT STOCK EXCHANGE DEVELOPMENT AND MAJOR EVENTS

The Kuwait Stock Exchange (KSE) remains one of the best-developed stock markets in the region, second in size only to Saudi Arabia, and well ahead of other regional markets (Oxford Business Group 2006b). According to Aldaihani and Aldeehani (2008), the KSE ranks first in the Arab world in turnover ratio, second in stock-value traded, and third in market capitalization. The exchange has undergone several development phases and struggled with many crises that have significantly affected the Kuwaiti economy.

After the discovery of oil and subsequent influx of oil revenues, the Kuwaiti government recognized an urgent need to establish shareholding companies to help improve the country's infrastructure and boost its economy and global financial position (Al-Yaqout 2006). The National Bank of Kuwait, established in 1952,

became the country's first public shareholding company. The National Cinema Company became the second in 1954, and was soon followed by Kuwait Airways in 1956 and Oil Tankers in 1957 (Bley & Chen 2006).

The rapid growth of the economy's corporate business sector pressured authorities to establish a regulatory framework for stock trading. In 1960, the government introduced the first Commercial Companies Law (No. 15) to organize and regulate all companies. But the law focused largely on shareholding companies and failed to regulate or provide an organizational structure for stock trading (Al-Yaqout 2006). For that reason, a new law, No. 32, was passed in 1970 to regulate domestic trading of the securities of joint-stock companies. This law proved critical and is considered Kuwait's first significant step toward organizing the trading of domestic shares (Al-Yaqout 2006; Alanezi 2006). Law No. 32 addressed many issues, the most important being the creation of a consultation committee to supervise trading, the design of a strong stock market framework, the passage of laws to protect the economy from stock price volatility, and the assessment of foreign companies seeking to register their shares in the market. The development and major events of the KSE will be discussed in detail in the following section.

### **2.4.1 Developments and major events**

### 2.4.1.1 1976–1977 crisis

In the 1970s, the Kuwaiti market was characterized by a rise in speculative activities as large numbers of inexperienced investors looking for quick and high returns entered the stock market (Al-Yaqout 2006; Alanezi 2006). Another factor that contributed to this rise was the wide use of the 'forward method', which allowed traders to use post-dated cheques to settle payments (Al-Qenae 2001; Al-Yaqout 2006; Alanezi 2006). Al-Qenae (2001) contends that the market at that time still lacked sufficient regulation and was controlled by key investors who manipulated the market to earn short-term gains.

By late 1976 the rapid rise in trading activity and huge inflation of share prices contributed to a calamitous market collapse. There were many factors that led to the crisis, including lower demand from investors after the enormous increases in stock prices; the widespread use of the 'forward method' which created significant levels of debt; the lack of a sufficient clearing system; and the still-weak organization of the stock market (Al-Qenae 2001; Al-Yaqout 2006; Alanezi 2006). By the end of 1977 stocks prices had fallen sharply and trading dropped by 66% compared to 1976 (Al-Yaqout 2006). Immediately following the collapse, the government forbade until 1979 the establishment of any new local shareholding companies (Al-Sultan 1989).

### 2.4.1.2 Al-Manakh crisis of 1982

As a result of the ban on new shareholding companies and sluggish stock trading after the crash, Kuwaiti investors began to pursue new kinds of shareholding companies. The flexibility for establishing new companies in neighbouring countries prompted Kuwaiti investors to establish Gulf shareholding companies. These Gulf companies were banned from trading on the official Kuwaiti market; thus, they sought other ways to trade their securities and created the Kuwaiti over-the-counter (OTC) Al-Manakh Stock Market (Elshamy & Al-Qenae 2005). Trading stocks on this market was attractive to investors because there were no restrictions on trading. In the absence of official regulations and supervision, brokers worked independently and set their own prices. Predictably, trading volumes surged, shares prices climbed,

and profits escalated. This market was also fuelled by post-dated cheques which ,under the commercial law, were considered cash instruments payable upon presentation (Al-Yaqout 2006). In August 1982, this market also crashed as investors once again failed to cover their post-dated cheques (Oxford Business Group 2006b).

Analysts agree that the Al-Manakh crisis was caused by inadequate government regulation, insufficient financial disclosure, frivolous speculation, the use of post-dated cheques, and the lack of government control over Gulf shareholding companies (Al-Mutairi 2004).

### 2.4.1.3 The emergence of the Kuwait Stock Exchange (KSE)

After the stock market crash of 1982, regulators tightened market controls by toughening the requirements for companies pursuing listing on the KSE (Alsalman 2002). As a result, the number of newly-listed companies, shares issued and stockbrokers were limited. Numerous regulations were also promulgated to bolster investors' confidence in the market (Al-Qenae 2001)—the main one being the Ameri Decree of 1983. The Ameri Decree of 1983 was prepared in response to the Al-Manakh crash of 1982. This decree ordered the reorganization of the Kuwaiti stock market as an independent financial institution guided by an executive administration and a Market Committee to protect investors, issuers and brokers (Oxford Business Group 2006a). In 1984 the KSE was successfully established and opened its doors to investors (KSE 2010a). For years after the Al-Manakh crisis, the government was busy trying to control debt and scheduling settlements for outstanding post-dated cheques.

### 2.4.1.4 Introducing bonds

Before 1983 Kuwait faced a scarcity of tradable securities; the only investment instrument available was common stock. After 1983, the Market Committee allowed other financial instruments to be traded on the KSE. In 1987, the KSE introduced Resolution No. 50 to organize the issuance, listing, and dealing of bonds. By the end of 1987, bonds were being traded and the KSE benefited from a diversification in tradable investment instruments for the first time (Annual Economic Report of the KSE 1987). Corporate bonds are seldom traded on the KSE, however, though they are listed on the market. There remain few bond issuers, and most available bonds are government bonds (International Monetary Fund 2004).

### 2.4.1.5 Opening the market to GCC members

In an attempt to boost investor confidence and trading on the KSE, in May 1989 the government opened the stock market to citizens of the GCC, allowing them to buy stock in Kuwaiti companies and allowing cross-listing of shares (Oxford Business Group 2006b). This development effectively activated the market by increasing investor trust.

The Kuwaiti market grew substantially as a result of the passage of the Ameri Decree in 1983, the introduction of bonds as tradable securities in 1987, and the authorization by GCC for citizens to trade on the KSE in 1989. However, in August 1990, the Iraqi invasion of Kuwait had a substantial impact on the development of the KSE.

### 2.4.1.6 The Gulf War of 1990–1991

The invasion of Kuwait was a major shock to the nation and its economic system and the massive destruction that followed changed the development path of the Kuwaiti economy (International Monetary Fund 2005). The post-war period in Kuwait was a challenging one. After the liberation of Kuwait in February 1991, government spending focused on rebuilding the country. The country's economic structure and performance suffered greatly in the 1990s, and the KSE was closed from August 1990 to September 1992 (Annual Economic Report of the KSE 1990/1991). After reopening, the KSE struggled to regain its position and rebuild investor confidence, and stock market activity remained sluggish. Nonetheless, trading on the KSE grew slowly and in 1995 became more efficient with the implementation of a new electronic and settlement system (Bley & Chen 2006).

### 2.4.1.7 Introduction of mutual funds

Although mutual funds were briefly introduced on the KSE in May 1990, this development ended with the Iraqi invasion two months later (Annual Economic Report of the KSE 1990/1991). Mutual funds were reintroduced in April 1992 (Annual Economic Report of the KSE 1992). To encourage the establishment of healthy mutual funds, the Kuwait Investment Authority guaranteed it would contribute 50% of the capital for any investment fund that aimed to attract small investors to the market (Al-Seef 2006).

### 2.4.1.8 Introducing the Kuwait Automated Trading System

To cope with increased trading, the KSE became the first stock market in the Arab world to apply the Arabic Automated System (Al-Hashel 2003). Authorities launched the Kuwait Automated Trading System (KATS) in 1996 to allow faster trade transactions. The decision to change from a manual system that had been in place since 1983 to the automated trading system was made on January 15, 1996. The system is fully computerized and displays information related to trade to brokers and traders. KATS allows traders to register their bids and offers, then the system matches them according to the priority of prices until an agreement takes place (Al-Hashel 2003). The KATS was designed to improve market competition, liquidity and transparency (Annual Economic Report of the KSE 1996). The system allows faster, fairer and more efficient securities trading, and has improved market competitiveness and increased equality between traders. Investor trust was gradually regained, and the market again became active (Annual Economic Report of the KSE 1995; International Monetary Fund 2004).

### 2.4.1.9 Foreign investment on the KSE

Before 2000, foreign investment<sup>5</sup> on the KSE was prohibited because of the limited authority of market regulators and the lack of market maturity (Annual Economic Report of the KSE 2000). To cope with increasing economic globalization, the Ameri Decree No. 20 was issued in 2000. This allowed non-Kuwaitis to buy shares in Kuwaiti shareholding companies. Since 2000, foreign nationals have been allowed to own and trade shares in existing companies and those that may be established in the future, as well as in mutual funds (Annual Economic Report of the KSE 2000).

<sup>&</sup>lt;sup>5</sup> Foreign investors are those other than GCC nationals.

### 2.4.1.10 Ladies trading hall

A distinction claimed by no other stock exchange is the KSE trading hall for ladies. The Ladies Trading Hall opened in January 2003 with the goal of creating an adequate environment for business women and granting women equal rights to men in terms of managing their investments and trades (Annual Economic Report of the KSE 2003). The Ladies Trading Hall is equipped with the most advanced computer screens, allowing women to closely follow the activity of the market.

### 2.4.1.11 Online trading

In 2003, the KSE launched an online trading service that allows stock traders and investors to remotely trade and track daily market activities. This service attracted a new segment of investors to the KSE and constituted another significant step by the KSE toward a solid financial footing, nationally and internationally, and toward parity with the most advanced stock markets (Al-Seef 2006).

### 2.4.1.12 The boom of 2003-2005

The elimination of Saddam Hussein's regime in April 2003, coupled with higher international prices for crude oil, contributed to an economic boom in Kuwait from 2003 through 2005 (International Monetary Fund 2004; Oxford Business Group 2006b). Investor and trader confidence was restored and the more-secure economic and political environment prompted increased investing and the establishment of more businesses. Many Kuwaiti firms also benefitted from profitable projects to help reconstruct Iraq; many also invested in the KSE. These factors led to a substantial increase in market liquidity and enormous financial growth in Kuwait. The KSE in 2003 ranked among the best-performing stock markets in the world (Oxford Business Group 2006b). The years 2004 and 2005 saw a sharp rise in capitalization, new companies listed (specifically IPOs), and market index values (Annual Economic Report of the KSE 2004, 2005).

### 2.4.1.13 Introduction of Call Options

In a continuous effort to distinguish itself among regional stock markets and diversify its trading instruments, the KSE in March 2005 introduced Call Option as a derivative product to be traded on the market. Call Options are limited to specified companies that the Market committee of the KSE approve (Al-Seef 2006). The KSE was the first market in the Middle East to offer these instruments (Al Mohasiboon Magazine 2006). As at 2005, put options were not traded on the KSE and no changes to the regulations have occurred to permit put option trading (Annual Economic Report of the KSE 2005, 2010). A discussion of the Global Financial Crisis of 2008 and the enactment of the Capital Market Authority in 2010 are discussed in the next sections.

### 2.4.1.14 The Global Financial Crisis of 2008

In 2008, a financial crisis that began in the United States quickly spread to countries around the world, leaving collapsed financial markets, economic recession, rising unemployment, and personal and business bankruptcies in its wake. Various factors created the crisis, but the chief cause was the poor quality of subprime mortgages in the United States (Blackburn 2008).

As a result of the crisis, Kuwait once again faces a gloomy financial situation, as do other countries around the world (Al-Mutawaa 2009). The KSE index

witnessed huge losses that is similar to some of the leading stock markets<sup>6</sup>. That the crisis affected Kuwait, a small country with no outstanding debt, to the same extent as many larger countries with more debt, surprised many (Al-Mutawaa 2009). Al-Matawaa (2009) also identified four main factors that increased the impact of the global crisis on the Kuwaiti economy. First, as news of the crisis spread, fear and panic gripped KSE investors. Second, as share prices dropped sharply, investors' wealth also declined. Third, as global liquidity dried up and the recession spread, oil prices fell to below average levels. Fourth, as the value of foreign investments owned by some Kuwaiti financial institutions also fell, these institutions became unable to pay their debts.

In response, Kuwaiti government regulators and financial institutions joined forces to take action to lift the economy. The Central Bank of Kuwait (CBK), for example, lowered interest rates on loans and directed banks to increase their capital to enhance the stability of the banking sector (Al-Mutawaa 2009). Though the government was working with policy makers to deal with the financial crisis, many investors were not happy with such efforts. One group of KSE investors filed a lawsuit against the KSE in an attempt to recoup their losses (Al-Atrabi & Al-Sayed 2008). As a result, on November 13 2008, the Administrative Court in Kuwait suspended all trading on the KSE for two working days (Al-Shal Report 2008). This set a striking precedent for the KSE; nothing similar had occurred during the worst days of Al-Manakh crisis in 1982. Many financial analysts argued that the decision to suspend trading was too risky and charged that it revealed regulators' inability to cope with the crisis. They reasoned that market prices are driven by supply and demand and that these forces sometimes balance at extremely high or low levels. They also contended that a decision to suspend market transactions should be treated as a matter of national security, not jurisprudence. Further, they maintained that the losses the Kuwaiti market incurred were no different than those sustained by other markets around the world (Al-Shal Report 2008).

### 2.4.1.15 Enacting the Capital Market Authority law of 2010

Kuwait was the last of the GCC countries to establish a Capital Market Authority (CMA) when the Kuwaiti Parliament enacted the Capital Market Law in February 2010 (Eiman 2010). The law was gazetted on March 13, 2011 and its objective is to create the CMA as a single, independent, accountable authority, managed by a Board of Commissioners with the power to develop and regulate the capital market in Kuwait. This step is anticipated to enhance transparency, trust and confidence in the Kuwaiti financial system and represents the most recent regulatory change at the time of writing. The next section provides a brief overview of the KSE equities market, trading sectors and types of companies that list on the KSE.

#### 2.4.2 Equities markets

New companies on the KSE can be listed on either the Official Market or the Parallel Market. New issues, whether Initial Public Offering (IPOs), Seasoned Equity Offerings (SEOs) or bonds, must first be sold to the public on the Primary Market (Al-Mutairi 2004). After the initial sale of a security on the Primary Market, it is then

<sup>&</sup>lt;sup>6</sup> The percentage change in the KSE index from closing prices for 2007 to those of 2008 was -43.12%. In comparison, the change in the FTSE 100 index (London Stock Exchange) for the same period was -31.33%, the NYSE Composite index (New York Stock Exchange) was -40.89% while the NIKKEI 225 (Tokyo Stock Exchange) lost 42.12% over the same period (Al-Mutawaa 2009).

traded on the Secondary Market. The investor therefore purchases the security from another investor, rather than from the issuing corporation on the Secondary Market (Al-Mutairi 2004). When the Parallel Market was introduced during 1983 and 1984, only GCC companies were allowed to list on it (Annual Economic Report of the KSE 1988). In 2000, the Parallel Market was reintroduced with a new structure that permits the listing of companies that do not meet the requirements for listing on the Official Market, regardless of their nationality (Annual Economic Report of the KSE 2000). In 2003, the Market Committee allowed companies on the Parallel Market to transfer to the Official Market if they meet its listing requirements (Annual Economic Report of the KSE 2003). Therefore, the Parallel Market can be described as a transitory market where new companies can list—with flexible requirements and more relaxed regulations—before transferring to the Official Market.

### 2.4.3 KSE trade sectors

Shares of companies listed on the KSE are classified into eight sectors. These are as follows: banking, investment, insurance, real estate, industrial, services, food, non–Kuwaiti companies, and mutual funds (KSE 2010b). Table 2.1 presents total trading activities of the KSE from 1997–2007 and Table 2.2 identifies the total number of listed firms from 1997–2007.

|      | Number of     |               |                    |
|------|---------------|---------------|--------------------|
|      | traded shares | Trading value | Total transactions |
| Year | (million)     | (million KD)  | (thousands)        |
| 1997 | 33988.0       | 10487.0       | 588.0              |
| 1998 | 13917.0       | 3341.0        | 350.0              |
| 1999 | 9495.0        | 1841.0        | 231.0              |
| 2000 | 6757.0        | 1290.0        | 171.0              |
| 2001 | 16304.2       | 3548.0        | 355.1              |
| 2002 | 27834.5       | 6680.9        | 521.3              |
| 2003 | 49565.0       | 16253.0       | 1082.0             |
| 2004 | 33537.0       | 15276.0       | 1057.0             |
| 2005 | 52246.0       | 28422.0       | 1956.0             |
| 2006 | 37658.0       | 17284.0       | 1486.0             |
| 2007 | 70438.0       | 37009.5       | 2101.7             |

Table 2.1 Total Trading Activities of the KSE from 1997–2007

Table 2.2 Total Number of KSE Listed Firms from 1997–2007

|      |         |            |           | Real   |          |         |      | Non-    |       |
|------|---------|------------|-----------|--------|----------|---------|------|---------|-------|
| Year | Banking | Investment | Insurance | Estate | Industry | Service | Food | Kuwaiti | Total |
| 1997 | 8       | 15         | 4         | 9      | 14       | 11      | 4    | 9       | 74    |
| 1998 | 8       | 16         | 4         | 10     | 16       | 11      | 4    | 10      | 79    |
| 1999 | 8       | 18         | 4         | 13     | 16       | 13      | 4    | 9       | 85    |
| 2000 | 8       | 18         | 4         | 13     | 16       | 14      | 4    | 9       | 86    |
| 2001 | 8       | 19         | 4         | 13     | 16       | 14      | 4    | 10      | 88    |
| 2002 | 8       | 22         | 4         | 14     | 17       | 16      | 4    | 10      | 95    |
| 2003 | 8       | 28         | 4         | 16     | 20       | 17      | 4    | 11      | 108   |
| 2004 | 8       | 29         | 6         | 17     | 22       | 21      | 5    | 12      | 120   |
| 2005 | 8       | 39         | 7         | 28     | 23       | 33      | 5    | 15      | 158   |
| 2006 | 9       | 43         | 7         | 29     | 25       | 45      | 5    | 17      | 180   |
| 2007 | 9       | 43         | 7         | 34     | 27       | 53      | 6    | 17      | 196   |

### 2.4.4 KSE membership

Article No. 10 of the Ameri Decree (1983, p. 13) specifies the following entities as members of the KSE:<sup>7</sup>

- 1- Kuwaiti Public Shareholding Companies (KSCs)
- 2- Kuwaiti Closed Shareholding Companies (KSCCs)
- 3- Middlemen of the Stock Exchange (stockbrokers)

A shareholding company is formed by a group of shareholders who subscribe for negotiable shares. Shareholders have a limited liability and are not responsible for the company's obligations except to the extent of the face value of the shares subscribed (Law No. 15 1960). There are two kinds of shareholding companies that can be listed on the KSE: public and closed. Commercial Companies Law No. 15 (1960) identifies KSCs as public offerings securities companies (IPOs). IPOs are those companies that invite a public subscription. For a public company to be established, a decree must be issued and published in the official gazette, announcing its incorporation. A public company can generally list on the exchange one year after its establishment, specifically after its first audited financial statement (Law No. 15 1960).

In contrast to IPOs, closed companies do not offer shares for public subscription (National Bank of Kuwait 2007; Oxford Business Group 2006c). However, closed companies are sometimes required to issue shares for private subscription if requested by the Market Committee. For these companies, listing is a way for the company to switch from private to public ownership through the sale of a privately held corporation to the public. Thus, closed companies list to allow existing shareholders to sell their shares to the public. Therefore, the selling shareholders decide the selling price of the shares since the proceeds will go directly to them (IPO Monitor 2010). Table 2.3 highlights the differences between KSCs and KSCCs.

| KSCs (Public Companies)                         | KSCCs (Closed Companies)                              |
|---|---|
| Represent 10% of listed firms on the KSE.       | Represent 90% of listed firms on the KSE.             |
| Invite public subscription by issuing shares to | Switch from private to public ownership by selling    |
| the public.                                     | shares of a privately held corporation to the public. |
| The proceeds from the sale of the primary       | Shareholders decide the selling price of the shares   |
| shares go directly to the issuing firm.         | since the shares proceeds will go directly to them.   |
| Must establish one year before listing.         | Must establish three years before listing.            |
| Can be member of the KSE once the first set     | Can be member of the KSE by meeting specific          |
| of financial statements is issued.              | listing requirements and obtaining Market             |
|   | Committee approval.                                   |
| Must issue a decree and announce its            | No need to issue a decree.                            |
| establishment in the official gazette.          |   |

Table 2.3 Differences between KSCs and KSCCs

The Commercial Companies Law does not require the issue of a decree for the incorporation of closed companies. Any closed company pursuing listing on the KSE must meet a specific set of requirements issued by the Market Committee. The KSCC must also issue a prospectus<sup>8</sup> that should be available on the first day of trade

<sup>&</sup>lt;sup>7</sup>Stock exchange members must pay registration fees and an annual subscription fee.

<sup>&</sup>lt;sup>8</sup>The prospectus must include general information about the company, the history of the company and its affiliates for the last three years, descriptions of company property, the legal status of any cases filed by or

and should include a full set of audited financial statements for the last three years (KSE 2010c).

Closed companies requesting listing on the KSE usually appoint a listing consultant. The consultant is responsible for filing the company's legal documents. The consultant also reviews the financial status of the company, including the company's compliance with accounting regulations. He or she also helps the company to finalize the prospectus (Listing consultants Per. Comm 2009). Once the Market Committee approves a closed company for listing, the company must fulfil the listing procedures within a specified time from the date of approval notification and must pay a registration fee.

The Market Committee oversees brokerage firms; however, it does not have the power to license, inspect, or investigate brokers. The Ministry of Commerce and Industry (MoCI) is responsible for licensing all financial intermediaries. The KSE inspects and investigates brokerage companies only in cases where trading or settlement rules have been violated (International Monetary Fund 2004).

# 2.5 GOVERNMENT BODIES SUPERVISING AND REGULATING THE KSE

The capital market in Kuwait is regulated and supervised by three enforcement bodies: (1) the MoCI, which is responsible for supervising the KSE securities issuers and intermediaries; (2) the KSE Market Committee, which was established by the Ameri Decree of 1983 in order to organize and regulate the securities market; and (3) the CBK, which regulates and supervises banks and investment firms listed on the KSE.

The MoCI is accountable for the licensing of market intermediaries and for the regulation and supervision of the primary market, including dealing with the legal aspects of company incorporation and issuance of capital shares. More specifically, the ministry takes care of Market Committee decisions such as listing new companies, listing terms and conditions, and companies' mergers and takeovers (Al-Jarrah 2008; Oxford Business Group 2006b).

The CBK was established in 1969 to establish the rules of the monetary financial system in the State of Kuwait (Islam 2003). The CBK is governed by Law No. 32, which concerns currency and the organization of the banking business (Law No. 32 1968). According to this law, all KSE-listed companies that are banks, investment companies, exchange houses or mutual funds should be under CBK supervision. Since July 2005, the oversight of mutual funds has been delegated to the KSE Market Committee as a replacement for CBK supervision (Ameri Decree No. 158 2005). The principle responsibilities of the CBK are to issue the Kuwaiti dinar on behalf of the State of Kuwait, direct credit policy to assist social and economic progress, promote the growth of national income, and manage the country's banking system. The CBK can inspect the institutions under its supervision at any time and check the extent of their compliance with its provisions, laws, resolutions and regulations (Central Bank of Kuwait 2009). As of March 2010, there were 9 banks and 49 investment companies among the 185 companies listed on the KSE.

against the company, information on the company's shares and shareholders, and a full set of audited financial statements including footnotes and the external auditors' report for the last three years (KSE 2010c).

The Market Committee supervises the management of KSE. The Market Committee is responsible for setting the general rules and policies of the KSE. It supervises the KSE to ensure its compliance with the executive rules that delineate the purpose for which the KSE was established. Article No. 5 (1983) stipulates that the Market Committee must be organized under the chairmanship of the MoCI. The Market Committee members are as follows:

- 1- The director of the KSE
- 2- An MoCI representative
- 3- A Ministry of Finance representative
- 4- A CBK representative
- 5- Two experts, duly selected by the Council of Ministers, on nomination by the MoCI
- 6- Four members selected by the Kuwait Chamber of Commerce and Industry, including one middleman (stockbroker).

Article No. 6 (1983) specifies the rules and procedures of the Market Committee. According to this article, the Market Committee shall issue internal rules and regulations to the KSE on matters including the stock exchange structure, personnel system, financial regulations, registrations and membership. The Market Committee deals with all issues relating to KSE dealings, securities and registration of stockbrokers. In addition, the Market Committee oversees the applications of companies pursuing listing on the KSE and inspects their financial statements for approval. The committee is also charged with approving the projected annual budget of the KSE (Ameri Decree 1983). From 1984 through 2009, the committee issued numerous resolutions regulating all aspects of the market.

Based on the requirements of the Ameri Decree of 1986, the Market Committee created the Kuwait Clearing Company (KCC) in Resolution No. 13 (Al-Qenae, Li & Wearing 2002; Annual Economic Report of the KSE 1987; 1987). Equity and debt traders on the KSE are cleared through the KCC. The KCC is entrusted by the Market Committee to clear and settle all securities traded in the market. More specifically, the main duties of the KCC are to clear transactions, register shares, resolve obligations and rights occurring from market transactions, and specify the parties and their respective rights for each transaction. The KCC also provides a central depository service for listed and non-listed companies' securities and for domestic and foreign investors. In addition, the KCC provides a range of other services including the distribution of profits and the administration of some of the IPO subscriptions (Al Mohasiboon Magazine 2009b). The KCC electronically executes the settlements of all trades made through the KSE. All investors and traders must open an account with the KCC to be able to trade on the KSE (Al Mohasiboon Magazine 2009b).

History provides many examples of conflict between the enforcement bodies of the KSE, with KSE regulators unable to fulfil their duties. Numerous domestic and international parties agree that the KSE suffers from a weak governing structure and that its management and regulatory framework contains significant flaws being scattered as it is among diverse laws and agencies, (Aldaihani & Aldeehani 2008; Bouresli 2009; International Monetary Fund 2004). The KSE enforcement agencies issue numerous interrelated regulations that are practically impossible to track, undermining consistent enforcement (International Monetary Fund 2004; Oxford Business Group 2006b).

The practical functioning of the Market Committee and the KSE illustrates the confusion among KSE regulatory agencies. The Market Committee, charged with managing the detailed affairs of the KSE, is presumed to oversee the KSE. However, in practice, the Market Committee and the KSE are regarded as a single entity with dual functions and responsibilities (Bouresli 2009; International Monetary Fund 2004; Kuwait Chamber of Commerce and Industry 2006). As long as the two share the same management body, it will remain difficult for the Market Committee to uncover and address violations and shortcomings of the KSE (Al-Jarrah 2008). The current practice results not only in a clear conflict of interest but also in a division of power, weak surveillance abilities, inconsistent enforcement, and contradictory regulations (International Monetary Fund 2004).

In support of this argument, the second Kuwait Conference on Transparency in 2008 concluded that the Market Committee had not been granted the requisite power and responsibility to act as an independent regulatory agency and to oversee the development of a securities market that is efficient, fair and transparent. The Market Committee should be separated from the KSE and operate with its own resources, staff and authority (Oxford Business Group 2006b).

Another example of the conflict among agencies regulating the KSE is the contradiction found in Article No. 5 of the Ameri Decree (Ameri Decree 1983). This article declares that 'the Stock Exchange shall be managed by a committee, to be constituted under the Chairmanship of the Minister of Commerce and Industry'. This decree was intended to help organize the KSE but, in fact, only weakens oversight of the KSE (Al-Jarrah 2008). In this regard, Al-Jarrah (2008) argues that Article No. 5 of the Amiri Decree illustrates the divergence between the technical and the political functions of the Minister of the MoCI.

As the chief clearing and settlement institution, the KCC works under the umbrella of the KSE. Meanwhile, the KCC also operates as the securities depository and registry. These two functions should be separated (International Monetary Fund 2004). In most other exchanges, securities must be fully deposited with the clearing and settlement institution, while the cash transfer must be made directly through the banks (Kuwait Transparency Association Report 2006). Therefore, it is inappropriate for the KCC to act as an investment custodian for stock and at the same time hold cash. Moreover, according to the 2006 Kuwait Transparency Association Report, the KSE owns 27.5% of the KCC. This level of ownership by the KSE will lead to biased judgments and decisions; thus, the KCC does not have the requisite independence to duly fulfil its tasks (Kuwait Transparency Association Report 2006).

Another conflict is found in the Market Committee's responsibility to regulate and supervise brokerage firms at the KSE and its lack of authority to license these firms. The power to license brokerage firms is granted to the MoCI. Therefore, brokers are subject to the licensing power of one regulatory agency, but are supervised and inspected by another regulatory agency (International Monetary Fund 2004; Oxford Business Group 2006b).

Before February 2010, the KSE was the only market in the Gulf region without an independent regulatory body to manage its capital market (Al Mohasiboon Magazine 2006). The primary market is supervised by the MoCI, and the secondary market is supervised by the Market Committee. Financial institutions such as banks and investment companies are supervised by the CBK.

In brief, Kuwait's system is unique and eccentric among the regulatory systems of the world's stock markets (Kuwait Transparency Association Report 2006). Most other stock markets have a Capital Market Authority, which has the executive ability to meet its responsibilities and the full powers to develop and regulate its market. Hopefully, the emergence in February 2010 of a Capital Market Authority in Kuwait will bring the securities regulatory framework of the KSE more in line with international standards. The next section documents the historical development of the listing requirements of the KSE and its evolution.

### 2.6 EVOLUTION OF THE LISTING REQUIREMENTS

The market provides the framework for shareholding companies to offer their securities for trading. As far as this author is aware, no study to date discusses the evolution of these requirements. Therefore, all information included here was taken directly from the laws and regulations issued from 1983 through 2010. During these years, and particularly in 1983 and in 2010, landmark regulations were issued. A leading piece of legislation was the Ameri Decree (1983), which reorganized the stock market; and the KSE was successfully established as an independent financial institution managed by the Market Committee the following year. The Capital Market Authority regulation of 2010 represents another milestone which should positively affect the development of the KSE.

To be listed on the KSE, closed companies must meet listing requirements and follow rules set by the Market Committee. Article No. 6, item No. 3 of the Amiri Decree (1983) stipulates: 'The Market Committee is responsible for setting the general rules and policies for the KSE; in particular it shall set the rules and procedures for enrolling brokers and listing shares of Joint stock companies and any other securities in the market'.

The Commercial Companies Law No. 15 (1960) identifies KSCs (public companies) as listed once their first set of financial statements are issued. However, KSCCs (closed companies) membership in the market is granted by the Market Committee only if they meet specific requirements. Thus, all listing requirements issued by the Market Committee relate only to KSCCs, not KSCs.

The Market Committee is responsible for issuing market entrance guidelines for two KSE markets: the Official Market and the Parallel Market. One of the main purposes of this study is to document the evolution of the listing requirements of the KSE. Due to the small number and unstable condition of the companies listed on the Parallel Market, only companies listed on the Official Market are included in the sample for this study. Activity on the parallel market has decreased substantially since the Al-Manakh crisis discussed earlier. In December 2011, only 14 companies were listed on the parallel market compared with 216 on the official market. Listing regulations for the official market are discussed in section 2.6.1 and those for the parallel market will be discussed in Appendix B.

### 2.6.1 Listing requirements for the Official Market

Resolution No. 1 (1984) issued by the Market Committee was the first resolution following the reorganization of the KSE in 1983. This resolution establishes and enforces the listing requirements for the Official Market. It was

issued after the Al-Manakh crisis of 1982. It consisted of just four articles. The most important of these was the requirement that a company seeking listing on the KSE have a minimum paid-in capital of KD 5 million. It also mandated that such a company be established for at least three years prior to listing. In addition, this resolution obliged companies to obtain a profit of at least  $5\%^9$  over the past three years. In addition, it empowered the Market Committee to exempt some companies based on the nature of their activities and purpose.

Market Committee Resolution No. 4 (1988) altered Resolution No. 1 (1984) and contained eleven articles. This resolution required a company seeking to list on the KSE to have achieved at least 6% in operational profit during the past three years and at least 5% in distributed cash dividends<sup>10</sup> during the past year; a prospectus of the company's history and financial status duly authorized by the company's management and external auditor must also be submitted to the Market Committee. It also required that trading in the company's shares start at the shares' book value or at a value determined by a specialized authority. If the latter option was chosen, the price had to be approved by the Market Committee.

In 1993, Resolution No. 4 (1988) was revoked and replaced by Resolution No 1 (1993) This resolution was unusual as it was released during Kuwait's rehabilitation and reconstruction period following the Gulf War. It consisted of three main articles, the most important of which is Article No. 1, which specifies the integration of the Parallel Market with the Official Market. Article No. 2 reduces the minimum paid-in-capital to KD 1 million<sup>11</sup>, as compared with KD 5 million in the previous resolution. The most remarkable aspect of this resolution is its lack of any pre-listing profit requirement. However, companies seeking to list with the KSE must not have reported any losses in the last financial year. It should be noted that this particular set of listing requirements was less onerous and more flexible in order to accelerate the restructuring of the KSE after the Gulf War.

After a partial economic recovery following post-war reconstruction, the Market Committee decided to tighten the KSE listing requirements. Thus, in 1997 Resolution No.1, consisting of ten articles, was issued. One of the most important changes in this resolution was the requirement that the capital of a company seeking listing be at least KD 2 million and that shareholders' equity be at least KD 3 million. Another modification required a company to show a net profit from its main activity of at least 5% of its paid-in capital for each of the previous two years. The last article in this resolution stated that the Market Committee had the right to exempt and reject any company from listing without justification.

Shortly after the issuing of Resolution No. 1 (1997), an amendment to this resolution was made. The Market Committee issued Resolution No. 3 (1998) which modified the pre-listing profit requirement by adding two new rules. The amendment required companies seeking listing to have reported operating profits during the last financial year with the average operational profit of at least 5% of paid-in-capital for the last two years.

<sup>&</sup>lt;sup>9</sup>Resolution No. 1 (1984) did not define 5% profitability.

<sup>&</sup>lt;sup>10</sup> Resolution No. 4 (1988) did not define 5% cash dividends.

<sup>&</sup>lt;sup>11</sup> The Kuwait dinar (KD) is the official currency in Kuwait. The average exchange rate over the sample period is approximately 1KD: 3.00 US\$ and 1KD: 2.00 EUR.

In addition, the amendment required companies pursuing listing on the KSE to submit a list of shareholders and their ownership percentages to the Market Committee. No changes were permitted to the ownership structure of such companies until the trading of shares had commenced in the market. The amendment also instructed companies to complete listing procedures within 45 days of Market Committee approval; otherwise the approval would be revoked.

The Market Committee strengthened the listing requirements once again by replacing Resolution No. 1 (1997) and Resolution No. 3 (1998) with Resolution No. 3 (2004) and Resolution No 7 (2005), respectively. Resolution No. 3 (2004) contained eleven articles. Among the most significant of these is the requirement to increase the minimum paid-in capital to KD 3 million, up from KD 2 million in the previous resolution. Another major change is in the profit requirement. The prelisting profit requirement increased to no less than an average of 7.5% of paid-in capital for two of the last three financial years, up from 5% in the previous regulation. This resolution also stipulated in Article No. 5 that the number of shareholders must be at least 150. In contrast, the previous resolutions of (1997) and (1998) only required that the paid-in capital be distributed among a sufficient number of shareholders, without specifying that number.

Although the listing requirements were gradually strengthened, 2005 witnessed a record number of companies listing on the KSE.<sup>12</sup> One year after the issuance of No. 3 (2004), the Market Committee, on November 27 2005, restricted the number of new companies listing on the KSE. Consequently, Resolution No. 7 (2005) was promulgated, adding two new listing requirements. Resolution No. 7 had a significant impact on KSCC shareholders. This resolution introduced the concepts of strategic shareholders and lockup restrictions. A *strategic shareholder* was defined in this resolution as 'the one who owns, directly or indirectly, 5% or more of a company's capital'. Total shares of strategic shareholders in a company seeking listing could be no less than 25% of the company's capital, whether owned by one or more strategic shareholder.

To guarantee the continuing participation of insiders in the firm even after going public and to protect new shareholders, restrictions on shares are imposed. Lockups are defined by many researchers as agreements made by insiders of stockissuing firms to abstain from selling shares for a specified period of time after the issue (Brau, Lambson & McQueen 2005). Since lockups in Kuwait are mandated by law, the term 'lockup restriction' will be used to differentiate these from the lockup agreements used in other countries. Starting from November 2005, all listing KSCCs were required to retain 25% of the company's capital, specifically the strategic shareholders' shares at the clearinghouse of the KSE. The lockup restriction in the Kuwaiti setting is unique in two ways. First, there are three fixed expiration periods, after which strategic shareholders are allowed to dispose of their shares. As in figure 2.1, the first expiration period is after the first year of the listing. The second expiration period is after the second year of the listing. The final expiration period is after the third year of listing. Second, a specific percentage of shares are allowed to be disposed of in each period. Fifty percent of the total restricted shares can be disposed of at the first expiration period, twenty-five percent at the second expiration period and the remaining 25 percent cannot be sold until the third expiration period.

<sup>&</sup>lt;sup>12</sup>There were 13 new listed companies on the KSE in 2003, 19 in 2004, 33 in 2005, and 21 in 2006.



SS refers to the strategic shareholder and is defined as one who owns, directly or indirectly, 5% or more of the company's capital (Resolution No.7 2005)

Figure 2.1 Lockup Expiration Periods at the KSE - November 27, 2005 to November 6, 2008

A new set of listing rules was adopted on January 2007 in the Market Committee's Resolution No. 1 (2007). This resolution replaced Resolutions No. 3 (2004) and Resolution No. 7 (2005) and consisted of sixteen articles. The most significant change set the capital requirement at no less than KD 10 million, up from KD 3 million in the previous resolution. In addition, shareholders' equity must be no less than 115% of the paid-in capital in each of the last three years, in contrast to the requirement of only one year before listing in the previous resolution. Another matter worth mentioning here is that this resolution obligates KSCCs to offer 30% of their capital for private subscription. These offers are managed by specialized companies that must be independent from the companies seeking listing. The pre-listing profit requirements and the lockup restrictions on strategic shareholders of previous resolutions remain unchanged.

The last alteration to listing requirements relevant to the sample period of this study occurred in (2008) in No. 2. The main change in this resolution was in the calculation of the base percentage of the total shareholders' equity and pre-listing profit. The base was modified to include the weighted average paid-in capital instead of only the paid-in capital per the previous resolution. This modification is set forth in Article No. 2, which also stipulates that the total shareholders' equity must be 115% of the weighted average of the paid-in capital in the past two years. Another issue addressed in this resolution was to cancel the concept of strategic shareholders. Instead, 25% of the paid-in capital of a company must be retained at the clearinghouse for two years from the date of listing. Therefore, strategic shareholders have only one lockup expiration period, after two years of listing, to dispose of their restricted shares.

In contrast to Resolution No. 1 (2007), which obligates newly listed companies to offer 30% of their capital for private subscription, No. 2 (2008) required that 30% of the company's capital be distributed among a number of shareholders specified by
the Market Committee. If this percentage is not available, the company must offer 30% of its capital for private subscription through a specialized company independent from the company seeking listing.

In summary, the listing requirements of the Official Market have been altered and modified frequently during a relatively short period of time. On some occasions, the capital requirement was increased, and on others it was reduced. In some cases, lockup restrictions were imposed, and in others there were no such requirements. The most volatile requirement concerned pre-listing profits. The pre-listing profit requirement started at 5% in Resolution No. 1 (1984), increased to 6% in Resolution No. 4 (1988), changed to zero in Resolution No. 1 (1993), and was reintroduced at 5% in Resolution No. 1 (1997). From 2004 until 2008, the pre-listing profit requirement remained stable at 7.5%, with the only change being to the base used for calculating the profit.

Table A.1 in Appendix A presents a timeline for the changes to listing requirements on the KSE for the period from 1997 to 2008. The next section discusses the accounting, auditing requirements and the development of the accounting profession in the Kuwaiti context.

# 2.7 ACCOUNTING, AUDITING REQUIREMENTS, AND THE ACCOUNTING PROFESSION IN KUWAIT

The financial reports prepared by listed companies on the KSE are an important means of communication for management because they supply vital information for many users and groups. This information is essential and strongly influences the decision-making behaviour of investors, investment analysts and portfolio managers, among others. In addition, the users need the information provided by annual and quarterly financial reports to evaluate the economic health of companies, gauge their future success, and evaluate their management and financial decisions (Al-Bassam 2006).

#### 2.7.1 Accounting and auditing requirements in Kuwait

#### 2.7.1.1 Financial reporting standards

Kuwait is considered a pioneer not only among the Gulf Co-Operation Council members (GCC)<sup>13</sup>, but also globally for its adoption of International Financial Reporting Standards (IFRS) in 1991<sup>14</sup>(Al-Shammari, Brown & Tarca 2007). Many researchers note that before Kuwait adopted IFRS (called International Accounting Standards [IAS] before June 2003), there was no single guide for accounting standards in Kuwait. This lack of uniform accounting standards made the comparability among companies' financial statements difficult (Elshamy & Al-Qenae 2005). The accounting standards used in Kuwait before it adopted the IFRS most frequently derived from the United States, members of the European Union, or some Arab countries (Elshamy & Al-Qenae 2005; Shuaib 1978, 1998).

Al-Bannay (2002) adds that, prior to Kuwait's adoption of IFRS, it was unknown which accounting standards were being used by Kuwaiti companies. The

<sup>&</sup>lt;sup>13</sup> Oman adopted IFRS in 1986 (Al-Shammari, Brown & Tarca 2007).

<sup>&</sup>lt;sup>14</sup>Australia adopted IFRS in 2005, the European Union 2005, Pakistan 2004, Turkey 2006, and Hong Kong 2005 (Jeanjean & Stolowy 2008).

accounting and disclosure practices chosen by companies varied widely, and the financial information disclosed was quite limited.

In 1990, the MoCI issued Ministerial Resolution No. 18, requiring all Kuwaiti companies, whatever their legal status, to adopt IFRS by January 1, 1991. Since then, the compliance of listing companies with IFRS has been monitored and checked by two agencies: the Control Department of the MoCI and the Surveillance Department of the KSE (Al-Bannay 2002; Al-Shammari, Brown & Tarca 2007; Alanezi 2006). The Control Department of the MoCI is responsible for monitoring companies to ascertain their compliance with the appropriate fiscal regulations. The department is also authorized to examine the financial statements of all companies, listed and non-listed, in order to verify compliance with IFRS (Al-Shammari, Brown & Tarca 2007).

Alanezi (2006) argues that meeting the Control Department's mandate to monitor, review and check the IFRS compliance of every company in Kuwait appears to be unworkable. He gives many reasons for this but highlights the insufficient professional qualifications and experience of the Control Department staff. Al-Shammari, Brown and Tarca (2007) agree that the department's limited monitoring capability, maximum workload and unqualified staff seriously hamper its efficiency.

The Surveillance Department of the KSE is also legally responsible for monitoring the compliance of listed companies with IFRS. Unlike the Control Department of the MoCI, the Surveillance Department staff of the KSE are technically qualified (Al-Shammari, Brown & Tarca 2007). They monitor the compliance of listed companies with IFRS and use a checklist prepared by Surveillance Department staff to ensure that all required financial disclosures are made (Al-Shammari, Brown & Tarca 2007).

Listed companies must submit their audited financial statements to the MoCI and the KSE within three months of the end of the financial year (Resolution No.16 1987). In addition, since January 1998, quarterly financial reports must also be filed to the above named authorities within 45 days of the quarter closing date (Al-Wazzan 2006).

In general, the MoCI and the KSE are considered separate agencies. Each has its own procedures to check compliance with IFRS; however, there is a lack of coordination between the two agencies and different enforcement mechanisms are applied (Al-Shammari, Brown & Tarca 2007).

#### 2.7.1.2 Auditing standards

Before February 2008, there was no uniform body of regulated or even generally accepted auditing standards used in Kuwait (Shuaib 1998). Most auditors voluntarily used the International Standards of Audit (ISAs), but there were no legal requirements to do so (Listing consultants Per. Comm 2009). Some accounting firms based their audits on U.S. and U.K. standards. Still others did not appear to follow any particular standard. In some cases, financial statements were certified without any effective auditing (Shuaib 1978, 1998). As a step toward enhancing the auditing profession by setting uniform auditing standards in Kuwait, Ministerial Resolution No. 101 was passed in 2008, requiring all companies to conduct their audit in accordance with ISAs.

#### 2.7.1.3 Auditors' practice

Kuwaiti Shareholding Companies (KSCs) and Kuwaiti Closed Shareholding Companies (KSCCs) must have an annual audit and submit their audited financial statements to the MoCI and to the KSE within three months of their year-end (Resolution No.16 1987). Article No. 161 (Law No. 15 1960) of the Company Commercial Law allows listed companies to be audited by one auditor. In a step forward, this law was changed in 1994. Under Law No. 51, all companies listed on the KSE must have at least two auditors from separate firms serving as joint auditors. These auditors must be independent of the company being audited and must be registered with the MoCI. This law also requires all banks and financial institutions to have two independent external auditors and be monitored by the CBK.

Law No. 5, issued in 1981, requires that audits in Kuwait be conducted by licensed auditors. Licensed auditors are accountants who have passed the auditing practice professional examination (prepared by the MoCI in collaboration with Kuwait University) and are registered with the registry of auditors of the MoCI. Before Law No. 5 was promulgated, auditors were not required to pass a standardized examination to become licensed; all that was needed was a bachelor's degree in business or, sometimes, only practical experience (Shuaib 1978).

The auditing profession in Kuwait was largely shaped by three laws and regulations: Law No. 15 (1960), Law No. 5 (1981), and Ministerial Resolution No. 101(2008). It should be noted here, however, that Law No. 6 (1962) was the first law enacted by the government to regulate the accounting profession. This law was replaced by law No. 5 (1981); therefore, it is not relevant to this research. Law No. 15 (1960) details the legal structure and procedure for the incorporation of different types of companies and briefly sketches their accounting and auditing requirements. This law is limited with respect to auditing practices. For instance, Law No. 15 (1960) mandates that Kuwaiti companies conduct an audit, specify some of the content of the auditor's report, and state that it is the auditor's responsibility to give his or her opinion on every matter related to the audit and report it to the general shareholders at the annual meeting (Shuaib 1978, 1998).

It should be noted that Article No. 161 of this law specifies that company shareholders have the right to appoint auditors and specify their fees; however, the common practice in Kuwait is for the shareholders to authorize the board of directors to select auditors and set their fees (Kuwait Transparency Association Report 2006). This practice hampers the independence of auditors as they are then biased toward the interests of the board of directors rather than the shareholders. As a result, this practice increases the likelihood that auditors will authorize financial statements that do not reflect the true position of the company; consequently, questions about auditor conflict of interest are not uncommon. The lack of auditor independence was highlighted by the Kuwaiti media as one cause that worsened the effect of the 2008 global financial crisis in Kuwait. As one Kuwaiti analyst put it, the 'financial crisis is seen everywhere but in the financial reports of the Kuwaiti companies' (2009a, p. 38). While the financial reports of Kuwaiti companies indicated positions of strength, the companies themselves were clearly under financial pressure.

Law No. 5, passed in 1981, regulates the practice of auditing in Kuwait. This law is considered key by the accounting and auditing profession because it addresses many concerns related to external auditors. These concerns include general requirements for registering and practising accounting in Kuwait, the rights and duties of a public auditor, and the penalties that auditors may incur when violating this law. Chapter 1 of Law No. 5 covers the conditions and procedures for auditor registration. The primary requirements to join the registry of auditors are a bachelor's degree in accountancy; passing the auditing practice professional examination; at least seven years of experience in auditing either banks, insurance, or finance companies, and at least five years of experience in auditing other companies; Kuwaiti nationality; and a good reputation.

Chapter 2 of Law No. 5 discusses auditors' rights and duties. For example, auditors are forbidden to undertake any additional profession that is incompatible with his/her auditing duties. Examples may include consultation that is not related to accounting, bookkeeping, and preparing financial statements; or advertising his/her services in a way that is incompatible with the ethics of the profession (Shuaib 1998). In addition, an auditor cannot also be a partner, administrator, employee or relative up to the fourth degree to anyone in the client's company.

Finally, Chapter 3 of Law No. 5 explains the penalties that auditors may face if they violate Law No. 5 (1981). These sanctions vary based on the nature of the auditor's offence. Sanctions begin with a warning, proceed to a prohibition from practising auditing for a specific period of time, and end with removing the auditor's name from the registry of auditors.

Ministerial Resolution No. 101, issued in 2008, requires all companies to conduct their audits in accordance with International Standards of Audit (ISAs). This resolution was clearly overdue when one considers that Resolution No. 18, mandating the use of IFRS, was issued in 1990. As discussed earlier, before Resolution No. 101 there was no single set of generally accepted auditing standards that auditors followed; auditors applied different standards taken from those of leading countries or in some cases essentially did not follow any standard (Shuaib 1998). Resolution No. 101 should eradicate heterogeneous auditing practices and enhance the quality of auditing services.

## 2.7.2 Accounting profession in Kuwait

The accounting profession in Kuwait is still in the early stages of development and is far from well-established (Shuaib 1998). In an attempt to raise Kuwaiti accounting standards, accountants established the Kuwait Accountants and Auditors Association (KAAA) in February 1973. The KAAA's mission is to develop a culture of expertise in accounting. To achieve this, the KAAA conducts studies, prepares research reports, provides consultations, promotes the exchange of experience, supports the development of members' expertise, widens the practical background of those working in the field of accounting, and helps regulate auditors' qualification exams (Kuwait Accountants and Auditors Association 2010a). By the end of 2009, the KAAA had 2,484 members (Kuwait Accountants and Auditors Association 2010b). The KAAA is a member of the International Federation of Accountants (IFAC), which is responsible for issuing international standards of audit.

Although, the KAAA is the only professional accounting association in Kuwait, it does not have the power to certify accountants and auditors or to set accounting and auditing standards (Al-Bannay 2002; Alanezi 2006; Shuaib 1998). The KAAA has been criticized by many professionals and academics in the accounting arena. For example, Shuaib (1998) emphasizes its inability to set

accounting standards, its inefficiency, and its slow progress as an accounting association.

To increase the effectiveness of the KAAA, Ministerial Resolution No. 291, which concerns the rules of ethical conduct for the auditing profession, was issued in 2006. Article No. 3 of this resolution charges the KAAA with monitoring the implementation of, and compliance with, ethical rules of conduct for accountants issued by the IFAC. It also gives the KAAA the right to investigate any violation of these rules of conduct and to report the complaint to the Minister of MoCI. Resolution No. 291 bolsters the power of the KAAA, thereby enhancing its ability to become an influential institution that supports the development of the accounting profession.

Although generally accepted accounting and auditing standards provide concepts, guidelines, and rules to maximize the usefulness of information in financial statements, these principles may not be correctly applied. The application of these principles may reflect attempts by companies to manipulate accounting figures to serve their own interests. The discretion involved in the application of accounting principles may be used at the expense of other stakeholders in the company—most notably the investors, creditors and traders in the financial market (Al-Bassam 2006).

There have been numerous incidents where KSE-listed companies 'bent' their application of required accounting principles to serve their own interests and not those of other company stakeholders, particularly for standards No. 39 (Financial Instruments: Recognition and Measurements), No. 40 (Investment Property), and No. 36 (the Impairment of Assets) (Al-Bassam 2006; Alanezi 2006). The IMF (2004) has highlighted the ambiguous and inadequate disclosure in financial statements prepared by some KSE-listed companies.

Researchers, analysts, financial reporters, academics and authors of specialized reports all agree that the accounting information provided by Kuwaiti firms should be strengthened by demanding more stringent professional training for accountants (Al-Bassam 2006; International Monetary Fund 2004). They question the usefulness of the accounting information that KSE-listed companies provide investors and traders. And they concur that the usefulness of this accounting information may be hindered by one or more of the following factors: insufficient information, unreliable information, and inadequate accounting expertise. The dominance of speculative activities on the KSE also reduces the importance of the accounting information used by investors (Al-Bassam 2006).

Developing higher-quality accounting information is not the only task facing the accounting profession. Increasing the level of corporate governance and intensity of internal controls could also improve such information. Research could play an indirect role in improving accounting information by employing scientific methods to develop new approaches to improving accounting information (Al-Bassam 2006).

## 2.8 DEFICIENCIES OF THE KSE

Maroon (2007) compares the listing requirements of the KSE with those of other Gulf Markets (including Dubai and Saudi Arabia) and concludes that the requirements for listing on the Kuwaiti market are the most difficult in the region. One of the reasons for this is the KSE's pre-listing profit requirement; other markets in the region do not have such a requirement. Although the KSE listing requirement

is tough, the large number of instances where these requirements are violated is considered a major issue that needs to be addressed (Kuwait Transparency Association Report 2006). Granting approval to new companies to list on the market is one of the powers of the Market Committee. Some companies have been listed without meeting the listing requirements. This damages the solidity, trustworthiness and strength of the KSE. In addition, it sheds doubt on the approval process of these companies and on the efficiency and experience of the Market Committee's staff. The listing of the Al-Deera Holding Company is a good example of such a listing violation. The legal entity of Al-Deera Holding Company was transferred into a shareholding company on June 8, 2005. On the same date, the company's capital was increased from KD 5 million to KD 25 million. On August 8, 2005, the company was listed on the KSE (KSE 2010b). Article No.4 of the listing requirements states that 'If the listing request was provided by a company which has effectively increased its capital, then a year has to be elapsed from the approval of the shareholders' general assembly of such increase' (Resolution No.3 2004) In practice, the listing of Al-Deera was completed and approved two months after its capital increase, which is a clear violation of the abovementioned article (Kuwait Transparency Association Report 2006, p. 13).

It is expected that a country like Kuwait that enjoys a high income level and huge oil profits will reserve funds to organize the capital market, particularly considering its key role in boosting the economy (Bouresli 2009). Before February 2010, however, Kuwait was one of the few remaining countries in the world without a comprehensive law organizing the stock market. The regulatory climate and framework for the KSE is generally inconsistent with the conditions needed to achieve the objectives and principles advocated by the International Organization of Securities Commission (International Monetary Fund 2004).

Since its inception, the KSE can only be described as unstable (Aldaihani & Aldeehani 2008). This is due to economic fluctuations and major financial and political factors that have affected the KSE. Examples include the financial crises in 1976, 1982 and 2008; oil price fluctuations; regional security threats; and the consequences of the Iraqi invasion in 1990. Al-Nefeesi (2008) argues that the KSE is now relatively mature due to its long history and the crises it has weathered; however, he adds that it still has more gaps and deficiencies than other emerging markets. The development of the KSE is hampered by the lack of an appropriate legal and institutional framework; and delays in the organization of the Kuwaiti market are not justified (Al-Nefeesi 2008).

Bley and Chen (2006) argue that in the past, stock markets in the Middle East have remained virtually invisible to global investors due to restrictions that these markets have imposed on foreigners and the lack of common accounting standards and business transparency, as well as economic and political uncertainty. Kuwait needs more foreign investment to expand and diversify its economic base.

Non-disclosure is considered a key KSE deficiency. The more financial disclosure companies provide, the more transparency there is for stakeholders. The KSE is suffering from the non-disclosure of vital financial information by companies. Any information that affects the financial position of a company must be disclosed through appropriate official and legal channels. Legal disputes must also be disclosed. Unfortunately, it has become standard practice for KSE regulators and other stakeholders to read such information in the newspapers first, before it is officially disclosed (Kuwait Transparency Association Report 2006). The only party

that truly suffers from such violations is the shareholders, who are far from corporate management. They receive vital financial information only after the share price has changed and deals have been completed by insiders (Al-Nefeesi 2008). One example of the above problem is the injunction that was issued against Mobile Telecommunication Company (MTC) (now Zain) on April 19, 2006 (Kuwait Transparency Association Report 2006, p. 13). By law, MTC should disclose information about the case and the ensuing legal action to KSE authorities. However, the company did not issue any statement to the KSE and, instead, concealed the lawsuit against it; therefore, the KSE did not announce the dispute. Investors were astonished when the verdict was published in newspapers on May 9, 2006. The KSE had not stopped the trading of MTC shares. All that was done was to initiate investigations into the matter and the reasons for MTC's non-disclosure. In the end, some insider parties benefited from information about the lawsuit by selling their MTC shares before the news was published—their profits came at the expense of the majority.

Market manipulation and insider trading is a serious problem on the KSE and both need to be explicitly prohibited (International Monetary Fund 2004). In Kuwait it is common practice for insiders at board of director meetings or among executive managers to share confidential information such as expected profits and dividends. Often, some of this information is leaked by board members. These board members are protected and cannot be held accountable for their leaks, although this information affects the price of shares as well as trading volumes (Kuwait Transparency Association Report 2006).

## 2.8.1 International assessments of the KSE made by IMF and the World Bank

The regulatory deficiencies of the KSE are not only attested to by internal parties, but also by international parties such as International Monetary Fund (IMF) and the Word Bank. Both organizations issued a special report after the assessment. Usually the assessment report results are revised with the official authorities to discuss the main findings and recommendations. Most of the time, new legislations and some modification to the existing laws are made directly after submitting the official assessment results to authorities (Bouresli 2009). Although the KSE officials had made some changes in 2005 after the official submission of the IMF and the Word Bank assessment results, these modification were insufficient and in need of major improvement (Bouresli 2009).

## 2.8.1.1 The IMF financial sector assessment program

The financial sector assessment program was based on the methodology developed by IOSCO to evaluate the implementation of each principle (International Monetary Fund 2004). The assessment focused on existing laws that regulate the KSE and on recording and documenting market functions; interviews were conducted with the KSE management, staff, legal experts, investors, and some government officials. The IMF program assessed Kuwait's observance of International Organization of Securities Commission (IOSCO) objectives and principles. The IOSCO is identified as the international standard-setter for securities markets, with a membership comprised of 90% of the world securities markets (International Organization of Securities Commissions 2010). It is worth mentioning that Kuwait is not a member of IOSCO. By distancing itself from the IOSCO global best practices, Kuwait lacks an independent oversight body. In addition, the organizers of the KSE are still applying old laws that are not up to the level required

for ISOCO membership (Bouresli 2009). The main findings of the assessment program relevant to this research were as follows (International Monetary Fund 2004):

- 1- KSE regulators and law enforcement agencies (the Market Committee, MoCI and CBK) have issued a large number of regulations in the past few years which are virtually impossible to track for a complete review. Although the KSE has developed a web site posting all rules, regulations, administrative decisions and guidelines, investors and other market participants cannot keep up with all the rules and regulations much less comply with them, because new rules and regulations are published briefly and are not explained clearly.
- 2- The lack of regulatory coordination has led to confusion and the neglect of responsibilities. Furthermore, the KSE and KCC are not subject to any kind of inspection by regulators.
- 3- From a legal viewpoint, the Market Committee is an independent agency, but in reality it is not. In particular, the minister of the MoCI serves as both its president and its chair on the board of directors; the director-general of the KSE servers as a vice president and can be removed; one member is from CBK, another from MoCI, and the majority of the rest of the members of the board of directors are appointed by the government. The administrative powers of the market institutions, namely the Market Committee, the KSE and the KCC, are inadequate. Inspections of the KCC by the Market Committee must be strengthened as the risks these institutions pose to the financial system are high. Furthermore, the Market committee and the KCC lack the power to effectively oversee key market institutions. Considerable thought must be given to supervising the clearing and settlement system and to recognizing the conflicts of interest that may arise as a result of the governance structure of the Market Committee, the KSE and the KCC.
- 4- Although there have been recent efforts from KSE officials to enhance market supervision, surveillance, inspection and investigation, the Market Committee and the KSE human resources need further strengthening to increase their effectiveness.
- 5- The KSE should be able to implement serious and strong sanctions, including levying fines, to enhance compliance to regulations.

## 2.8.1.2 The World Bank and the IMF Financial System Stability Assessment

A second report, the Financial System Stability Assessment, was made by the IMF and the World Bank, and was completed in January 2004 (World Bank & International Monetary Fund 2004). Its primary purpose was to aid KSE authorities in appraising the strengths, weaknesses and key development opportunities of the financial system. Their findings that relate to the scope of this research are as follows:

1. The Kuwaiti market lacks an appropriate legal and institutional framework, which has hindered the development of the market and placed

it in a weak position. The Market Committee is unable to successfully regulate and develop the market to ensure its effectiveness, equality and transparency.

- 2. Market manipulation and insider trading constitute serious deficiencies and need to be explicitly prohibited.
- 3. The inadequate and unclear procedures, assessments, investigations and surveillance powers of KSE regulating agencies are a major problem.

The IMF and World Bank teams suggested many changes that need to be made to bring the regulatory system of the KSE into greater conformity with international standards. First, the KSE needs to establish an accountable and legally liable authority with the complete power to control and supervise the securities market. Second, insider trading and market manipulation must be eradicated with regulations that are enforced by a system that can effectively perform inspections, investigations, and surveillance. Third, disclosure requirements should be imposed by regulators and auditors' compliance with internationally accepted accounting and auditing standards should be examined. Finally, an ongoing, long-term training program should be required for all regulators.

## 2.9 SUMMARY

This chapter has outlined the structure of the Kuwaiti economy, the development of the KSE, the major events that have affected the KSE, the government bodies that supervise and regulate the KSE, the accounting and auditing requirements for the KSE listed companies, the evolution of the KSE listing requirements, and the critique of the KSE institutional framework by both national and international parties.

An overview of accounting regulations has been provided in this chapter. The requirement for listed companies to retain two independent auditors is especially relevant to this research. This is because KSCCs pursuing listing on the KSE are expected to have a greater opportunity to manipulate earnings before listing when only one external auditor is in charge, compared to after listing when two external auditors are in charge. The unique combination of the pre-listing profit requirements and three-stage lockup regulations was also highlighted. This combination of the listing requirements make the Kuwaiti setting an excellent one for examining the earnings management behaviour issue.

The capital market in Kuwait is regulated and supervised by three enforcement bodies: the Market Committee (MC), the Ministry of Commerce and Industry (MCoI), and the Central Bank of Kuwait (CBK). A lack of regulatory coordination among these bodies has led to confusion and lack of responsibility. In summary, the KSE can only be described as unstable (Aldaihani & Aldeehani 2008). Much of this instability is due to the economic fluctuations and major financial and political factors that have affected the KSE. Furthermore, the development of the KSE has been hampered by the absence of a comprehensive, appropriate regulatory framework. National and international parties agree that many changes need to be made to bring this framework into greater conformity with international standards. After providing an overview of the institutional setting of Kuwait, especially as it pertains to the Kuwait Stock Exchange (KSE), the following chapter (Chapter 3) provides an in-depth analysis of the earnings management literature around share issue.

# 3.1 INTRODUCTION

Managers' discretionary behaviour is a topic that has been heavily investigated by capital-market researchers. Managers have opportunities and incentives to engage in earnings-management practice, both of which are thought to be especially strong around share issue. Opportunity is thought to exist because of the high degree of information asymmetry around share issue; due to this information asymmetry, managers have superior knowledge about the internal operation of the firm, its investment opportunities, and its true economic health, among other things (Cohen & Dean 2005; Leland & Pyle 1977; Scott 2009). Incentives are thought to exist for many reasons, including, according to Healy and Wahlen (1999), incentives concerning contracting, regulations and capital-markets. Capital-market incentives are considered the most significant for earnings management around share issue and so have been heavily tested by researchers.

The literature on earnings management around share issue provides decidedly mixed evidence of earnings management, ranging from very aggressive earnings management to no earnings management at all. One stream of studies suggests that earnings management is an opportunistic behaviour; these studies include Boubakri, Boyer and Ghalleb (2008), Healy and Wahlen (1999) and Jiraporn et.al (2008). The authors of these studies maintain that managers' decisions derive from an attempt to obtain personal private gain. Conversely, another stream of studies takes an informational perspective on earnings management; these include Subramanyam (1996), Watts and Zimmerman (1990), Holthausen (1990), Healy and Palepu (1993), Guay, Kothari and Watts (1996), and Lara, Osma and Neophytou (2009). These researchers argue that earnings management may be beneficial because it potentially enhances the information value of earnings.

Research that focuses on earnings management around listing and a firm's subsequent performance is the core of this literature review. In the following sections, a review of related research is provided; starting with an overview of the motivations of going public. Second, definitions of earnings management are presented. Third, a review of the mechanisms and incentives of earnings management are articulated, along with an evaluation of capital-market incentives. For the capital-market incentives, four major capital-market issues are discussed: pre-IPO earnings management; earnings management around lockups; earnings management and post-issue performance; and earnings management and auditor's reputation.

# 3.2 MOTIVATIONS FOR GOING PUBLIC

Going public is one of the most important events in a company's life (Aharony, Lin-Chan & Loeb 1993). The most common means for a private firm to go public is the IPO. An IPO occurs when a security is sold to the general public for the first time (Ritter 1998). Therefore, an IPO is the first opportunity for a company's entrepreneurs to realize the value of their ownership in their firm (DuCharme, Malatesta & Sefcik 2001).

Generally, there is little publicly-available information about companies going public at the time of an IPO. Therefore, a firm undergoing an IPO must issue a legal document called a prospectus that aims to inform investors about the financial status of the firm (Gounopoulos 2004). The prospectus is the only document that can be publicly distributed by issuers before going public. The prospectus includes information about the company and some accounting numbers, including financial statements (Nagata & Hachiya 2007).

Firms that choose an IPO must trade off the costs and benefits associated with the act of going public. Costs of IPOs may include fees and expenses paid for legal counsellors, auditors, and underwriters. Being a public company also means disclosing more information to investors and regulators and this could be considered a cost (Ritter & Welch 2002). Benefits of IPOs may include liquidity, capital expansion, diversification, and the facilitation of a takeover. Several assumptions have been advanced in the academic literature as to why companies may prefer to go public. Brau and Fawcett (2006), for example, contend that the primary reason companies go public is to raise capital to finance their investments. A second reason is to allow insiders to cash out, most likely at the highest price possible, and to diversify their portfolios. A third possible reason is that an IPO may facilitate a takeover of a company, creating a higher value (Ritter & Welch 2002).

#### 3.3 DEFINITION OF EARNINGS MANAGEMENT

Due to the unobservable nature and complexity of earnings management, there appears to be no universally accepted definition of the term in the literature (Armstrong, Foster & Taylor 2009). The most widely cited definitions of *earnings management* in the literature are offered by Shipper (1989) and Healy and Wahlen (1999). Shipper (1989, p. 92) defines earnings management as the 'Purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain'. Healy and Wahlen (1999, p. 368) define earnings management as follows:

Earnings management occurs when managers use judgment in the financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers.

Schipper's (1989) definition of earnings management emphasizes management's intent to obtain private gain, as opposed to a neutral participation. Schipper (1989) implies that any activity in which managers exercise influence over reported earnings to increase their compensation is considered earnings management. Healy and Wahlen's (1999) definition, on the other hand, focuses on the judgment managers use in financial reporting, which can be used wisely to create advantages for users of financial statements, or in such a way as to create disadvantages for users.

These definitions represent two common views of company management. The first view holds that management needs to exercise judgment in business operations and financial reporting since GAAP clearly requires management to make wise estimates and judgments. The advantages of wise judgments accrue when owners/managers select the appropriate financial reporting and accounting methods to demonstrate their firm's underlying economic performance and effectively present

information about that performance to users of financial statements. The International Accounting Standard Board (IASB) (2001, p. 92) clearly states that the objective of a financial report is to 'provide information about the financial position, performance and change in financial position of an entity that is useful to a wide range of users in making economic decisions'. The second view is known as that of opportunistic earnings management (Boubakri, Boyer & Ghalleb 2008; Healy & Wahlen 1999; Jiraporn et al. 2008). This view holds that managers base their judgments and decisions on whether they will result in personal private gain. Opportunistic earnings management occurs when owners/managers intentionally select financial reporting and accounting methods to either mislead stakeholders about the company's underlying economic performance or to influence contractual outcomes to their benefit (Healy & Wahlen 1999).

A number of studies such as Subramanyam (1996), Watts and Zimmerman (1990), Holthausen (1990), Healy and Palepu (1993), Guay, Kothari and Watts (1996), and Lara, Osma and Neophytou (2009) have argued that earnings management may be beneficial because it potentially enhances the information value of earnings. Scott (2009) called it 'good earnings management'. Managers may exercise good earnings management as a mechanism to reveal private information about a firm's future prospects to investors. Therefore, managers are using good earnings management as a signalling device to notify investors about the firm's willingness to make disclosures that reflect best accounting practices and increase the usefulness of financial statements (Jiraporn et al. 2008; Lara, Osma & Neophytou 2009; Miller 2009). Thus, this type of earnings management may not be harmful (Jiraporn et al. 2008).

Despite the empirical evidence of good earnings management, another stream of studies focus on opportunistic earnings management, which Scott (2009) called 'bad earnings management'. Managers engage in bad earnings-management behaviour to mislead potential investors and gain personal benefits. It should be noted here that most of the earnings-management literature focuses on opportunistic or bad earnings-management behaviour and incentives (Chan et al. 2008; DuCharme, Malatesta & Sefcik 2004; Qintao 2007).

#### 3.4 EARNINGS MANAGEMENT MECHANISMS

The earnings-management literature has focused mainly on three broad methods for managing earnings: (1) accruals management through changes in estimates and accounting policies; (2) real earnings management that directly affects cash flow (Roychowdhury, 2006) ; and (3) classification-shifting (McVay 2006). It can be implied from Healy and Wahlen's (1999) definition that firms may deliberately misreport their earnings by using the flexibility allowed under GAAP to change reported earnings without changing underlying (past) cash flows. Conversely, firms may engage in real earnings management by structuring economic events to change underlying cash flows (Mazzaque, Rahman & Salat 2006; Qintao 2007). Another potential earnings-management mechanism that has been recently investigated by researchers is that of shifting the classification of core expenses to special items. Before discussing earnings-management mechanisms, it is important to review the components of reported earnings and to look how the accruals system works in accounting.

The accounting earnings are an important element of financial reporting: the sum of the cash flow from operations and accruals (Roosenboom, Van der Goot & Mertens 2003). The income statement is the most important financial statement because it reveals the results of the business operation (Godfrey et al. 2006; Scott 2009). In accounting, the accrual method recognizes revenues and expenses at the time they are incurred, irrespective of when cash is received or paid. Revenues earned during a specific period are then matched with the expenses incurred in the corresponding period. The accrual system allows investors to assess the economic performance of a firm during a specific period, using revenue recognition and matching (Dechow & Skinner 2000). Constrained by accounting standards, there is no specific method to match cost with revenues in accounting; accounting professionals usually allow diverse techniques of accounting for the same item (Scott 2009).

#### 3.4.1 Accrual-based earnings management

Accounting practices allow managers considerable discretion in the financial information provided, especially in relation to accruals. Accrual-based earnings management refers to managers' opportunistic use of the flexibility allowed under GAAP to change reported earnings without any cash flow consequences. Since some accounting decisions involve accruals, accruals are a standard part of a firm's transactions and are likely to reverse over time. Accruals represent the differences between earnings and cash flows. To illustrate, accruals can be created by selling on credit because the sale is recognized along with a receivable. Then, a receivable disappears when cash is received (McVay 2006; Mohanram 2003). If a firm is aggressive with its accounting, it can borrow earnings from future periods, through the acceleration of revenues or deceleration of expenses to increase current earnings. Because of the reversing nature of accruals, in the future, earnings will be automatically lowered by the amount of earnings that was accelerated in the prior period. On the other hand, if a firm is conservative, it will save up earnings for the future (Mohanram 2003).

The most commonly studied method to test for earnings management is the accrual-based examination method. Scholars agree that accruals can be used as a device to convey private information that is easier to manipulate and has no direct cash flow consequences (Healy 1985; Healy & Palepu 1993; Jones 1991; McNichols & Wilson 1988; Rangan 1998; Roychowdhury 2006; Seger 2007; Spohr 2004; Teoh, Welch & Wong 1998b).

Roosenboom, Van der Goot and Mertens (2003) argue that IPO firms expect to exercise accounting discretion in the period preceding their IPO. Investors rely heavily on financial statement disclosures in pricing IPO shares, thus, they may resort to inflating earnings to achieve higher offer prices. This predicts that managers tend to use income-increasing accruals prior to going public to increase the offering proceeds. Due to the reversal nature of accruals, accruals will reverse; inflated earnings cannot be sustained in subsequent periods. Roosenboom, Van der Goot and Mertens (2003) also suggest that the reversal of accruals may hurt poorly performing firms. Increasing accruals in one period must be offset by lowering accruals in subsequent periods and poorly performing firms cannot continue to overstate earnings without being detected. Firms that are performing well, on the other hand, are likely to have an increase in their cash flow and in earnings growth in later periods, which can offset reversals resulting from previous earnings-management

decisions. Mohanram (2003) agrees with Roosenboom, Van der Goot and Mertens (2003) in terms that high-performance firms can be aggressive with their accounting and, at the same time, can get away with it during growth stages.

## 3.4.2 Real activities-based earnings management

A second way which earnings can be managed is through the manipulation of real activities during the year. Roychowdhury (2006, p. 3) defines this type of manipulation as:

a departure from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations. These departures do not necessarily contribute to firm value even though they enable managers to meet reporting goals.

Real activities-based earnings management is accomplished with a variety of operating decisions. For example, it can take place when firms offer price discounts and more flexible credit terms to customers to increase sales, especially toward the end of the year. Building up excess inventory to lower reported Cost of Goods Sold (COGS) is another example of real activities earnings management. Added to this, the opportunistic reduction of R&D expenditures to reduce reported expenses is also considered a real activities earnings-management practice (Dechow & Skinner 2000). Roychowdhury (2006) found supporting evidence of earnings management through real activities manipulation. He found that companies trying to avoid losses from overproduction report lower COGS and offer price discounts to temporarily increase sales, and reduce R&D expenditures to improve profit margins. Dechow and Skinner (2000) point out another range of activities that are also real-activities earnings-management methods. These include managers' alteration of shipment schedules and delaying maintenance expenditures to affect reported earnings. Another study by Bens, Nagar and Wong (2002) shows that firms partially financed stock repurchases by reducing R&D expenditures. Although previous researchers found evidence of real activities manipulation, Burghstahler and Dichev (1997) find limited evidence of firms that use real activities manipulations to meet the zeroearnings threshold. Roychowdhury (2006) argues that most of the evidence on real activities manipulation reflects the opportunistic reduction of R&D expenditures as an earnings management tool to reduce reported expenses with little evidence of real activities manipulation other than R&D reduction.

## 3.4.3 Classification-shifting-based earnings management

A third potential earnings-management tool is that of the classification shifting of core expenses to specific accounts within the income statement (McVay 2006; Mohanram 2003). Classification shifting is a fairly new but important area of research in the accounting and earning management literature. Recently, there has been growing interest in classification shifting research as an earnings-management tool (Athanasakou, Strong & Walker 2007).

Classification shifting is distinct from accrual management and the manipulation of real activities in several ways. Classification shifting does not change the bottom-line income in financial statements; thus, no accrual reversal consequences are applied. In addition, because bottom-line income does not change, managers can avoid scrutiny from auditors since auditors may spend less effort to verify the misclassified items (Nelson, Elliott & Tarpley 2002).

The earnings-management literature provides evidence supporting the classification-shifting phenomenon. Using U.S. data, McVay (2006) found opportunistic misclassification and vertical movement of expenses from core expenses (e.g., COGS, general, and administrative expenses) to special items. Additional evidence was found by Athanasakou, Strong and Walker (2009) using UK data. They found evidence of classification shifting of small core expenses to other non-recurring items in order to meet analysts' expectations.

Managers are motivated to manage earnings using classification shifting because shifting core expenses to special items will increase core earnings, while bottom-line net income remains unaffected. Financial-statement users will be interested mostly in monitoring the firm's core earnings rather than its bottom-line GAAP earnings. Therefore, managers are able to mislead users of financial statements with the vertical shifting of accounting numbers (Fan & Thomas 2010).

#### 3.4.4 Costs of earnings management

Although many studies support the use of methods discussed in this section as an earnings management tool, scholars also hypothesize that this manipulation is not cost-free. The cost of manipulating earnings differs across these methods. Starting with the accrual method, scholars believe that in addition to the cost of detection, this method of earnings management bears the cost of accrual reversal, since future earnings will suffer from past manipulation. According to Graham, Harvey and Rajgopal (2005), the aggressive manipulation of accruals is transparent in the year of change and more likely to raise the suspicion of auditors and the board of directors. In contrast to the cost of earnings-management manipulation via accruals, classification shifting bears a relatively low cost (McVay 2006). Classification shifting of expenses (from core expenses to special items) bears no accrual that reverses later, nor are there missing revenues since GAAP net income does not change (Nelson, Elliott & Tarpley 2002). As a result, auditors' examinations might be limited to verifying and detecting appropriate classifications.

Researchers suggest that manipulating earnings through real-activities manipulation will bear the highest cost of the three methods since future cash flow will be negatively affected by current actions to manipulate earnings (Lo 2008). Surprisingly, despite the high cost associated with real-activities manipulation, a survey conducted by Graham, Harvey and Rajgopal (2005) revealed that managers are more willing to engage in real-activities manipulations. In addition, the survey concluded that managers are reluctant to employ earnings management via accrual manipulation, although accrual manipulation is associated with lower costs than realactivities manipulations. According to Lo (2008) and Roychowdhury (2006), managers chose to accept the high costs associated with real-activities manipulations because accrual manipulation is subject to heavier scrutiny by auditors, regulators, and courts. Therefore, managers are willing to bear the high cost in order to get away with the manipulation and escape detection. Another convincing reason for managers' preference for real-activities-based earnings management relates to the risks involved. To reach specific earnings targets, managers can wait until the yearend to use accruals to manage earnings. Waiting until the year-end to manipulate earnings is risky because sometimes the earnings that need to be manipulated are greater than the actual accruals. As a result, managers intend to reduce the risk involved with manipulating accruals by manipulating earnings through real-activities earnings management (Fan & Thomas 2010).

#### 3.5 EARNINGS MANAGEMENT INCENTIVES

A range of incentives that explain why managers engage in opportunistic or bad earnings-management practices has been suggested in the literature. The most commonly mentioned incentives, supported by Healy and Wahlen (1999), are:

- 1- management-compensation contracts and debt covenant considerations
- 2- political and governmental regulatory considerations
- 3- capital-market considerations

#### 3.5.1 Management-compensation contracts and debt covenant considerations

Most companies pay managers a base salary, plus a bonus or incentive. The bonus is often based on two performance measures: reported earnings and share price (Scott 2009). It should be expected that managers are motivated to use earnings management to maximize their compensation, thereby maximizing the value of their wealth (Beneish 2001; Healy 1985; McKee 2005). Scott (2009, p. 356) noted that an executive compensation plan is an agency contract between a firm and its managers' that determines compensation according to one or more measures of manager performance.

While Healy's (1985) original contribution—supported by other studies such as Cheng and Warfield (2005), Bergstresser and Philippon (2006), Harris and Bromiley (2007), and Efendi, Srivastava and Swanson (2007)—found evidence that managers manipulate earnings to increase their wealth, studies by Baber, Kang and Liang (Baber, Kang & Liang 2009) and Armstrong, Jangolinzer and Larcker (2010) found no evidence that executive compensation incentives induce managers to manipulate accounting numbers for personal gain.<sup>15</sup>

Long-term lending contracts normally include covenants to protect lenders from manager actions that are in conflict with the lenders' best interest. Such manager actions may dilute the immunity of existing lenders by producing immoderate dividends, further borrowing, or permitting shareholders' equity to fall below specific levels (Scott 2009). Some studies have found that debt covenants are frequently violated (Roberts & Sufi 2009a, 2009b). Violation of covenants and debt agreements impose high penalty rates and costs. Therefore, not breaching the conditions of debt covenants is thought to provide an incentive for firms to engage in earnings-management practice to avoid the cost of breach of covenant (Beneish 2001; Scott 2009).

Earnings management in a debt-covenant context was investigated by many researchers and produced mixed results. Numerous studies have found that debt is positively related to income-increasing earnings management (Defond & Jiambalvo 1994; Klein 2002; Othman & Zeghal 2006). Defond and Jiambalvo (1994) investigated firms that violated their debt covenants and found evidence of the use discretionary accruals to accelerate earnings management one year prior to the covenant violation. Also, borrowing firms face more pressure to make accounting choices that show a convincing firm performance that falls above covenant thresholds (Nini, Smith & Sufi 2009). On the other hand, DeAngelo, DeAngelo and Skinner (1994) investigated whether firms close to breaching their lending covenants

<sup>&</sup>lt;sup>15</sup>See Armstrong, Jangolizer and Larcker (2010) for a review of literature on management compensation.

changed accounting methods. They found an insignificant level of earningsmanagement behaviour by these firms, which were instead reporting conservatively. Beatty, Weber and Yu (2008) also agree that borrowers prepare more conservative financial statements in order to satisfy lenders' requirements, making it difficult for managers to engage in earnings management. Other recent studies also support the conservatism findings e.g. Beatty,Weber and Yu (2008); Lee,Lev and Yeo (2007) and Zhong,Gribbin and Zheng (2007).

#### 3.5.2 Political and governmental regulatory considerations

Firms can also manage their reported earnings in response to political and governmental regulations. It can be beneficial for firms to appear more/less profitable in order to avoid government interference. Jones (1991), for example, tested the behaviour of earnings management during import-relief investigations by the U.S. International Trade Commission (ITC). She contends that managers understated earnings during the year of import-relief investigations in an attempt to benefit from import-relief regulations. In other recent evidence gathered from the Chinese market, Chen, Wang and Zhao (2009) examined earnings management through asset impairment reversal that was motivated by regulatory incentives.<sup>16</sup> They found that listed firms appeared to use impairment reversals of previously recognized asset impairments as the primary earnings-management tool to reduce or avoid delisting.

Although little attention has been given to the political motivation to manage earnings, it has been domenstrated that there is a strong incentive for firms to manage their earnings for political purposes (Verbruggen, Christaens & Milis 2008; Watts & Zimmerman 1978). A recent study by Ramanna and Roychowdhury (2010) investigated the discretionary accruals of firms with links to U.S. congressional candidates during the 2004 elections. They found that firms with a history of campaign contributions to congressional candidates engage in income-decreasing earnings management to manage the political cost.

## 3.5.3 Capital market considerations

This study focuses on capital market issues and, specifically, earningsmanagement incentives around listing. Although prior international research has discussed the practice of earnings management in the context of initial public offerings (IPOs) and seasoned equity offerings (SEOs), no known literature to date is available on earnings management by newly-listed KSCCs. Therefore, this study will use the findings and insights from previous international IPO and SEO research to glean insights about what might be expected in this setting of interest.

The concept of owners/managers using discretionary behaviour to opportunistically manage earnings around new issues (IPOs and SEOs) has received a great deal of attention by researchers. These studies conclude that earnings management around IPOs is both empirically detectable and economically significant (Cotten 2008, p. 118).

<sup>&</sup>lt;sup>16</sup>In 1998, listed companies in China were required to recognize asset impairments for accounts receivable, inventories, and investments. By 2001, the impairments regulation was extended to fixed assets, construction in progress, intangible assets, and entrusted loans (Chen, Wang & Zhao 2009).

Some researchers, and specifically Armstrong, Foster and Taylor (2009) and Dechow and Skinner (2000), argue that the IPO literature does not adequately examine managerial incentives for inflating earnings around IPO and suggest further investigation. Armstrong, Foster and Taylor (2009) discussed two possible motives for earnings management that are unique to the IPO setting. The first motive is managers' desire to diversify their holdings, since they have a large amount of their wealth locked in the firm's equity, prior to the IPO. The second motive is the managers' desire to increase the firm's stock price because managers' evaluations will be based on it.

Four major trajectories of earnings-management behaviour will be discussed in this section. These are (1) the manipulation of earnings in a pre-IPO year (Aharony, Lin-Chan & Loeb 1993; Friedlan 1994; Neill, Pourciau & Schaefer 1995); (2) the manipulation of earnings around lockup expiration (Brav & Gompers 2003; Huang & Lin 2007); (3) the post-issue performance of IPOs (DuCharme, Malatesta & Sefcik 2001, 2004; Qintao 2007; Roosenboom, Van der Goot & Mertens 2003; Teoh, Welch & Wong 1998b); and (4) earnings management and auditor's quality/reputation (Firth & Liau-Tan 1998; Jun Lin, Liu & Wang 2009).

#### 3.5.3.1 Pre-IPO earnings management

The accounting literature presents plenty of evidence that managers manipulate earnings around share issues, including initial public offerings (IPOs) and seasoned equity offerings (SEOs).

Although the assumption is that pre-IPO earnings management is well documented, a lack of a historical data on pre-IPO financial statements has precluded researchers from investigating this phenomenon (Armstrong, Foster & Taylor 2009). Teoh, Welch and Wong (1998b, p. 1936) commented that 'the lack of readily available machine-accessible data precludes us from doing a large sample study using strictly pre-IPO data to measure earnings management'. Therefore, most studies addressing pre-IPO earnings management are either based on small samples such as Ball and Shivakumar's (2008) study of the UK market that included 172 IPO firms; DuCharme, Malatesta and Sefcik (2001) who studied 171 U.S. IPO firms, and Venkararaman, Weber and Willenborg (2008) who studied 142 U.S. IPO firms; or assess the magnitude of earnings management in the IPO year, then infer results to the pre-IPO year (Armstrong, Foster & Taylor 2009). Examples of studies that used this approach are Teoh, Welch and Wong (1998b) in the U.S. market and Shen, Coakley and Instefjord (2008) in the Chinese market. In order to examine IPO earnings management, Teoh, Welch and Wong (1998b) used the information in the first public financial statement to include pre- and post-IPO data, then predicted that the first-year earnings management will infer the existence of pre-IPO earnings management stating that 'issuers who aggressively manage their pre-IPO earnings probably also manage their first post-IPO earnings' (Teoh, Welch & Wong 1998b, p. 1936). Consistent with Teoh, Welch and Wong (1998b), Shen, Coakley and Instefiord (2008, p. 3) argued that 'the data gleaned from the first public financial statement are still representative as the incentives to manage earnings are likely to persist after firms go public'.

Although investigating the existence of earnings management in the pre-IPO year is difficult, much literature is available that examines this phenomenon. Jain and Kini (1994) investigated the change in operating performance of 682 U.S. firms as they transitioned from private to public ownership through IPOs. They concluded

that IPO firms appear to engage in window dressing prior to the offerings in order to distinguish themselves as firms with good prospects. As a result, the pre-IPO high performance will lead to optimistic assessments of earnings growth that will not be sustainable.

Friedlan (1994) found in a study of 277 U.S. IPO firms that issuers make income-increasing discretionary accruals in the year before going public. More importantly, he determined that in most of the cases he investigated, accruals turned losses into profits. A subsequent study by Teoh, Welch and Wong (1998a) of 1,248 U.S. SEO firms found evidence that, due to the scarcity of public information about firms around the time of the issue, issuers take advantage of asymmetric information and are tempted to make unusually high income-increasing accounting adjustments in pre-issue financial statements.

DuCharme, Malatesta and Sefcik (2001), in their examination of 171 U.S. IPO manufacturing firms, found a negative relationship between abnormal accruals around the offer date (pre-IPO year and IPO year) and later stock returns. They concluded that aggressive pre-IPO earnings management not only increases IPO proceeds but also decreases investors' future returns. Another examination of the presence of pre-IPO earnings management is made by Spohr (2004). Spohr (2004) studied the presence of earnings management in 56 Finnish firms undergoing IPOs. He argued that firms held by individuals are weaker performers because they are more likely to manage earnings upward before the IPO than firms that are institutionally held. These results support the hypothesis that single-owner entrepreneurs are more likely to manage earnings upward before the IPO than firms that are institutionally owned.

In an attempt to establish whether Danish managers use discretionary accruals to reach their earnings forecast targets, a study was conducted by Gramlich and Sorensen (2004). This study examined earnings management in response to IPO-related earnings forecasts that were voluntarily released to investors by 58 Danish IPOs. The results indicated that Danish firms used discretionary accruals to narrow the gap between these forecasts and their reported earnings, regardless of whether pre-managed earnings were less or greater than the IPO forecast amount. Mashayekhi and Azar (2008) make a new contribution for the pre-IPO earnings management literature by testing 90 IPO Iranian firms. As they expected, their examination found evidence that Iranian IPO firms engage in accrual earnings management prior to going public and in the IPO year in order to reach their voluntary earnings forecast targets.

While several studies have documented the widespread use of opportunistic earnings management by managers in the pre-IPO period in order to inflate income prior to IPOs, other studies do not support this finding. These studies base their argument on the notion that managers of firms undergoing an IPO usually use more conservative financial accounting in their prospectuses and place a greater focus on the quality of financial reporting. Kimbro (2005), for example, studied 691 Chinese IPOs and found that firms undergoing an IPO are more conservative and use income-decreasing accruals in their prospectuses, suggesting that such firms might save income during the pre-IPO period to allow some accounting flexibility in future periods.

Seger (2007) and Qintao (2007) challenge the opportunistic perspective on earnings management and advocate the information perspective instead. Seger

(2007) studied a sample of 512 IPOs in 24 countries worldwide and found that IPO firms that are suspected of opportunistic behaviour represent only a small proportion (+/-10%) of the total sample. Venkataraman, Weber and Willenborg (2008) studied a sample of 142 U.S. IPOs to find that pre-IPO accruals are negative and less than post-IPO accruals, and that auditors are more conservative when auditing IPO financial statements and receive higher fees when auditing IPOs prospectuses. Roosenboom, Van der Goot and Mertens (2003) examined a sample of 64 Dutch IPOs and found no evidence of earnings-management practices in the year before the IPO.

Perhaps the most compelling evidence that firms are more conservative in their pre-IPO accounting numbers is introduced by Ball and Shivakumar (2008). They contend that, on average, UK firms report more conservatively just prior to the IPO. Therefore, companies become more conservative in their reporting to avoid legal penalties and do not engage in earnings-management practice. Ball and Shivakumar (2008) hypothesize that IPO firms do not support aggressive reporting and the absence of negative-IPO consequences substantiates their conjecture (Billings & Lewis 2009). Consistent with results obtained by Ball and Shivakumar (2008), Armstrong, Foster and Taylor (2009) found no evidence of earnings management in each of the two years prior to IPO. In addition, they questioned the validity of the well-documented negative correlation between earnings management through accruals manipulation on year-of-issue and post-IPO returns.

An investigation to link opportunistic behaviour by IPOs with subsequent penalties was conducted by Billings and Lewis (2009). Billings and Lewis (2009) argue that subsequent penalties of opportunistic earnings management may involve negative consequences for IPO firms, such as an increased incidence of shareholder litigation, higher lawsuit settlement amounts, and an increased risk of delisting. Out of the 1,668 U.S. IPO firms examined in their study, only 72 firms faced subsequent litigation related to their offerings and 34 firms afterward decreased the income reported at the IPO through the use of an earnings restatement. Although these findings provide more insights to contradict theories of the widespread use of opportunistic behaviour by IPOs, the findings do not reject the presence of opportunistic behaviour by these firms (Billings & Lewis 2009).

In light of the abovementioned studies, it can be concluded that the empirical findings of pre-IPO earnings management focus on two main competing views. The first view identifies and supports the existence of opportunistic earnings management by managers in the pre-IPO period, while the second view challenges the opportunistic perspective on earnings management in favour of the conservative behaviour and information perspective.

## 3.5.3.2 Earnings management around lockups

Lockup contracts are agreements that prevent the pre-IPO shareholders of listing firms from selling a specific percentage of their shares over a certain period following admission to the stock exchange and are frequently voluntary arrangements (Goergen, Renneboog & Khurshed 2006). In the United States, lockup contracts are called 'lockup agreements' and most use a 180-day period. In the United Kingdom, the contracts are called 'lock-in' agreements. Most lock-in agreements have no specific expiry date and tie the expiration to a specific event such as the issuance of financial statements or the firm's results, with an average duration of about 600 days (Espenlaub, Goergen & Khurshed 2001). Lockups are

voluntary contracts in some countries such as the United States and the United Kingdom, whereas in other countries such as France, Germany, Italy, Taiwan and Kuwait lockups are compulsory contracts, imposed by law, with standardised expiration periods (Goergen, Renneboog & Khurshed 2006; Huang & Lin 2007).

The literature reveals that lockup contracts assure the market that pre-IPO shareholders will not cash out immediately following the IPO and will therefore align their interests with those of outside investors (Chen, Fok & Lu 2011). Brav and Gompers (2003) provide three potential reasons for the existence and length of lockup periods. First, lockups may serve as a device to signal firm quality. Highvalue firms signal their quality by agreeing to longer lockups than lower-quality firms (Yung & Zender 2006). Therefore, this device is used by these firms to signal their quality and to either obtain a higher price at the IPO or obtain a better price at consequent seasoned equity offerings (Brav & Gompers 2003). Second, lockups may serve as a commitment solution to a moral hazard problem (Yung & Zender 2006). Lockups allow time for private information to become public. Therefore, lockups should work as a commitment device to alleviate information asymmetry around IPOs and protect potential investors from being misled by insiders' actions (Espenlaub, Goergen & Khurshed 2001; Goergen, Renneboog & Khurshed 2006). Finally, lockups may be used as a means for underwriters to extract additional fees from the IPO firm (Brav & Gompers 2003). Underwriters will generate additional income through underwriting the seasoned equity offerings (SEOs) of the IPO firms since under U.S. lockup contracts SEOs are allowed to be offered before the lockup expiration date (Goergen, Renneboog & Khurshed 2006).

Although Brav and Gompers (2003) were the first to offer an empirical analysis of the possible reasons for the inclusion of the lockup period in the IPO setting, most studies have found evidence to support the commitment hypothesis and the use of lockups as a solution to a moral hazard problem to mitigate the information asymmetries between insiders and shareholders (Brav & Gompers 2003; Chen, Fok & Lu 2011; Espenlaub, Goergen & Khurshed 2001). Empirical evidence for the signalling hypotheses is mixed. While Brav and Gompers (2003) find no support for the idea that insiders signal their quality by committing their shares for a longer period of time, Brau, Lambson and McQueen (2005) and Chen, Fok and Lu (2011) did find empirical support for the signalling hypothesis. The existing literature fails to find evidence of the use of lockups as a means for underwriters to extract additional fees from IPO firms (Krishnamurti & Thong 2008).

The implications of lockup agreements have only recently attracted academic and professional interest. Most studies (e.g.,Espenlaub, Goergen and Khurshed (2001); Field and Hanka (2001); Bradley, Jordanand Yi (2001); Brav and Gompers (2003); Goergen, Renneboogand Khurshed(2006)) in the lockup literature have addressed share-price reactions to IPO lockup expirations. A second stream of literature has focused on the effect of insider trading on market liquidity around lockup expirations. These studies include Cao, Field and Hanka (2004); Krishnamurti and Thong (2008); and Chen, Fok and Lu (2011). Very few studies have examined the correlation between lockups and earnings-management behaviour around expirations. One that did was a study of Taiwanese IPO firms. This study examined the earnings-management behaviour around lockup restriction expiration periods, specifically studying discretionary accruals during the period of issue and subsequent sales of restricted shares (Huang & Lin 2007). Huang and Lin (2007) found positive discretionary accruals around lockup periods and a positive relationship between the earnings-management practice in the first lockup period and subsequent sales of restricted shares. They also reported that an extensive use of earnings management during the IPO period might restrict the firm's ability to engage in such practice during later lockup expirations due to the reversal nature of accruals.

### 3.5.3.3 Earnings management and post-issue performance

Another phenomenon that has been investigated by numerous prior empirical studies is that of post-IPO performance. The studies addressing this issue have revealed that, on average, IPO firms underperform in the long run in most capital markets. They have based their claims on the notion that issuers boost earnings to inflate their stock prices by applying favourable accounting policies to manage earnings up. This leads to increased earnings during the IPO year. Naive investors may be systematically deceived by earnings management and will agree to pay a high offer price (Chahine 2004). Consequently, accrual reversals will eventually occur (Armstrong, Foster & Taylor 2009; Ball & Shivakumar 2008; Teoh, Welch & Wong 1998b).

Teoh, Welch and Wong (1998a, 1998b) explored the relationship between U.S. IPO firms' and SEO firms' earnings management and their respective subsequent stock returns. The authors documented a significant negative relationship between pre-offering discretionary accruals and post-offering stock returns. Rangan (1998) added further evidence to the literature on the poor post-IPO performance by examining 230 U.S. firms that showed a reversal of accruals around SEOs, specifically in the year following the offering. Consistent with Teoh, Welch and Wong (1998a, 1998b), Shivakumar (2000) in his study of management. Shivakumar (2000) found that accruals were abnormally high before equity offerings and predicted that subsequent declines in net income were likely.

A survey analysing various features of the European IPO market from 1995 to 2004 added additional empirical evidence to the IPO earnings-management literature and specifically to subsequent IPO underperformance. The survey covered 15 European IPO markets. Regardless of national differences between European markets, a substantial underperformance was found for the three post-IPO years in 87% of the European markets surveyed (Gajewski & Gresse 2006). Similarly, in their examination of the Chinese market, Aharony, Wang and Yuan (2005) found evidence of opportunistic managerial behaviour and underperformance in the post-IPO period.

A growing body of recent papers strengthen the evidence of the subsequent poor-performance phenomenon of IPOs and argue that in the issue year, discretionary accruals better predict returns because investors are fooled by earnings management at the time of the IPO, and that this (at least partially) explains the longrun underperformance of IPOs (Armstrong, Foster & Taylor 2009). Kao, Wu and Yang (2009) document that, on average, Chinese IPO firms report a decline in post-IPO profitability and poor long-run stock performance. Consistent with previous studies of the U.S. market, Cai, Liu and Mase (2008) report that Chinese IPOs underperform the market by up to 30% over the long run; and Ahmad-Zaluki, Campbell and Goodacre (2011) reported that Malaysian IPO companies engaged in aggressive earnings management during a period of economic crisis reported a significantly worse market-based performance than their more conservative counterparts during this period. Qintao (2007) found that discretionary accruals are highest in the IPO year and strongly predict a subsequent decline in IPO firms' operating performance. Although Qintao's (2007) results are consistent with the idea that IPO issuers advance accruals to increase reported earnings in the issuing year, his results are inconsistent with the managerial opportunism hypothesis and the notion of investors being systematically fooled by earnings management and window-dressing behaviour around issues.

The empirical literature on the poor performance of IPOs is fairly extensive and the subject of intense investigation and debate by researchers. Although much of the literature interprets high discretionary accruals in the year of the IPO as evidence of income-increasing earnings management, it provides inconclusive evidence of post-IPO performance. Among those leading the dispute over poor post-IPO performance are Ball and Shivakumar (2008), who compared two sets of financial data for the same firms and the same years from a sample of 393 IPO firms in the United Kingdom. Ball and Shivakumar (2008) found, in contrast to Teoh, Welch and Wong (1998b), that IPO firms report more conservatively. Ball and Shivakumar claim that the increase in discretionary accruals surrounding IPOs could be attributed to firms' use of their IPO proceeds to make appropriate changes to their working capital. In other words, the appearance of discretionary accruals around IPOs related to working capital changes is endogenous to an IPO and not related to earnings management (Ball & Shivakumar 2008; Seger 2007). Consistent with Ball and Shivakumar (2008), Armstrong, Foster and Taylor (2009) conjectured that the relationship between discretionary accruals in the year of the IPO and subsequent stock returns is not due to investors being misled by earnings management, but rather is an artefact of the correlation between cash flows and subsequent stock returns.

Although Ball and Shivakumar's (2008) argument is quite convincing, Chang et al. (2008) question the existence of the negative relationship between discretionary accruals and post-issue stock performance, which Ball and Shivakumar (2008) fail to explain. Chang et al. (2008) claim that if the increase in discretionary accruals is not an opportunistic behaviour that reflects earnings management, then a strong negative impact on future performance should not exist. Another argument is raised by Lo (2008, p. 357), who also questioned the findings of Ball and Shivakumar (2008). Lo stated that 'if we were to accept Ball and Shivakumar's critique that the discretionary accrual proxy does not represent earnings management, then we have an interesting question: What signal does the estimated discretionary accruals proxy, and why does this signal predict future returns?'.

The consistent findings of the post-issue performance anomaly evidence the presence of the negative association between earnings management around issues and subsequent firm performance. Those findings indicate that issuers with high levels of earnings management have the worst subsequent earnings and share price performance. Meanwhile, another group of studies emerged to question the existence of the negative relation between earnings management around issues and subsequent firm performance. Ball and Shivakumar (2008) and Armstrong, Foster and Taylor (2009) were the leaders of this group and argue that the discretionary accruals around issues are endogenous to the IPO and not related to earnings management.

#### 3.5.3.4 Earnings management and the auditor's quality/reputation

Financial statements are a primary source of information in capital markets. The existence of information asymmetry and managerial conflicts create a demand for the external audit of these financial statements (Jun Lin, Liu & Wang 2009). External audits provide an independent evaluation of the truthfulness and fairness of financial statements and lend credibility to the company's operations and financial position. The external auditor's certification adds credibility to the financial statements, as well as improving financial reporting (Jun Lin, Liu & Wang 2009; Teoh & Wong 1993). The higher the quality of an audit, presumably the stronger the assurance to investors that the financial reports are free from material misstatements (Barton 2005).

Audit quality is inherently unobservable (Firth & Liau-Tan 1998), difficult to measure (Jun Lin, Liu & Wang 2009), and multidimensional (Balsam, Krishnan & Yang 2003); thus, no single auditor characteristic can be used as a proxy for audit quality (Balsam, Krishnan & Yang 2003; Jun Lin, Liu & Wang 2009; Lennox 2005). A variety of audit quality proxies have been suggested in the literature. For example, researchers have used auditor reputation, brand name, size (Lennox 2005; Teoh & Wong 1993), industry specialization (Balsam, Krishnan & Yang 2003; Mascarenhas, Cahan & Naiker 2010), length of auditor-client relationship (tenure) (Boone, Khurana & Raman 2008; Chin-Ying, Chan-Jane & Yu-Chen 2008), and frequency of issuing unclean opinion reports (Francis & Krishnan 1999). Although many audit quality proxies have been employed in the literature, empirical research generally agrees that the size or the brand name of auditors is the most appropriate proxy for auditing quality (Jun Lin, Liu & Wang 2009). These studies provide strong evidence that the financial statements certified by large auditing firms (e.g. the 'big' 4/5/6) are more valued by investors and are of high quality (Clatworthy, Makepeace & Peel 2009; Clatworthy & Peel 2007; Lennox 1999, 2005; McMeeking, Peasnell & Pope 2007; Teoh & Wong 1993). From an investor's perspective, the larger (big 4/5/6) auditing firms have better financial resources, superior technology, and a reputation to safeguard that will ensure an independent quality audit service (Salhi & Mansoury 2009).

DeAngelo (1981) argued that larger (big 4/5/6) audit firms provide a highquality audit service because they are more independent and provide more credible and reliable financial statements. Confirming DeAngelo's (1981) view, Teoh and Wong (1993) find that larger audit firms (Big Eight) generate more precise earnings and their clients have significantly higher earnings response coefficients than those of non-big eight. In a study to examine the relation between audit quality and earnings management, Becker et al. (1998) found that clients of non-Big Six audit firms report discretionary accruals are higher than the discretionary accrual reported by clients of Big Six audit firms. Francis and Krishnan (1999) also observe a lower level of discretionary accruals among the Big Six clients. Other studies failed to find a relationship between audit quality proxied by big 4/5/6 audit firms and discretionary accruals (earnings management). Examples of these studies are Jeong and Rho (2004) in the Korean market; Lin, Li and Yang (2006) in the U.S. market; and Piot and Janin (2007) in the French market.

Researchers agree that earnings-management behaviour impairs the credibility of accounting numbers and seriously undermines the value of financial statements. This creates a demand for external auditors of high quality, strong reputation, or large size to certify and add credibility to financial statements. Since these firms have established reputations to protect, as well as higher training costs, better research facilities and superior technology—and also higher potential losses in case of litigation—they usually charge significantly higher fees (Clatworthy, Makepeace & Peel 2009; Clatworthy & Peel 2007; Lennox 1999, 2005; McMeeking, Peasnell & Pope 2007). A higher fee requirement can convey higher audit quality (Lin & Hwang 2010). However, some researchers, such as Frankel, Johnson and Nelson (2002) and Li and Lin (2005), argue that high fees paid to auditors increase the economic bond between auditors and their clients and thus impair auditors' independence, resulting in poor quality audits and more earnings management. While these studies provide evidence of impaired auditor independence from higher auditing fees, other studies have been less successful in finding evidence to support this claim. For example, Chung and Kallapur (2003) failed to find a significant relationship between earnings management and audit fees. In addition, Raghunandan, Read and Whisenant (2003) could not find support for the claim that the total fees inappropriately influence audited financial statements.

#### 3.6 SUMMARY

Earnings management is widely understood as the process by which financial information is manipulated to present the financial position and performance of a company in a way that does not reflect the true position and performance of the firm (Armstrong, Foster & Taylor 2009; Healy & Wahlen 1999).

This chapter has summarized prior research that relates to the overall topic of this dissertation. It provides divergent views and evidence on earnings-management behaviour around share issues. Managers' discretionary behaviour is one of the areas of capital markets that has been heavily investigated. The majority of the earnings-management literature has focused on opportunistic or bad earnings-management incentives (Chan et al. 2008; DuCharme, Malatesta & Sefcik 2004; Qintao 2007), despite empirical evidence of good earnings management.

Earnings-management literature offers empirical evidence that around the time new securities are offered to the public, issuers have a strong incentive to inflate company earnings (Cotten 2008; Dechow & Skinner 2000; Teoh, Welch & Wong 1998a). Issuers do not need to violate GAAP to inflate earnings; they need only, for example, advance recognition of revenues and/or to delay the recognition of expenses. One of the topics most heavily investigated by researchers is the capital market incentives for earnings management.

Scholars have also investigated the phenomenon documented in the IPO literature of a negative association between earnings management and post-IPO underperformance. Studies addressing this issue have revealed that, on average, IPO firms underperform in the long run in most capital markets. They base their claim on the notion that issuers boost earnings to inflate their stock prices by managing earnings. Investors may be systematically deceived by earnings management and will agree to pay a high offer price (Armstrong, Foster & Taylor 2009; Chahine 2004; Teoh, Welch & Wong 1998b). In contrast to studies that support the negative association between earnings management and subsequent firm underperformance, other scholars such as Ball and Shivakumar (2008) and Chang et al. (2008) question the validity of this association.

Although manipulating earnings might seem an easy option for an issuer, in fact it is quite risky. Issuers may choose not to manage earnings due to the substantial costs associated with such manipulation (DuCharme, Malatesta & Sefcik 2001; Qintao 2007). These costs can range from severe accrual reversal; the suspicion of auditors and boards of directors; and litigation.

The majority of international studies reviewed in this chapter were conducted in developed markets. They discuss the practice of earnings management in the context of initial public offerings (IPOs) and seasoned equity offerings (SEOs). In contrast, this research is based on the analysis of earnings management behaviour related to closed shareholding companies around listing. These represent 90% of companies listed on the KSE in the emerging market of Kuwait. Therefore, the investigation in this study is undertaken in a setting that has not been examined by previous literature. This provides an opportunity for research since no known literature to date is available on earnings management by newly-listed KSCCs. The next chapter pursues this further, developing the theoretical framework and the research hypotheses to address the study's research objectives and questions.

# 4.1 INTRODUCTION

This chapter discusses the theoretical approach used in this thesis to analyse earnings management behaviour around listing and to develop the hypotheses to be tested. There is no one theory that adequately captures and explains all earningsmanagement behaviour around listing. Therefore, analysis of companies' earnings management around listing is examined in the context of two theories offered in the relevant literature. These are signalling theory and agency theory. Both of these theories address management incentives in the context of information asymmetry.

According to Scott (2009), a market characterized by information asymmetry occurs when one type of market participant knows something about the asset being traded that another type of participant does not know. The IPO environment is usually characterized by information asymmetry wherein insiders know more than outsiders about the internal operation of the firm, its investment opportunities, and its true economic health, among other things (Cohen & Dean 2005; Leland & Pyle 1977; Scott 2009). The sources of information about IPOs that investors can use to evaluate companies are fairly limited. Issuers, on the other hand, possess their firms' private information, including potential future cash flow and investment opportunities (Nagata & Hachiya 2007). Leland and Pyle (1977) recognize that IPOs are often associated with a high level of information asymmetry. To address this asymmetry, IPO issuers publish a prospectus that usually contains several financial statements and other historical data prior to listing.

The unequal distribution of information in the IPO setting creates an opportunity for insiders to engage in earnings management (Spohr 2004). In order to maximize their wealth, insiders may take advantage of information asymmetry to serve their own interests. This may take the form of an optimistic bias in publicly released company information or delaying or withholding the release of negative company information (Cohen & Dean 2005; Scott 2009).

# 4.2 SIGNALLING THEORY

Signalling theory asserts that a signal is an action taken by a high-quality firm that would be irrational if the firm were low quality (Scott 2009). There are two requisite properties of signalling (Daily et al. 2003): (1) the signal must be observable and known beforehand, and (2) the signal must be costly to imitate. Although signalling theory is derived from labour market research (Spence 1973), signalling is a phenomenon common to any market with information asymmetry. Signalling theory contends that IPO issuers are more informed than potential investors. In IPO markets, issuers, unlike investors, are fully knowledgeable about the quality and the expected performance of their firms (Morris 1987; Scott 2009; Spence 1973).

Signalling research around IPOs continues to be an important component of the IPO literature (Brau & Fawcett 2006; Leland & Pyle 1977) and many signals have been suggested. The majority of studies that address this issue selected and studied

one credible signal used to convey firm quality. Credible signals proposed in the IPO literature include reported earnings (earnings management), for example, Brau and Fawcett (2006), Qintao (2007), McKee (2005), and Scott (2009); percentage of ownership retained, for example ,Qintao (2007), Fayoumi,Abuzayed and Alexander (2010), Li and McConomy (2004); length of lockup period, for example, Brau Lambson and McQueen (2005), Brav and Gompers (2003),Yung and Zender(2006); and underwriter reputation/auditor quality, for example, Chang et al (2008) and Lee, Lev and Yeo (2007).

In 2006, Brau and Fawcett published the results of their survey of 336 chief financial officers (CFOs) of firms that (1) successfully completed IPOs, (2) began the IPO process but chose to withdraw, or (3) were large enough to go public but had not yet attempted an IPO. They found that the strongest signal firms used around the IPO was to highlight strong historical earnings. Investors rely heavily on the prospectuses to evaluate new listing firms due to the lack of other sources of information. Issuers have strong incentives to disclose favourable accounting information allowed by the accrual accounting system to influence investors' perceptions of the firm's value. Owing to asymmetric information surrounding IPOs, Qintao (2007, p. 30) argues that 'to achieve separation, high-quality firms have an incentive to overstate earnings to a level that is costly for a lower type to mimic'.

The second strongest signal was to hire an underwriter with a good reputation. The third strongest signal was to commit to a long-term lockup. The survey also found some negative signals such as selling a large portion of the firm, which would raise the spectre of an accelerated cash out by insiders. Studies such as those by Leland and Pyle (1977), Brav and Gompers (2003), and Chih-Jen (2007) matched Brau and Fawcett's (2003) finding that lockups serve as a device to distinguish high-quality firms from low-quality firms. Insiders agree to lockup their shares for a longer-than-usual period of time to signal their firm's high quality and to help overcome information asymmetry.

Other studies, however, examine the choice of using multiple signals that can be employed as a complement or as a substitue for one another to transmit private information to investors about firm value and quality (Chang et al. 2008). For example, Datar, Felthman and Huges (1991) demonstrated that enterpreneurs can jointly use retained ownership and auditor quality signals to signal IPO value. Another study by (Copley & Douthett 2002) also suggests that issuers use audit quality as an alternative to ownership retention by choosing a high-quality auditor with a lower level of retained ownership. Confirming the findings of Datar, Felthman and Hughes (1991), a subsequent study conducted by Copley and Douthett (2002) foundthat auditor quality and direct disclosure are substitute signals for ownership retention that can be used jointly to minimize the cost tothe issuer. Another study conducted by Li and McConomy (2004) in the Canadian market advocates the use of multiple signals as complements. Li and McConomy (2004) find that retained ownership and provision of management earnings forecasts are credible signals that jointly affect Canadian IPO valuations.

Qintao (2007) established that entrenpreneurs can combine ownership retention and reported earnings (earnings management) signals to achieve separation and to minimize total signalling cost in his sample of U.S. issuers. Qintao (2007) advocates the informational prospects of earnings management where high-quality issuers intentionally overstate earnings via earning management to achieve separation; thus, detering low-quality issuers from mimicking them. Having discussed signalling theory and with respect to the Kuwaiti market, two signals are likely to be used by KSCC issuers to distinguish themselves; (1) reported earnings and (2) auditor quality/reputation. It is expected that KSCC issuers use the prelisting earnings to signal the firms's quality. The income reported on the KSCC prospectuse functions as a signal to build investor confidence and therby obtain a higher price for their stock. Given that all KSCCs pursuing listing on the KSE are subject to a three-stage lockup period, listing KSCCs lose their opportunity to use the lockup restriction as a positive signalling device because the law applies to all firms. Therefore, high-quality firms will need to look for other signals to distinguish themselves from other firms. Therefore, issuers are likely to use inflated earnings during lockup exipiration periods as a signal of firm quality in order to time their exit strategy and maximize their personal wealth by selling their restricted shares. In addition, issuers may signal the high quality of their firms by employing an auditor with an established name and a strong reputation. Reputable auditors are expected to perform higher quality audits that results in more accurate financial statements.

#### 4.3 AGENCY THEORY

One leading explanation for earnings management around listing is that of agency theory, first proposed by Jensen and Meckling (1976). Agency theory has been widely used by accounting scholars in the last thirty years and is one of the most important paradigms in the study of accounting (Lambert 2001).<sup>17</sup> According to this theory, an agency relationship occurs when there is a contract between two parties, the principal and the agent, and the principal has engaged the agent to perform a service. The principal's task is to provide capital, to bear risk, and to delegate decision-making authority to the agent. The agent's task is to act on the principal's behalf and to bear risk (Lambert 2001).

#### 4.3.1 Managerial opportunism

Prior empirical studies on earnings management around IPOs found that managers often opportunistically inflate their company's earnings in order to issue stock at artificially high prices (Loughran & Ritter 1995; Qintao 2007). According to managerial opportunism, investors are deceived by earnings management before IPOs because it promotes overly optimistic expectations for the company's future earnings (DuCharme, Malatesta & Sefcik 2004; Qintao 2007). Loughran and Ritter (1995), in particular, argue that the long-run underperformance of IPO stock is evidence of earnings management. Firms using earnings management attain higher prices for their stocks than they might otherwise, but such firms' subsequent earnings also tend to be disappointing (DuCharme, Malatesta & Sefcik 2004; Teoh, Welch & Wong 1998a, 1998b).

In their often-cited work, Teoh, Welch and Wong (1998a, 1998b) studied earnings management in the highly regulated U.S. market and found a negative correlation between inflated accruals during firms' issuing periods and their subsequent stock returns. These studies and others propose that investors are misled by earnings management before equity offerings in the U.S. market. Managerial

<sup>&</sup>lt;sup>17</sup>Recent studies that apply agency theory to earnings management include Bruton, Chahine and Filatotchev (2009); Jiraporn et al. (2008); Bedardet, Coulombe and Courteau (2008) and Prior, Surroca and Tribo(2008).

opportunism would therefore be even more likely to exist in less-regulated markets such as Kuwait's (Bouresli 2009; International Monetary Fund 2005).

### 4.3.2 Shareholder–Management conflict

Due to information asymmetry during IPOs, managers tend to operate in their own self-interest rather than in the best interests of shareholders. Managers generally know their firm's real underlying economic value far better than shareholders. The relationship between management and shareholders is considered a model of a pure agency relationship (Jensen & Meckling 1976, p. 6). Agency theory assumes that both the principal/shareholders and the agent/management are utility maximisers and that this creates a conflict of interest between the two parties (Eisenhardt 1989; Jensen & Meckling 1976). This conflict can best be seen when management wants to maximize its own utility in a way that is not in the best interest of shareholders.

Conflicts of interest between the principal and the agent introduce various costs that are addressed in the agency theory literature. Researchers in the IPO and earnings-management area have recognized two distinct types of agency costs: (1) adverse selection and (2) moral hazard (Bruton, Chahine & Filatotchev 2009; Eisenhardt 1989; Godfrey et al. 2006; Yan & Cai 2003).

## 4.3.3 Adverse selection cost

An adverse selection cost arises when the agent has private information about a firm that it chooses not to reveal to the principal. The principal at this stage cannot know whether the agent's actions will be in the principal's best interest. This information asymmetry adversely affects the principal's decision, which is based on data provided by the agent (Bruton, Chahine & Filatotchev 2009). Scott (2009, p. 13) states that "adverse selection occurs when one or more parties to a business transaction, or potential transaction, have an information advantage over other parties".

With regard to the adverse selection problem and its relation to this research, the problem of adverse selection in the KSCCs is caused by an information asymmetry between the existing shareholders and the new investors before and/or after their contract relationship is initiated (Sung 2005) During the KSE listing process, the KSCCs agent/existing shareholders may choose not to reveal all of the information about the firm to the public. Existing shareholders that are seeking personal financial gains may disclose financial statements that misrepresent their firm's economic performance. Consequently, investors who are misled by the reported earnings are less able to make informed decisions.

## 4.3.4 Moral hazard cost

Moral hazard occurs any time the agent shirks his or her duties and does not act in the best interest of the principal (Bruton, Chahine & Filatotchev 2009). During an IPO, this expected lack of effort on the part of the agent creates a moral hazard cost because the agent will not have an equal incentive to achieve maximum efficiency for either the principal or for the firm as for himself (Bruton, Chahine & Filatotchev 2009; Eisenhardt 1989). Scott (2009, p. 14) states that a 'moral hazard exists when one or more parties to a business transaction, or potential transaction, can observe their actions in fulfilment of the transaction but other parties cannot'.

For KSCCs, the moral hazard problem is expected to occur after the existing shareholders' sell their strategic shares for the first time. KSE rules allow strategic

shareholders to liquidate half of their restricted after one year of listing. Although the moral hazard problem is expected to arise after the first expiration date of the lockup restriction, an important point that must be stressed is that the strategic shareholders at this time still have 50% of their strategic shares (i.e. 12.5% of total capital) locked up at the KSE. Therefore, it is indeed questionable whether the strategic shareholders would actually shirk their duties and not act in the best interest of the principal.

## 4.4 HYPOTHESES DEVELOPMENT

Prior researchers have offered numerous hypotheses or predictions about earnings management around IPOs and its expected outcomes, many of which were discussed in the literature review. In this study, different hypotheses have been developed, based on the formulated theories discussed earlier in this chapter. These hypotheses are discussed in the following sections.

## 4.4.1 Earnings management before listing

Applying the agency theory framework to this research, an agency relationship exists between the agent who represents KSCCs' existing shareholders or 'insiders', and the principal who represents future investors. According to agency theory, there are three strong incentives for KSCC insiders to manage their companies' earnings upward prior to listing. The first incentive is to meet the KSE listing requirements. The second incentive is to maximize their opportunity to sell shares to the public at the highest possible price. The third incentive is to exploit the less onerous oneauditor requirement before listing as opposed to the heavier two-auditor requirement after listing.

One KSE listing requirement (discussed in Chapter 2) mandates that all companies pursuing listing must achieve a minimum profit level for at least two years prior to listing. KSCCs choosing to list must also prepare a prospectus that discloses all the information investors need. The prospectus, comprised mostly of three pre-issue audited financial statements and a short history of the issuing firm, is the only document distributed by KSCC issuers before going public (KSE 2010c). Although the financial statements included in the prospectus must be audited by an external auditor to verify compliance with accounting and auditing standards, prior studies in other markets have shown these statements nonetheless show earnings manipulation and an optimistic company bias (Ang & Brau 2002; Katz 2009).

An IPO represents the first opportunity for a private firm's shareholders to sell their shares to the public (Kim & Park 2005). Existing shareholders want to sell a proportion of their company's shares to the public at the highest possible price; hence, it is in their interest to manage company earnings up as high as possible before listing.

Another factor driving opportunistic behaviour among listing KSCCs is that in Kuwait, as in the United Kingdom, regulations for financial reporting for private companies are somewhat less restrictive than those for public companies (Ball & Shivakumar 2005). Kuwait's Ministerial Resolution No. 18 of 1990 requires private and public companies to adopt IFRS when preparing financial statements. Both types of companies are also required to file audited annual financial statements. Listed companies, however, are subject to greater scrutiny because under Law No. 51 (as discussed in Chapter 2) these companies must have at least two auditors from

separate firms serve as joint auditors. Therefore, it is likely that public companies in Kuwait will be associated with higher-quality financial reports than will private companies. In the United Kingdom and Europe, among countries with stronger regulations for public firms, studies have found that public firms' financials are generally higher quality than private firms' financials. For example, Ball and Shivakumar (2005) report that private-firm financials in the United Kingdom are generally of lower quality than public firm financials of firms of equivalent size and industry.

The requirement for two external auditors in Kuwait implies greater scrutiny, which may represent a deterrent against earnings manipulation after listing. Compared to private companies, public companies in Europe are likely to be associated with higher reporting quality (Burghstahler, Hail & Leuz 2006). In Kuwait, the heavier post-listing financial regulations should strengthen the association of higher quality financial reporting with public firms. Based on this argument, there is more opportunity for the KSCCs going public to manage their earnings upward before listing than there is after listing.

A convincing counter-argument is raised by Venkataraman, Weber and Willenborg (2008). They claim that auditors are more conservative in auditing IPO prospectuses in order to avoid potential legal liability, which results in less earnings management. This argument, however, is unlikely to hold in the Kuwaiti setting for the following reasons: First, the KSE requires that a KSCC prospectus include full sets of financial statements, duly reviewed by an external auditor, for the past three years. KSCCs applying for listing may also appoint a consultant who is responsible for filing and processing the firm's legal documents and preparing the prospectus. The consultant is not responsible for re-auditing the financial statements included in the prospectus. Thus, the consultant has neither the legal responsibility nor the authority to re-audit the financial statements, which have already been verified by previous auditors. Second, Venkataraman, Weber and Willenborg's (2008) claim is based on the legal liability expected by auditors in higher-litigation regimes such as the United States. It has been shown that Kuwaiti regulators have inadequate judiciary powers (Alanezi 2006). Therefore, it is expected that auditors in Kuwait will not consider legal liability a major risk when conducting their audits.

Institutional incentives and opportunistic earnings management before listing combine to create an adverse selection cost. During the KSE listing process, KSCC insiders seeking personal financial gain would prefer keeping some of the company's information from the public. In order to make the firm appear more promising to potential investors, existing shareholders are likely to misrepresent their firm's economic performance. Consequently, potential investors who are misled by such reported earnings are prevented from making well-informed decisions (Prior, Surroca & Tribo 2008). As a result, such investors will optimistically overestimate the KSCCs' values and accept higher stock prices than they would otherwise.

Conversely, some researchers argue that managing pre-listing earnings upward can be viewed as a positive signal. Brau and Fawcett (2006), Qintao (2007), McKee (2005) and Scott (2009), for example, note that increased earnings are sometimes viewed by investors as a positive signal of the firm's high quality and value, while decreased earnings can be viewed by investors as a negative signal.

As discussed in Chapter 3, many signals were proposed and examined by IPO studies as indicators by high-quality firms to distinguish themselves from low-quality

firms. The most notable signals proposed by researchers are reported earnings (earnings management), percentage of ownership retained, length of lockup period, and underwriter reputation or auditor quality. With respect to the Kuwaiti market, two signals will be investigated in this research; (1) reported earnings (earnings management) and (2) auditor quality/reputation<sup>18</sup>. No data are available to test the percentage of ownership retention. In addition, lockup periods cannot be used as a signal in the Kuwaiti setting because lockup periods with standard expiration dates are imposed by law for all KSCCs.

There are no relevant studies available that directly examine the potential signals that might be used around share issue in the Kuwaiti market. However, the following studies of the Kuwaiti market are indirectly related to the signalling issue and will be reviewed to glean insight into the reported-earnings signalling hypothesis.

Al-Qenae, Li and Wearing (2002), in their study of the correlation between company earnings and stock prices on the KSE, found evidence that Kuwaiti investors consider earnings in determining share prices. They also found that the market responds quickly to new information and anticipates earnings. Consistent with these findings, Elshamy and Al-Qenae (2005) inspected the value-relevance of earnings and book values on the KSE and concluded that earnings and book values, jointly and individually, have had a significant effect on securities prices on the KSE over a 20-year period. Based on the findings of both Al-Qenae, Li and Wearing (2002) and Elshamy and Al-Qenae (2005), it is reasonable to expect that KSCC issuers could use pre-listing earnings to signal a firm's quality. Therefore, earnings can be viewed as a signalling device used by KSCCs to achieve separation, as suggested by (Qintao 2007).

The above arguments deriving from agency and signalling theories lead to the following hypothesis:

#### H1a: KSE-listing firms exhibit positive earnings management in the prelisting financial year.

H1b: KSE-listing firms exhibit greater positive earnings management in the pre-listing financial year than in the listing year.

#### 4.4.2 Pre-listing year earning management and profit requirement

An interesting institutional feature of the KSE is the pre-listing profit requirement, which remained at 5% from 1997 to 2004. As noted in Chapter 2, Resolution No. 3 (2004) increased the pre-listing profit requirement to a minimum average of 7.5% of its paid-in capital. Due to this substantial change, firms that listed on the KSE from 2004 through to 2007 are expected to have a greater incentive to inflate their earnings in the pre-listing year than firms listed before 2004 due to the new listing requirement that minimum earnings increased by 2.5% over 2004 earning levels. Based on the Thus, the next hypothesis is as follows:

<sup>&</sup>lt;sup>18</sup>Underwriters are not involved in the listing process for the KSCCs, thus, underwriter reputation cannot be used as a signal device by the KSCCs. On the other hand, KSCCs may have the option to employ a listing consultant. The consultant is responsible for filing the company's legal documents, reviews the financial status of the company and to finalize the prospectus. Only 34 prospectuses were collected of a total sample of 80 KSCCs. For this reason, using a listing consultant to signal the quality of the KSCCs cannot also be used. (Details about data collection process and sample firms are discussed in chapter 6).

H2: Relative to firms listing before the profit-requirement change, firms listing following the change (from 2004 through to 2007) exhibit higher positive earnings management in the pre-listing financial year.

#### 4.4.3 Pre-listing year earnings management and auditor reputation

In addition to the pre-listing-profits signal, another positive signal that is widely posited is audit quality or auditor reputation. Audit quality/reputation may serve as a signal of company value in the IPO market and positively correlate to the post-issue company value (Chang et al. 2008). According to DeAngelo (1981), audit quality/reputation can be defined as the probability that an auditor will discover and report a breach in a client's accounting system. Therefore, it is expected that prestigious auditors will have greater incentive to ensure that their clients disclose more accurate financial statements (Chang et al. 2008; DeAngelo 1981; Firth & Liau-Tan 1998).

Based on this argument, it is anticipated that KSCCs investors will infer the quality of a company by examining their choice of auditor (Chang et al. 2008). To achieve distinction, KSCCs issuers will signal the high quality of their firm by employing an auditor with an established name and a strong reputation. With respect to low quality firms, the information disclosed in the financial statements reviewed by reputable auditors would be expected to be unfavourable for a low-quality firm, as no misstatement or misrepresentation would be allowed in financial statements because it might threaten the auditor's reputation. In the Kuwaiti auditing market, international auditing firms are not permitted to offer services unless they are affiliated with a Kuwaiti local auditing firm (Al-Shammari, Al-Yaqout & Al-Hussaini 2008).

There are many Kuwaiti firms that are affiliated with international auditing firms; most notably, Pricewaterhouse Coopers, KPMG, Ernst & Young, and Deloitte Touche & Tohmatsu. This study aligns with the previous auditor quality studies in deciding that the brand name of auditors is the most appropriate proxy for auditing quality (Clatworthy, Makepeace & Peel 2009; Clatworthy & Peel 2007; Lennox 1999, 2005; McMeeking, Peasnell & Pope 2007; Teoh & Wong 1993). Therefore, the Big-Audit classification of auditors is used in this research as a proxy for highquality auditors. By reviewing the 68 listed KSCCs sample, 32 KSCCs were audited by the four international auditing firms mentioned earlier, 12 KSCCs were audited by Al-Qatami local auditing firm, 12 KSCCs were audited by Al-Bazei local auditing firm and the rest of the 68 KSCCs (12 KSCCs) were audited by other local auditing firms. Based on their highest market share, the Big-Six audit firms will be implemented in this study-four local auditing firms affiliated with international auditing firms;<sup>19</sup> Pricewaterhouse Coopers, KPMG, Ernst & Young, and Deloitte Touche & Tohmatsu. in addition to two other local firms, namely, Al-Oatami and Al-Bazei. Therefore, the next hypothesis is as follows:

H3: There is a negative association between auditor reputation and prelisting year earnings management.

<sup>&</sup>lt;sup>19</sup>The international auditor's name is clearly identified on the audit report.

#### 4.4.4 Earnings management and lockup restriction

Resolution No. 7 (2005) is important in the history of the KSE because it introduced the concepts of *strategic shareholders* and *lockup restrictions*. The resolution defines a *strategic shareholder* as 'one who owns, directly or indirectly, 5% or more of a company's capital'. The total shares of all strategic shareholders in a company seeking listing may be no less than 25% of the company's capital, whether owned by one or more strategic shareholder. To guarantee the continuing participation of insiders in the firm even after going public and to protect new shareholders, lockup restrictions on new listing KSCC shares were imposed in Kuwait. This is in contrast to most countries where lockups are voluntary agreements made by insiders of stock-issuing firms who agree to abstain from selling shares for a specific period of time after the issue (Brau, Lambson & McQueen 2005). Researchers agree that the lockup periods in the IPO setting are intended to alleviate moral hazard and information asymmetry problems, and to ensure that insiders retain a significant interest in the firm even after the IPO (Brav & Gompers 2003; Krishnamurti & Thong 2008; Yung & Zender 2006).

In Kuwait, lockups are mandated by law; therefore, the term *lockup restriction* will be used to differentiate Kuwaiti lockups from the *lockup agreements* of other countries. Starting in November 2005, all listing KSCCs were required to retain 25% of the company's capital, specifically the strategic shareholders' stock. There are three fixed expiration periods after which strategic shareholders may dispose of shares. The first such period is after the first year of the listing. The second period is after the second year of the listing, and the third is after the third year of listing. A specific percentage of these shares may be sold in each period: 50% of the total restricted shares may be sold in the first expiration period, 25% in the second period, and the remaining 25% can be sold in the third period.

The introduction of lockup restrictions in Kuwait during the sample period used in this research offers the opportunity to assess their impact on earningsmanagement behaviour. In contrast to firms that listed before lockup restrictions were imposed (non-restricted firms), firms that listed after lockup restrictions (restricted firms) were imposed may have a greater incentive to continue inflating company earnings around the first restriction expiration period (i.e., during the first year of listing) by engaging in earnings management before the public sale of the restricted strategic shareholder shares.

Researchers have documented that insiders tend to sell their shares as soon as a lockup period expires (Brau, Lambson & McQueen 2005; Brav & Gompers 2003). At the first expiration period, KSE regulations allow KSCCs strategic shareholders to sell half of their restricted shares without limitations. Therefore, KSCCs issuers are expected to inflate earnings during the first expiration period to allow them to sell the highest percentage of their restricted shares; and also represents their first chance to gain wealth after listing. Insiders at KSCCs are also expected to continue inflating company earnings after the first expiration period in order to continue obtaining the highest possible share prices and thereby continuing to maximizing their personal wealth. This introduces a new opportunity arising from KSCCs strategic shareholders' wish to sell their shares at the first expiration date at the highest possible price. Therefore, it is reasonable to argue that KSCCs strategic shareholders engage in earnings management during the first lockup period to time their exit strategy and thus maximize personal wealth from selling shares when lockups expire.
Contrary to the contention that insiders engage in opportunistic behaviour to gain wealth, an intriguing counter-argument is that if KSCCs begin earnings manipulation well before listing, then it may be quite difficult to continue inflating earnings throughout the first year of listing because of the reversal of accruals (Chih-Jen & Chung-Gee 2007; Roosenboom, Van der Goot & Mertens 2003; Roychowdhury 2006). Roosenboom, Van der Goot and Mertens (2003) argue that such a reversal of accruals is most likely to affect poorly performing firms, because firms that perform well are more likely to have an increasing cash flow and thus no need to continue over-reporting.

Other researchers, however, view lockup length mainly as a way for insiders to signal firm quality. While Brav and Gompers (2003) find no support for the idea that insiders signal firm quality by locking up their shares for a longer period of time, Brau, Lambson, and McQueen (2005) find empirical support for the use of long lockup to signal firm quality.

However, given that all KSCCs pursuing listing on the KSE are subject to a three-stage lockup period, listing KSCCs lose their opportunity to use the lockup restriction as a positive signalling device because the law applies to all firms. Since listing KSCCs cannot use the lockup restrictions as a signalling device, high-quality firms will need to look for other signals to distinguish themselves from other firms.

Earlier studies found that company earnings are one of the most heavily used measures to affect the value of IPO issues. These include studies conducted in the United States (Dechow, Kothari & Watts 1998; DuCharme, Malatesta & Sefcik 2004) and in Kuwait (Al-Qenae, Li & Wearing 2002; Elshamy & Al-Qenae 2005). McKee (2005) suggests that increased earnings are viewed by investors as a signal of a firm's high quality and value, and decreased earnings are viewed as a signal of a firm's lower quality and value. Not surprisingly, some studies, including Kimbro (2005) and Kinnunen et al.(2000), have documented the frequent use of income-increasing to signal strong future firm performance. Based on the theoretical support for opportunism and signalling earnings-management behaviour prior to listing, it is probable that continuing to inflate income after listing functions as the most important signal KSCC issuers can use to establish investor confidence and thereby obtain a higher price for their stock after each lockup period expires. Therefore, the following hypothesis is proposed:

## H4: Relative to non-restricted firms, restricted firms exhibit higher positive earnings management in the first post-listing financial year.

#### 4.4.5 Earnings management and post-issue performance

If earnings are manipulated upward before going public, investors may be disappointed with future results. Given the previously documented negative association between abnormal accruals and subsequent performance, one can assert that the greater the degree of earnings management before listing, the poorer the post-listing performance of the firm will be. Prior studies in the U.S. setting, such as those of DuCharme, Malatesta, and Sefcik (2001), Teoh, Welch and Wong (1998a), and Shivakumar (2000); and in the Chinese setting, including Aharony, Wang and Yuan (2005), Kao, Wu and Yang (2009),Qintao (2007), and Cai, Liu and Mase (2008); and in the European setting, such as Gajewski and Gresse (2006), have examined the association between earnings management around IPOs and post-listing firm performance. These studies found evidence of long-term firm

underperformance following IPOs and revealed that, on average, IPO firms underperform in most capital markets over the long run.

In the case of Kuwait, the underperformance of newly-listed firms is expected for several reasons. First, if existing shareholders opportunistically manage earnings upward prior to listing, accruals will later be reversed: future earnings will suffer from past manipulation, which leads to a decline in future earnings. Second, newlylisted KSCCs are required to follow the KSE rules and regulations and appoint two external auditors, conditions which are expected to reduce companies' opportunities to continue inflating earnings after listing. Another factor that may contribute to the underperformance of newly-listed KSCCs is that the tendency of existing and strategic shareholders to inflate company earnings around listing creates a moral hazard stemming from investors' inability to observe insiders' behaviour. KSE rules allow strategic shareholders to liquidate half of their restricted strategic shares one year after listing. Moral hazard is expected to occur in KSCCs when strategic shareholders are first permitted to liquidate their shares, when insiders will not have the same incentive to achieve maximum efficiency for the investors or for the firm. As Godfrey et al. (2006) note, the smaller the agent's ownership interest in the firm, the more likely the agent is to shirk.

While the moral hazard problem is expected to arise after the selling of insiders' shares, it is important to stress that the strategic shareholders at this time still have 50% of their shares locked up at the KSE. Therefore, it is indeed questionable whether the strategic shareholders would actually shirk their duties and not act in the best interest of the principal. Added to this, Ball and Shivakumar (2008) argue that a company's reputation is a major asset for any firm pursuing listing on the market. Therefore, companies might be expected to strengthen their reputation rather than shirk their duties and suffer a decline in income, market value, and reputation in the long run. Some recent studies, such as Armstrong, Foster and Taylor (2009) in their study of the U.S. market and Mashayekhi and Azar (2008) in theirstudy of the Iranian market, support Ball and Shivakumar's findings and fail to locate a negative relationship between earnings management and subsequent firm performance. Based on the mixed findings of the empirical evidence of the association between pre-listing earnings management and subsequent firm performance, no specific association is addressed in the following hypothesis.

H5a: The level of pre-listing earnings management is associated with subsequent firm stock performance.

H5b: The level of pre-listing earnings management is associated with subsequent firm accounting performance.

## 4.5 SUMMARY

The objective of this chapter was to identify the theoretical approach used in this study. Throughout this chapter, two theories have been applied: (1) signalling theory and (2) agency theory. These theories propose that earnings management can be viewed as either opportunistic or beneficial. Conflicts of interest between the principal and the agent may produce an agency cost that will be reflected in a higher degree of earnings management. On the other hand, earnings management may be used to convey accurate private information and to enhance the information value of financial statements, and thereby send a signal differentiating a high-quality firm from low-quality firms. The incentives to manage earnings upward around listing in the Kuwaiti context are quite compelling; however, the literature provides cogent explanations as to why newly-listing firms might choose not to do so.

This chapter has defined and developed the study's research hypotheses, which are derived from the theories and from the literature review. The methodology applied to test these hypotheses is presented in detail in the next chapter.

## Chapter 5: Measures of Earnings Management and Long-run Performance

## 5.1 INTRODUCTION

The preceding chapters examined different aspects of the earnings management phenomenon: its mechanisms, methods, and incentives. Theoretical links between earnings management in the pre-issue year, lockup restrictions, auditor quality/reputation, and subsequent firm performance were delineated and proposed. Hypotheses regarding firms' earnings management practices around the time of issue were developed in light of the Kuwait institutional setting, theory and findings from previous earnings management studies. This chapter describes the methodology used to undertake this empirical study. Arguments for the approach to be used in this study are also provided.

The chapter proceeds as follows: Section 5.2 describes the earnings management measures to be used and considers some of the issues related to discretionary-accruals models. Section 5.3 describes the long-run performance methodology and discusses measuring long-run performance using market and accounting based metrics.

## 5.2 EARNINGS MANAGEMENT MEASURES

Because earnings management cannot be directly measured, a growing body of research has developed various models to approximate and detect potential earnings management. Studies in this field have focused on developing and employing mostly three predominant research methods. These are (1) the aggregate accrual method developed and used by Healy (1985), DeAngelo (1986), Jones (1991), Dechow, Sloan and Sweeney (1995), Kang and Sivaramakrishnan (1995), Kasznik (1999) and Kothari, Leone and Wasley (2005); (2) the specific accrual method developed and used by Petroni (1992), Beaver and Engel (1996), Beneish (1997), Beaver and McNichols (1998) and Phillips, Pincus and Rego (2003); and (3) the distribution method developed and used by Burgstahler and Dichev (1997) and Degeorge, Patel and Zeckhauser (1999). Although no existing method is perfect in measuring earnings management, the most common method used is the aggregate accrual method. In the next section, methodologies for measuring earnings management are reviewed in general, with an emphasis on the aggregate accruals method.

#### 5.2.1 The specific accrual method

The specific accrual method is advocated by McNichols (2000) as a means to avoid extensive reliance on aggregate accruals. This method has been used in earnings management studies of specific industries such as banking and insurance, and in the context of specific transactions. Scholars using this model mostly choose one type of sizable accrual to investigate earnings management behaviour. For example, McNichols and Wilson (1988) assess bad debt provisions; Teoh, Wong and Rao (1999) assess depreciation estimates and deferred tax valuation allowances; Beatty and Weber (2002) assess loan loss reserves; and Stubben (2009) assesses revenues since revenues are among the largest earnings components for most firms that can be subject to discretion.

The problem with applying the single accrual methodology is that it requires the existence of a sizable accrual that can be used to manage earnings. In addition, it requires the identification of which specific accrual was used to manage earnings. Even if the appropriate accrual is identified, the effect of managing any one accrual by itself may not be large enough to achieve statistical significance (McNichols & Wilson 1988). Moreover, while the single accrual method is effective in detecting earnings management in some circumstances, in most circumstances it fails to detect earnings management (McNichols & Wilson 1988). As Healy and Wahlen (1999, p. 372) concluded, 'Overall, there is remarkably little evidence of earnings management using specific accruals, suggesting that this is likely to be a fruitful area for future research. By examining specific accruals, researchers can provide direct evidence for standard setters of areas where standards work well and where there may be room for improvement'.

## 5.2.2 The distribution method

The second approach found in the earning management literature is to predict earnings management by examining the statistical properties of earnings in order to determine behaviour that influences earnings. This method was used by Burghstahler and Dichev (1997) and Degeorge, Patel and Zeckhauser (1999) and is called the distribution method. The distribution method focuses on the behaviour of earnings around a specific benchmark. Burghstahler and Dichev (1997) examine the crosssectional distribution of earnings and changes in reported earnings and find graphical and statistical evidence that firms manage their earnings to avoid small earnings losses and decreases.

The Burghstahler and Dichev (1997) study has had a major impact on accounting research. Their approach has been used in many subsequent studies addressing earnings management, including Beatty, Ke and Petroni (2002); Dichev andSkinner (2002); Leuz, Nanda and Wysocki (2003); Phillips et al. (2004); Leone and Van Horn (2003); Frank and Rego (2006); and Roychowdhury (2006).

The distribution method is considered more objective than other methods in terms of detecting the incidence of earnings management (Xiong 2006). A main advantage of the distribution approach is that it can capture the effects of earnings management without estimating the noisy, abnormal accruals (Yu, Du & Sun 2006). Conversely, Healy and Wahlen (1999) contend that this approach fails to capture the magnitude of earnings management or reveal the methods that are used to manage earnings.

#### 5.2.3 The aggregate accrual method

Healy (1985) breaks down accruals into discretionary and nondiscretionary<sup>20</sup> components, paying special attention to the fact that it is more costly for managers to change accounting policies than to change accruals. With this method, total accruals

<sup>&</sup>lt;sup>20</sup>Other terms used in the literature for discretionary and nondiscretionary accruals are *normal* and *abnormal*; *expected* and *unexpected*; *managed* and *unmanaged*, etc.

are separated into discretionary and nondiscretionary components, both of which are not directly observable. Nondiscretionary accruals are driven by specific economic conditions over which managers have little control. Discretionary accruals, however, are manager-determined, as managers have discretion over accounting methods and estimates; these are, therefore, treated as a proxy for earnings management (Healy 1985; Teoh, Welch & Wong 1998a, 1998b).

Not all accrual choices represent earnings management. Yet, it is difficult to separate accruals into discretionary and nondiscretionary parts. For that reason, scholars must make assumptions in estimating the nondiscretionary parts first. Then, the nondiscretionary components must be removed from the total accruals to achieve a reasonable estimate of the discretionary components. Thus, discretionary components can be used as a proxy to test for earnings management. The most commonly used discretionary accruals models in the area of earnings management are the Healy (1985) model; the DeAngelo (1986) model; the Jones (1991) model; the modified Jones model by Dechow, Sloan and Sweeney (1995); the Kang and Sivaramakrishnan (1995) model; the cash flow model by Kasznik (1999); and the performance-matched discretionary accruals model used by Kothari, Leone and Wasley (2005).

Because of its popularity in accounting research, the original Jones model (1991) has inspired researchers to occasionally improvise with the model.<sup>21</sup> For example: Dechow, Sloan and Sweeney (1995) adjusted changes in sales for changes in trade receivables. Defond and Jiambalvo (1994) and Subramanyam (1996) used the cross-sectional variation of the Jones model instead of the times-series approach to allow for industry-wide economic conditions. Teoh, Welch and Wong (1998a) separate total accruals into four components: discretionary and nondiscretionary long-term accruals; and discretionary and nondiscretionary current accruals. Kasznik (1999) extends the Jones model by including the change in operating cash flows and lagged current accruals as independent variables (Cotten 2008). Another major development suggested by Kothari, Leone and Wasley (2005) has been to consider controlling performance ROA when calculating the discretionary accruals.

Despite the prevalence of aggregate models, they have been criticized often in the literature. Researchers argue that the aggregate accrual models provide biased and noisy estimates of discretionary accruals that provide mixed results (Dechow, Sloan & Sweeney 1995; Guay, Kothari & Watts 1996; Kang & Sivaramakrishnan 1995; Kothari, Leone & Wasely 2005). In addition, researchers cannot discern which components of earnings are managed. Although these criticisms occur repeatedly, a great deal of the earnings management literature nonetheless continues to employ these models to investigate earnings management.

Among these modifications to the Jones model, six different variations are chosen for this study to estimate discretionary accruals: Three models based on total accruals—the modified Jones Model by Dechow, Sloan and Sweeney (1995); the cash flow model by Kasznik (1999); and the adjusted-performance discretionary accruals model by Kothari, Leone and Wasley (2005)—are applied here. Similarly, three models based on current accruals—the current accrual model by Teoh, Welch and Wong (1998a); the cash flow model by Kasznik (1999); and the adjusted-

<sup>&</sup>lt;sup>21</sup>For more details about the Jones model, see Jones (1991) and Dechow, Sloan and Sweeney (1995).

performance discretionary accruals by Kothari, Leone and Wasley (2005)—are also employed.

The reasons for choosing these specific models for this study are, first, the modified Jones model tends to be the most powerful in detecting earnings management as compared with the five alternative discretionary accrual models tested by Dechow, Sloan and Sweeney (1995). Although the modified Jones model (1995) has sufficient power to justify its widespread use (Kothari 2001), it has been criticized by Kang and Shivaramakrishnan (1995) and Guay, Kothari and Watts (1996) for its limited control of working capital accrual activities where managers may have more discretion over long-term accruals. Given this restriction, this study considered the Teoh, Welch and Wong (Teoh, Welch & Wong 1998a) current accrual model as another alternative to predict earnings management. While the earnings management literature has extensively used and continues to use the Jones model and its modified versions, some studies have pointed to problems of misspecification with these models when applied to firms with extreme financial performance (Kasznik 1999; Kothari, Leone & Wasely 2005). Thus, in an attempt to control for mis-specification and to improve the reliability of the discretionary accruals measures, the cash flow model by Kasznik (1999) and the adjustedperformance discretionary accrual model proposed by Kothari, Leone and Wasley (2005) are applied in this research. In the next section, the selected models applied in this study are discussed in detail.

#### 5.2.3.1 The modified Jones model

As discussed in the previous section, the modified Jones model improves on the original Jones (1991) model. To understand the modified Jones model, it is essential to first briefly discuss the original Jones model. Studies using the Jones model and its modifications offer two different regression approaches when estimating discretionary accruals which are, in turn, used as a proxy for earnings management; these regression approaches are the times-series and cross-sectional approaches. The cross-sectional regression approach introduced by Defond and Jiambalvo (1994) will be used in this study. The reasons for choosing the crosssectional method over its counterpart are discussed in section 5.2.3.5 of this chapter.

The cross-sectional Jones model and its modifications require the construction of industry portfolios to estimate their initial regressions, such as in the study of Ahmad-Zaluki, Campbell and Goodacre (2011) and Teoh, Welch & Wong (1998a). These estimates represent the normal level of nondiscretionary accruals based on industry averages. There is no specific standard classification for companies listed on the KSE, such as the Standard Industrial Classification (SIC) in the United States or the Global Industry Classification Standard (GICS) in Australia. Therefore, following Whelan (2004) and Ahmad-Zaluki, Campbell and Goodacre (2011), sector classification of the KSE is used instead to identify industry members. However, constructing portfolios based on industry is not applicable in this study. The small number of listed companies on the KSE, which range from a total of 74 firms in 1997 to 196 firms in 2007, reduces the number of firms to less than 6 in some sector portfolios.<sup>22</sup> Therefore, to obtain reliable coefficient estimates for the variables

<sup>&</sup>lt;sup>22</sup>Most previous studies have required that companies' portfolios contain at least 10 companies, with IPO companies and companies that made an IPO in the same year and some previous years being excluded. Teoh, Welch, and Wong (1998a), for example, excluded firms from the estimation portfolio that conducted an IPO or

explaining nondiscretionary accruals, and following Roosenboom, Van der Goot and Mertens (2003)<sup>23</sup>, all industry portfolios are joined together to construct one portfolio matched on fiscal-year basis. At the same time, sector dummies are included in the year-by-year regression to capture some of the sectors' variation in nondiscretionary accruals.

Using equation (1), the initial regressions are estimated from a cross-section out-of-sample based on year-by-year KSCCs that did not list on the KSE for the previous three years<sup>24</sup>. Each year-portfolio consists of a group of listed firms and will be assigned to each of the new-listing KSCCs in the same year of the study sample. A listed firm refers to any company trading on the KSE in the real estate, industry, service and food sectors at any time during the period 1997 to 2007 that did not list in the previous three years. Financial institutions such as banks and regulated industries are not included in the sample; the financial reporting practices of these firms are different because they have specific reporting criteria (Central Bank of Kuwait 2009). Therefore, discretionary accruals are calculated as the difference between actual accruals and a non-discretionary accruals estimated on out-of-sample KSCCs.

Although some studies have used listed firms to estimate the pre-IPO nondiscretionary accruals, Mashayekhi and Azar (2008), Roosenboom, Van der Goot and Mertens (2003) and Nagata and Hachiya (2007) take a different approach. Nagata and Hachiya (2007) argue that comparing financials of listed firms with nonlisting firms and using publicly traded firms as a benchmark to estimate the pre-IPO earnings management is inappropriate. While Nagata and Hachiya's (2007) argument is true in terms of the differences in accrual patterns, size, and age of IPO firms as compared with listed firms, their argument does not hold in the Kuwaiti setting for several reasons. First, unlike IPOs, KSCCs are closed companies that do not offer shares for public subscription (National Bank of Kuwait 2007; Oxford Business Group 2006c). For these companies, listing is only a way for the company to switch from private to public ownership through the sale of a privately held corporation to the public. Therefore, KSCCs list to allow existing shareholders to sell their shares to the public, and the proceeds from selling their shares go directly to them. As a result, there will be no influence on the capital structure of the listing KSCC, since the proceeds of selling any shares around listing cannot be used to alter the working capital of the company; as Ball and Shivakumar (2008) note.

In addition, the law in Kuwait requires KSCCs to establish at least three years before listing and KSCCs must meet specific listing requirements and a specific profit level before listing.<sup>25</sup>Thus, new KSCCs are expected to operate years ahead to be able to meet the KSE listing requirements. Based on the above argument, new listing KSCCs are not expected to be different from listed firms, especially in terms

SEO in the same year. In their study of Malaysian IPO companies, Ahmad-Zaluki, Campbell and Goodacre (2011) required an industry portfolio to contain at least 10 firms, excluding IPO companies and companies that made an IPO in the previous three years. The portfolios of Defond and Jiambalvo (1994) range between 6 and 351 firms. Kasznik (1999) excluded industries with portfolios of less than six firms. <sup>23</sup>Roosenboom, Van der Goot and Mertens (2003) used a sample of 64 firms that went public on Euronext

<sup>&</sup>lt;sup>23</sup>Roosenboom, Van der Goot and Mertens (2003) used a sample of 64 firms that went public on Euronext Amsterdam between 1984 and 1994. Their sample consists of 26 firms that have pure secondary offerings, 6 firms that have primary offerings, and 32 firms that have both primary and secondary offerings.

<sup>&</sup>lt;sup>24</sup> The three-year condition is imposed in this study to allow the new listing KSCCs to clean their books of any opportunistic earnings management behaviour around lockup expiration periods, as discussed in Chapter 4.

<sup>&</sup>lt;sup>25</sup>See Table 2.4 and Table A.1 for more detail on the differences between KSCs and KSCCs and the evolution of listing requirements in the official market.

of their age and performance; thus, listed firms in this study are used as a benchmark to measure new listing KSCCs' earnings management.

A cross-sectional regression is performed separately in each year for each portfolio to estimate the coefficients  $\alpha_0$ ,  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  as in equation (1). Changes in revenues are used to account for nondiscretionary changes in noncash working capital accounts, such as changes in receivables or inventories; while the level of the PPE is used to account for nondiscretionary depreciation expenses (Teoh, Wong & Rao 1999; Xiong 2006). A potential issue with the discretionary accruals model is scaling. Most studies of earnings management around share issue have scaled the Jones model and its modifications using lagged total assets (Ball & Shivakumar 2008). A major modification to the Jones model applied in this study is to utilize the average total assets as a deflator. Ball and Shivakumar (2008) argue that using low values of the deflator (lagged total assets) produce extreme values of discretionary accruals estimates since pre-listing total assets are relatively small and not representative of the listing-year or post-listing year total assets. Based on this view, and following Armstrong, Foster and Taylor (2009) and Ball and Shivakumar (2008), average total assets will be used as a deflator in this study to mitigate the extremely large estimates of the discretionary accruals and to correct for the small-denominator problem (Ball & Shivakumar 2008). In addition, another scaling issue is that most prior research does not include a constant in the regression equation of the modified-Jones model. Kothari, Leone and Wasley (2005) advocate the inclusion of a constant term to mitigate model mis-specification and problems generating from an omitted size (scale) variable. This research estimates discretionary accruals in a manner consistent with Kothari, Leone and Wasley (2005) and adds a constant term to all models tested as in equation (1).

$$\frac{TA_{j,t}}{A_{j,(t-1+t)/2}} = \alpha_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}} \right] + \alpha_3 \left[ \frac{PPE_{j,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(1)

Where:

 $TA_{j,t}$  = total accruals for estimation portfolio firm j in year t;

 $A_{j,(t-1+t)/2}$  average of the beginning and end of year total assets for estimation portfolio firm j in year t;

 $\Delta REV_{j,t}$ =change in revenues for estimation portfolio firm j in year t;

 $PPE_{j,t}$  = gross property, plant, and equipment for estimation portfolio firm j in year t;

 $\sum_{i=1}^{4} IND_i$  =series of industry dummies where the variable equals one when the company is of the sector described by it and 0 otherwise;

 $\varepsilon_{j,t}$  = error term for estimation portfolio firm j in year t;

All variables are scaled by average total assets to mitigate heteroscedasticity.

The regression model estimates from the first equation provide the benchmarks for the predicted nondiscretionary accruals among firms in each portfolio. The next step involves estimating nondiscretionary accruals for each KSCC sample firm in each year by using the estimated coefficients  $\alpha_0, \alpha_1, \alpha_2$  and  $\alpha_3$  from each annual estimation portfolio.

A key assumption made under the Jones (1991) model is that revenues are nondiscretionary. By assuming all revenues to be nondiscretionary, Jones removes part of the manipulation from the discretionary accruals portion to the nondiscretionary portion, because managers can easily manipulate credit sales by accruing revenues before cash is received (Juan, Beatriz & Neophytou 2009). Disregarding the possibility that managers can easily engage in real activities manipulation by accruing revenues before the cash is received and extending generous credit to induce sales is a major limitation of the Jones methodology that was modified by Dechow, Sloan and Sweeney (1995); Juan, Beatriz and Neophytou (2009); and Teoh, Wong and Rao (1999).

Dechow, Sloan and Sweeney (1995) assume that revenues and in particular credit sales could be a source of earnings management. Thus, the authors proposed a modification in the original Jones model that would assist in detecting sales-based manipulation. Dechow, Sloan and Sweeney (1995) adjust the change in revenues for the change in receivables in the event period, inferring that all changes in uncollected credit sales at the end of an event period result from earnings management (Juan, Beatriz & Neophytou 2009). Contrary to the original Jones model, which assumes discretion is not exercised over revenues in either the estimation or the event period, the modified Jones model (1995)assumes that discretion over revenues is exercised only in the event period, not in the estimation period.<sup>26</sup>

By using the estimated coefficient from equation (1) with the residuals representing the discretionary portion, Dechow, Sloan and Sweeney (1995) extend the original Jones model to adjust the change in revenues by receivables in the event period. The nondiscretionary accruals are then calculated as in equation 2:

$$NDA_{i,t} = \alpha_0 + \widehat{\alpha_1} \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_2} \left[ \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_3} \left[ \frac{PPE_{i,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^{4} IND_i$$
(2)

Where:

 $NDA_{i,t}$  = expected nondiscretionary accruals for KSCC sample firm i in year t;  $\Delta TR_{i,t}$  = change in trade receivables for KSCC sample firm i in year t;  $\widehat{\alpha_1}, \widehat{\alpha_2} and \widehat{\alpha_3}$  =coefficients estimates;  $\sum_{i=1}^{4} IND_i$  =series of industry dummies where the variable equals one when the company is of the sector described by it and 0 otherwise; All other variables are as provided by defined.

All other variables are as previously defined.

Finally, the discretionary accruals which are subject to managerial manipulation are calculated. This is accomplished by taking the difference between the sample firm's reported total accruals and the nondiscretionary accruals (fitted values) estimated from equation (2). If non-zero DA is viewed, it can be inferred that earnings management exists throughout the year. Positive DA can be interpreted as income-increasing earnings management, and vice versa. Expected discretionary accruals are then defined in equation (3) as follows:

<sup>&</sup>lt;sup>26</sup>In a times-series setting, Dechow et al.(1995) only include the receivable adjustment in the event period. They assume that discretion is not exercised over revenues in the estimation period (or in estimating the parameters) but rather is exercised in the event period (or in estimating the nondiscretionary accruals).Kothari, Leone and Wasley (2005), on the other hand, in their use of the cross-sectional modified Jones model, include the adjustments of the accounts receivables for both the estimation period and the event period.

$$DA_{i,t} = \left[\frac{TA_{i,t}}{A_{j,(t-1+t)/2}}\right] - NDA_{i,t}$$
(3)

Where:

 $DA_{i,t}$  = expected discretionary accruals for KSCC sample firm i in year t; with all other variables are as previously defined.

#### 5.2.3.2 Current accruals model

Researchers such as Roosenboom, Van der Goot and Mertens (2003), DuCharme, Malatesta and Sefcik (2001, 2004), and Teoh, Wong and Rao (1999) investigate the use of the current accruals version of the Jones model developed by Teoh, Welch and Wong (1998a). Their rationale for applying the current accruals model is that the modified Jones model controls for only a small amount of normal working capital accrual activity and, therefore, the discretionary component of working capital accruals may be a superior proxy and more relevant than that of total accruals (Cotter 1996; Teoh, Welch & Wong 1998a). Athanasakou, Strong and Walker (2009) argue that current accruals are more flexible than non-current accruals (e.g. depreciation, amortization, impairments) due to their frequent occurrence and the higher degree of judgment involved in their estimation.

Most researchers defined this method as the discretionary current accruals model or the working accruals model. With this approach, only current accruals are separated into discretionary and nondiscretionary components. Current accruals are revenues and expenses that firms include in the net income, even though cash flows associated with these revenues and expenses take place in earlier or later periods (Mashayekhi & Azar 2008). Therefore, current accruals are reflected as increases or decreases in the balances of current asset accounts (excluding cash) and current liability accounts (Rangan 1998). Following Teoh, Welch and Wong (1998a), a measure of current accruals can be obtained as in equation (4):

$$CA_{j,t} = \Delta CAssets_{j,t} - \Delta Cash_{j,t} - \Delta CL_{j,t} + STD_{j,t}$$
(4)

Where:

 $CA_{j,t}$  = current accruals;  $\Delta CAssets_{j,t}$  = change in current assets from year t-1 to year t;  $\Delta Cash_{j,t}$  = change in cash and cash equivalent t-1 to year t;  $\Delta Cash_{j,t}$  = change in current liabilities from year t-1 to year t;  $\Delta STD_{j,t}$  = change in debt included in current liabilities from year t-1 to year t; The variables j and t are estimate portfolio firm j and time subscripts, respectively.

The coefficients for nondiscretionary current accruals are obtained by crosssectionally regressing current accruals on changes in revenues for each portfolio matched with a given sample firm. Under this approach, the PPE is dropped from the regression equation as in equation (5):

$$\frac{CA_{j,t}}{A_{j,(t-1+t)/2}} = a_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(5)

Where:

 $CA_{j,t}$  = current accruals for estimation portfolio firm j in year t; with all other variables are as previously defined.

Similar to the total accruals model, after estimating the model by each sector and year, the coefficient from the regression model estimates from the first step are then used to obtain a fitted value for expected current accruals, or nondiscretionary current accruals as in equation (6). To maintain consistency between the discretionary total accruals model and the current accruals model, the change in revenue is adjusted for the change in receivables. Then, the final step includes estimating current discretionary accruals for each firm as in equation (7).

$$NDCA_{i,t} = \alpha_0 + \widehat{\alpha_1} \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_2} \left[ \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^{4} IND_i$$
(6)  
$$DCA_{i,t} = \left[ \frac{CA_{i,t}}{A_{j,(t-1+t)/2}} \right] - NDCA_{i,t}$$
(7)

Where:

 $NDCA_{i,t}$  = expected nondiscretionary current accruals for KSCC sample firm i in year t;  $DCA_{i,t}$  = expected discretionary current accruals of KSCC sample firm i in year t with all other variables are as previously defined.

#### 5.2.3.3 The cash flow model

The third version of the Jones model examined in this research is called the cash flow model suggested by Dechow (1994) and employed by Kasznik (1999); DuCharme, Malatesta and Sefcik (2001) and Lara, Osma andNeophytou (2009). Dechow (1994) finds that accruals and cash flows exhibit strong negative association and, thus, advocate including cash flows in models for future research. Consistent with this view, this research extends the modified Jones model and includes operating cash flow as an explanatory variable as in equations (8) and (9).

$$\frac{TA_{j,t}}{A_{j,(t-1+t)/2}} = \alpha_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}} \right] + \alpha_3 \left[ \frac{PPE_{j,t}}{A_{j,(t-1+t)/2}} \right] + \alpha_4 \left[ \frac{\Delta CFO_{j,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(8)

$$\frac{CA_{j,t}}{A_{j,(t-1+t)/2}} = a_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}} \right] + \alpha_4 \left[ \frac{\Delta CFO_{j,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(9)

Where:

 $\Delta CFO_{j,t}$  = the change in cash flow from operation for KSCC sample firm i in year t; with all other variables are as previously defined.

#### 5.2.3.4 Adjusted-performance model

Kothari, Leone and Wasley (2005) argue that a firm's performance plays an important role in calculating discretionary accruals. This argument is based on the fact that most IPO firms are likely to time their offerings to match with periods of high performance and favourable stock market conditions (Qintao 2007). In addition, IPOs tend to receive a large inflow of cash, which they could use for working capital. Accordingly, it would not be surprising to find an increase in their accruals after the IPO even if there were no earnings management involvement. To mitigate this potential problem, Kothari, Leone and Wasley (2005) suggest that IPOs performance should be taken into consideration in calculating discretionary accruals.

Kothari, Leone and Wasley (2005) propose two alternatives to control for firm performance: the performance-matched approach and the regression-based approach. The performance-matched approach requires matching each issuing firm with a non-issuing firm based on industry, year, and return on assets (ROA)<sup>27</sup>(Cotten 2008; Gong, Louis & Sun 2008; Kothari, Leone & Wasely 2005; Qintao 2007). Then using the Jones model (1991) or the modified version of Jones (1995), estimating separately the discretionary accruals of both the IPO sample firms and the matched firms. Then, the expected discretionary accruals calculated by each matched firm are subtracted from the expected discretionary accruals calculated by each sample firm to arrive at the expected performance-matched adjusted discretionary accruals (see appendix C for more details on this approach).

Using the Kothari, Leone and Wasley (2005) performance-matched approach is not feasible for this study. Finding a matching firm based on ROA is quite difficult with such a small sample of KSCCs. Therefore, the adjusted-performance approach or the regression-based approach is used in this study as another alternative proposed by Kothari, Leone and Wasley (2005).<sup>28</sup> Under this approach, Kothari, Leone and Wasley (2005) expand the set of independent variables used in the regression models of discretionary accruals by including a current or past year's ROA. This can be done simply by adding a new regressor (ROA) to the modified Jones model for both the estimation period and the event period. Kothari, Leone and Wasley (2005) find that using the current year ROA works better than using the lagged ROA. Another change suggested by Kothari, Leone and Wasley (2005) is to include the adjusted change in revenues by receivables not only in the event period, but also in the estimation period as in equation (10) and (11). Two versions of the Kothari models will be implemented, the total accruals version and the current accruals version as follows as in equations (10) to (13):

<sup>&</sup>lt;sup>27</sup>Return on assets (ROA) is defined as net income + interest expense (net of tax) standardized by total assets at the beginning of the year (Katz 2009). Kothari, Leone and Wasley (2005) use only net income standardized by lagged total assets to avoid potential problems associated estimating a tax rate.

<sup>&</sup>lt;sup>28</sup>Kothari, Leone and Wasley (2005, p. 166) report that testing discretionary accruals using a performancematched approach is more specific than using a linear regression-based approach. This is due to the nonlinear relation between accruals and performance.

$$\frac{TA_{j,t}}{A_{j,(t-1+t)/2}} = a_0 + a_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + a_2 \left[ \frac{\Delta REV_{j,t} - \Delta TR_{j,t}}{A_{j,(t-1+t)/2}} \right] \\ + a_3 \left[ \frac{PPE_{j,t}}{A_{j,(t-1+t)/2}} \right] + ROA_{j,t} + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(10)

$$\frac{CA_{j,t}}{A_{j,(t-1+t)/2}} = a_0 + a_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + a_2 \left[ \frac{\Delta REV_{j,t} - \Delta TR_{j,t}}{A_{j,(t-1+t)/2}} \right] + ROA_{j,t} + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$$
(11)

$$NDA_{i,t} = a_0 + \widehat{\alpha_1} \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_2} \left[ \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_3} \left[ \frac{PPE_{i,t}}{A_{j,(t-1+t)/2}} \right] + ROA_{i,t} + \sum_{i=1}^{4} IND_i$$
(12)

$$NDCA_{i,t} = a_0 + \widehat{\alpha_1} \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \widehat{\alpha_2} \left[ \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{j,(t-1+t)/2}} \right] + ROA_{j,t} + \sum_{i=1}^4 IND_i$$

$$(13)$$

Where:

 $ROA_{j,t}$  = return on assets of the current year for estimation portfolio firm j in year t and all other variables are as previously defined.

#### 5.2.3.5 Issues related to discretionary-accruals models

#### Calculation of total accruals

The first step in applying the previous three models is to identify total accruals and current accruals. Extracting data for calculating accruals can be undertaken based on two methods: the balance sheet approach (the indirect method) and the cash flow approach (the direct method). In the balance sheet approach, total accruals are calculated indirectly from the balance sheet and income statement accounts as in equation (14). Current accruals are reflected as increases or decreases in the balances of current asset accounts (excluding cash) and current liability accounts (Rangan 1998). Teoh, Welch and Wong (1998a) measure the current accruals as in equation (15).

$$TA_{j,t} = \Delta CAssets_{j,t} - \Delta Cash_{j,t} - \Delta CL_{j,t} + \Delta STD_{j,t} - DEP_{j,t}$$
(14)

$$CA_{j,t} = \Delta CAssets_{j,t} - \Delta Cash_{j,t} - \Delta CL_{j,t} + STD_{j,t}$$
(15)

Where:

 $TA_{j,t}$ = Total accruals;  $CA_{j,t}$ = current accruals;  $\Delta CAssets_{j,t}$ = change in current assets from year t-1 to year t;  $\Delta Cash_{j,t}$ = change in cash and cash equivalent t-1 to year t;  $\Delta CL_{j,t}$ = change in current liabilities from year t-1 to year t;  $\Delta STD_{j,t}$ = change in debt included in current liabilities from year t-1 to year t;  $DEP_{j,t}$ = depreciation and amortization expense; The variables j and t are estimate portfolio firm j and time subscripts, respectively

Estimating total accruals using the balance sheet approach is economically and significantly biased in the presence of mergers, acquisitions and discontinued operations (Kothari, Leone & Wasely 2005). Therefore, researchers advocate the use of the cash flow approach where applicable.<sup>29</sup>In contrast to the balance sheet approach, research has demonstrated that the cash flow approach generates a precise measure of accruals, avoids measurement errors in estimating accruals and is less computationally demanding (Hribar & Collins 2002). As a recommendation for future research, Kothari, Leone and Wasley (2005) suggest that researchers use the cash-flow statement approach advocated by Hribar and Collins (2002) to measure total accruals. Following the recommendation of Kothari, Leone and Wasley (2005), this research estimates total accruals as in equation 16 directly from the statement of cash flows.

$$TA_{j,t} = EBXI_{j,t} - CFO_{j,t}$$
(16)

Where:

 $TA_{j,t}$  = total accruals generated from the cash flow statement with the indirect method;  $EBXI_{j,t}$  = earnings before extraordinary items and continued operations;  $CFO_{j,t}$  = cash flow from operation;

The variables j and t for estimate portfolio firm j and time subscripts, respectively.

#### Cross-sectional vs. time-series models

The literature offers two different approaches when estimating discretionary accruals which are, in turn, used as a proxy for earnings management: the time-series and cross-sectional approaches. The time-series approach uses a multiple of years prior to the event period under review as the basis for estimating the coefficient in the models. In other words, the time-series approach measures discretionary accruals during the event period relative to the level of nondiscretionary accruals during the estimation period. It assumes that during the estimation period, no systematic earnings management exists and it is free from earnings management. In order to produce a high explanatory power using the time-series approach, a long series of financial data is required. As stated by Subramanyam (1996, p. 254), a major limitation in applying the time-series approach is that 'Because of the lengthy time periods involved, it is possible for the model to be misspecified due to non-stationarity. ... [U]se of the time-series model lowers the power of tests which

<sup>&</sup>lt;sup>29</sup>Data availability is considered the main problem associated with applying the cash flow approach. Most previous studies used the balance sheet approach to calculate total accruals, mainly due to the unavailable data.

examine time-series behaviour in discretionary accruals, because of overlapping estimation and treatment periods'.

The cross-sectional approach introduced by Defond and Jiambalvo (1994), however, uses firms with similar characteristics in the same industry to estimate the coefficient of the models. The discretionary accruals estimated should be interpreted as discretionary accruals relative to the industry benchmark, since the cross-sectional regression is re-estimated each year. In comparing the results of the time-series and cross-sectional methods of the different versions of the Jones model, Subramanyam (1996), Young (1999), and Peasnell, Pope and Young (2000) find that the cross-sectional approach has better-specified parameters and generates lower standards of error for the coefficients and fewer outliers than the time-series approach (1999). Despite many researchers arguing for the cross-sectional approach over the time-series approach, the cross-sectional models are unlikely to capture industry-wide earnings management or the effect of the mean reversion properties of accruals (Peasnell, Pope & Young 2000)<sup>30</sup>.

In this dissertation, the cross-sectional version of the discretionary accruals models is used. The justifications for using the cross-sectional approach rather than the time-series approach are as follows: First, it has been proven by many scholars that the cross-sectional approach performs better than its time-series counterparts in detecting earnings management (Shivakumar (1996); Jeter and Shivakumar (1999); Dechow, Sloan and Sweeney(1995); Subramanyam (1996); Xie, Davidson and DaDalt (2003)). Second, in most IPO settings, acquiring sufficient time-series data is not feasible. Therefore, the data scarcity of the KSCCs could prevent sufficient data being available for time-series testing and it is easier to obtain a reasonable number of observations using the cross-sectional version.

#### Limitations of discretionary accruals models

Researchers such as Lee and Masulis (2006), Dechow, Sloan and Sweeney (1995), Lee and Masulis (2006) and Katz (2009) suggest that discretionary accruals models suffer from a correlated-omitted variables problem that biases the numbers produced and thus leads to mistaken implications regarding the existence of opportunistic earnings management. In addition, Guay, Kothari and Watts (1996) indicate that all discretionary accruals models estimate discretionary accruals with imprecision. Although many researchers have suggested further modifications to the discretionary accrual models to improve their power and specification, Teoh, Wong and Rao (1999) argue that regardless of the model used, the discretionary accrual proxy can be noisy.

## 5.3 MEASURING LONG-RUN PERFORMANCE

Two types of performance measures will be used to test the association between pre-listing earnings management and subsequent firm performance (H5): stock return performance measures and an accounting performance measure. A great deal of research has attempted to isolate the long-term effects of a firm issuing new capital such as Rangan (1998); Teoh, Welch andWong (1998b); Shivakumar (2000); Ahmad-Zaluki, Campbell and Goodacre (2011) and Armstrong, Jangolinzer and

<sup>&</sup>lt;sup>30</sup>For more detailed comparison of the time-series and the cross-sectional approach see Defond and Jiambavlo (1994), Subramanyam (1996) and Jeter and Shivakumar (1999).

Larcker (2010). Models have been developed to capture the impact on a firm's stock price and performance and whether underperformance is present following an issue. Poor stock-price performance is one of the important anomalies in the financial markets that has been heavily investigated and debated by researchers (Rangan 1998). Much of the literature finds evidence to support a negative association between earnings management around issue and subsequent firm performance (Aharony, Wang & Yuan 2005; Ahmad-Zaluki, Campbell & Goodacre 2011; Cai, Liu & Mase 2008; Fan & Thomas 2010; Gajewski & Gresse 2006; Kao, Wu & Yang 2009; Rangan 1998; Shivakumar 2000; Teoh, Welch & Wong 1998b). However, other studies question this negative association (Armstrong, Foster & Taylor 2009; Ball & Shivakumar 2008; Teoh, Welch & Wong 1998b).

#### 5.3.1 Long-run stock performance

The Efficient Market Hypothesis (EMH) posits that when firms go public, their share prices should reflect all the publicly available information at that point in time. Therefore, the share price of a new issue is expected to quickly adjust to any new publicly available information (Scott 2009).

Many studies have explored the long-run performance of stock returns following a major corporate event, such as stock splits, acquisitions or security offerings (Barber & Lyon 1996). These studies have tracked the post-event return performance of samples of firms for specific periods following such an event. The measurement of long-term performance is a complex and controversial matter (Gajewski & Gresse 2006); complicated (Kothari 2001); and challenging (Fama 1998). Indeed, such measurements have been questioned by many scholars, such as Barber and Lyon (1997); Fama (1998); Kothari and Warner (1997); Lyon, Barber and Tsai (1999).

There continues to be disagreement regarding the measurement of long-run stock performance (Fama 1998). Many alternative measures have been proposed, including two common measures: buy-and-hold abnormal returns (BHARs) and cumulative abnormal returns (CARs). The BHARs approach simply compounds (multiplies) the monthly abnormal returns for each month of the sample period (Wolfe 2009). On the other hand, the CARs approach adds the abnormal returns for each month of the sample period or calculates the average of the monthly abnormal returns.

There are some conceptual and statistical problems associated with the use of both the BHARs and CARs methods of measuring abnormal performance in the long-run (Sahin 2005). The CARs method does not accurately measure the return to an investor who holds a security for a long post-event period (Gajewski & Gresse 2006). In addition, cumulative returns that are reweighted every month may induce abnormal returns that are not realistic (Moshirian, Ng & Wu 2009). On the other hand, the BHARs method more accurately measures the investor's experience of holding a security for a long post-event period. Therefore, the use of BHARs is more widespread than other methods; although by compounding monthly returns, BHARs are severely skewed to the right (Drobetz, Kammermann & Wälchli 2005; Fama 1998; Liden 2006). However, Fama (1998) has a preference for the CARs over the BHARs approach, suggesting that despite problems associated with the CARs method, it nonetheless has fewer statistical inference problems than the BHARs alternative. Another view, posited by Barber and Lyon (1997) is that both measures of abnormal returns can produce different inferences from the same set of data.

Given the above controversy, and in the absence of an acceptable measure for long-run stock performance, this study measures subsequent stock performance using the BHARs method conducted by Ritter (1991); Teoh, Welch andWong (1998b); Roosenboom, Van der Goot and Mertens (2003); Moshirian, Ng and Wu (2009); and Wolfe (2009), and the CARs method conducted by Ritter (1991); Teoh, Welch and Wong (1998b); and Kao, Wu and Yang (2009).

### 5.3.1.1 Benchmark selection

The selection of the appropriate benchmark to measure long-run abnormal returns is the focus of another major debate in the asset-pricing literature. Researchers have typically utilized several alternative benchmarks to measure postlisting stock performance. Among these alternatives, benchmarks proposed are the market indices based benchmarks and the matching-firm based benchmarks. Ritter (1991), for example, used three market based indices: the CRSP value-weighted NASDAQ index, the CRSP value-weighted Amex-NYSE index, the smallest-size decile index of the New York Stock Exchange and a matched-firm benchmark based on industry and size. Roosenboom, Van der Goot and Mertens (2003), in analysing the long-run abnormal returns of 64 Dutch IPOs, used two market based benchmarks and two matched-firm based benchmarks: the value-weighted market index, the equally weighted market index, the size-benchmark portfolio and the book-to-market benchmark portfolios respectively.

Ahmad-Zaluki, Campbell and Goodacre (2007) tested 454 Malaysian IPOs by using a matched-firm benchmark based on market value and two market based benchmarks—the Malaysian main market index and an alternative market index —in Malaysia. Kamel (2006) used only market based benchmarks to measure the abnormal returns for 57 Egyptian IPOs. Moshirian, Ng and Wu (2009) used one market based benchmark, the MSCI Emerging Markets index and a matched- firm based benchmark that matched on size and book-to-market ratio, in their analysis of BHARs in 13 emerging markets. Teoh, Welch and Wong (1998b) used two market based benchmarks—the value-weighted market-adjusted returns and the NASDAQ composite index-adjusted returns—for their analysis of the abnormal returns of 1,649 U.S. IPOs.

Fama (1998) argued that using market indices as a benchmark to compute long-run returns biases the results since the index may contain the sample firms or new issuing firms. In addition, Barber and Lyon (1997) provide evidence that the measurement of long-run returns using reference and matched portfolios through market indices is mis-specified due to rebalancing, skewness and new-listing bias. Barber and Lyon (1997) advocate the use of the control or matched- firm approach to adequately correct the biasness. Under the matched-firm approach, the sample or (event) firms are matched to non-event firms based on a specific criteria (e.g., firm size, book-to-market ratio and/or industry) (Wolfe 2009).

Each of the approaches discussed to measure long-run performance have been used often by researchers such as Loughran and Ritter (1995); Fama (1998); Drobetz, Kammermann and Wälchli (2005); and Gajewski and Gresse (2006), among others, argues that long-term performance is sensitive to benchmark selection and the way the tests are done (e.g., BHARs vs. CARs).

In this study, two market benchmarks are used: the General Global Index (GGI) (a capitalization value-weighted index that contains all listed firms on the

KSE) and the Global Industry Index (GII) (a capitalization weighted industry index that contains firms listed by industry). Although the matched-firm approach is the theoretically preferred method as concluded by prior research, it cannot be operationalised in the Kuwaiti market. The small number of available non-issuing matching firms in the Kuwaiti market produces an overlapping application of non-issuing matching firms with KSCC sample firms<sup>31</sup>, leading to a major violation of the matching criteria.

## 5.3.1.2 Calculating the Buy-and-Hold abnormal returns (BHARs) and Cumulative abnormal returns (CARs)

Consistent with most earnings management studies based on accrual anomalies; the measurement of stock returns in this study will start from month (0), which is the month that comes after the publication of the first annual report as a public company for a three-year window (Qintao 2007; Roosenboom, Van der Goot & Mertens 2003; Teoh, Welch & Wong 1998b). Therefore, month (0) is defined as four months after the close of the fiscal year (0).

#### Calculation of monthly raw returns

The first step in measuring BHARs and CARs is to calculate the monthly raw returns for both the KSCC sample firms and the benchmark. The returns are computed for the three-year window, starting from month 0 through month 36. The monthly raw return is measured as the percentage change in the closing prices on the last trading day of the month as compared with the previous month (Ahmad-Zaluki, Campbell & Goodacre 2011; Chi, Wang & Young 2010) as in equation 17. All closing prices are adjusted for share capital increases and stock splits, but not for cash dividends (Al-Hashel 2003). This equation does not account for cash dividends since the KSCCs annual reports do not disclose any information about cash dividends and there are no other public data available for this variable.

$$r_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$
(17)

Where:  $r_{it}$  = the return for firm *i* in month *t*; and  $P_{it}$  = the closing price of firm *i* in month *t*.

#### Buy-and-Hold abnormal returns (BHARs)

Following Roosenboom, Van der Goot and Mertens (2003) and Ahmad-Zaluki, Campbell and Goodacre (2007) for each KSCC sample firm, the average BHARs is calculated for a 36-month holding period. The adjusted abnormal return of a sample KSCC is the buy-and-hold abnormal return of a sample KSCC firm and can be

<sup>&</sup>lt;sup>31</sup>Studies that were unable to use the matching benchmark due to small-sample limitations include Drobetz, Kammermann and Wälchli (2005), who used the Swiss Performance Index (SPI) and the Vontobel Small Companies Index (VSCI) for 109 Swiss IPOs; Cai, Liu and Mase (2008), who used the Shanghai Stock Exchange A-share Index for a sample of 335 Chinese IPOs; Kamel (2006), who used the Capital Market Authority Index (CMA), the Egyptian Financial Group Index (EFGI) and the Herms Financial Index (HFI) for 57 Egyptian IPOs; and Rangan (1998), who used a CRSP value-weighted market index to measure the stock returns of 230 U.S. IPOs.

obtained as the difference between the buy-and-hold returns of the sample firm and that of a benchmark using the market indices. For firms that are delisted before the 12-, 24- and 36-month holding period, whether a sample firm or a matched firm, the aftermarket period is truncated, ending with the last listing month on the KSE as in equation 18:

$$BHAR_{T} = \frac{1}{N} \sum_{i=1}^{N} \left[ \prod_{t=0}^{\min \langle T, delisted \rangle} (1 + r_{i,t}) - \prod_{t=0}^{\min \langle T, delisted \rangle} (1 + r_{m,t}) \right]$$
(18)

Where:

 $BHAR_T$  = is the mean buy-and-hold return for a KSCC sample firm over a holding period T (12, 24 and 36);

min(T, delsited) = is either the delisting date or T month (12, 24 and 36, the end of the time window period), whichever comes first;

t = is the first month in the window period or month 0;

 $r_{i,t}$  = is the monthly raw return for firm *i* in month *t*;

 $r_{m,t}$  = is the relevant monthly raw return for the benchmark used;

N = number of firms in event-month t.

#### Cumulative abnormal returns (CARs)

Following Ahmad-Zaluki, Campbell and Goodacre (2007) and Teoh, Welch and Wong (1998b), the monthly stock returns for each listing firm is compared with the monthly stock returns of a market index on a rolling basis for each of the 12, 24 and 36 months following the release of the first post-listing annual report as a public company. The cumulative mean abnormal returns at month T ( $CAR_T$ ) is defined as the sum of monthly abnormal returns over T months (12, 24 and 36) as in equation 19:

$$CAR_{T} = \sum_{t=0}^{T} \left[ \frac{1}{N} \sum_{i=1}^{N} (r_{it} - r_{mt}) \right]$$
(19)

#### 5.3.2 Accounting performance

Researchers find that the accounting performance of newly-listed companies tends to become worse after going public and then further deteriorates (Aharony, Lee & Wong 2000; Jain & Kini 1994; Loughran & Ritter 1997; Mikkelson, Partch & Shah 1997). Jain and Kini (1994) were the first scholars to study the operating performance of firms as they transitioned from private to public ownership. They found significant declines in operating performance as measured by returns on assets (ROA), operating cash flow and asset turnover following the issue. Consistent with Jain and Kini (1994), Aharony, Lee and Wong (2000) in their examination of the pre-and post-IPO earnings patterns of Chinese IPOs found that the median ROA peaks in the IPO year and declines thereafter. Matching IPOs with non-IPO listed firms, Mikkelson, Partch and Shah (1997) found that in most cases, prior to their IPO, the performance of IPOs as measured by income scaled by assets or by sales exceeded their matched firms and then, after their IPO, declined to a level below the performance of their matched firms. Testing subsequent firm performance involves three steps developed based on Barber and Lyon (1995) research as in Figure 5.1. The first step is to select the appropriate method for measuring accounting performance. The second step is to choose the best method for evaluating actual performance. The third step is to select an appropriate statistical test.

There does not appear to be a preferred method to measure the accounting performance (Ahmad-Zaluki, Campbell & Goodacre 2007). Different accounting performance measures have been proposed in the literature such as return on equity (ROE) as implemented in the study of DuCharme, Malatesta and Sefcik (2001); return on assets (ROA) Qintao (2007), Kao, Wu and Yang (2009) and Aharony, Lee and Wong (2000); and operating cash flow as in the study of Jain and Kini (1994). The choice in this study is to use the return on assets (ROA) as a measure of accounting performance due to its popularity and because it is not impacted by a firm's capital structure decisions as is the case for some other measures such as ROE.



Figure 5.1. Steps for Testing Subsequent Accounting Performance Methodology

Many researchers advocate the use of operating income rather than earnings when calculating the ROA<sup>32</sup>. They reason that operating income is not affected by extraordinary items, tax considerations, or accounting for minority interests (Barber & Lyon 1995). For most KSCC companies, operating income is not reported on the face of their income statements; in addition, the necessary data to calculate operating income is not available. Therefore, net income is used instead, as in the studies of Aharony, Lee and Wong (2000) and Teoh, Welch and Wong (1998a). In addition, following Barber and Lyon (1995) and Aharony, Lee and Wong (2000), cash balances are excluded from total assets so as to include only operating assets. Therefore, ROA can be defined as in equation 20:

$$= \frac{Net \ Income}{Total \ Assets - Cash \ and \ equivalents}$$

(20)

<sup>&</sup>lt;sup>32</sup>See Barber and Lyon (1995) for more discussion about the benefits of using operating income over earnings.

For the second step of the process identified in Figure 5.1, two approaches are used to evaluate the actual operating performance: the industry-adjusted ROA and the median-raw ROA ratio. The industry-adjusted ROA approach is adopted from the study of Mikkelson, Partch and Shah (1997). The industry-adjusted ROA equals the difference between the firm ROA and the industry-median ROA. The median-raw ratio approach is adopted from Mikkelson, Partch and Shah(1997) and Aharony, Lee and Wong (2000). The median-raw ratio approach compares the ROA medians of the sample firm across different time periods. In this study, and based on the available data of the KSCC sample firms, the ROA for each sample firm is calculated for five years, from year -2 to year +2. Then, following Jain and Kini (1994) and Loughran and Ritter (1997), a specific statistical test is applied to find the difference between the ROA medians before and after listing years. If issuing firms window dress their financial statements, it is expected the median of operating performance would peak in years -1 and 0 and then deteriorate afterwards. The third step is to select the appropriate statistical test. This step is discussed in detail in the analysis and results.

## 5.4 SUMMARY

This chapter describes the measurements of the study's key variables, earnings management and firm performance. First, an aggregate accrual research design is used in this research to estimate earnings management. Six cross-sectional models were chosen for this study to estimate discretionary accruals: three models are based on total accruals: the modified Jones Model by Dechow, Sloan and Sweeney (1995); the cash flow model by Kasznik (1999); and the adjusted-performance discretionary accruals model by Kothari, Leone and Wasley (2005). A further three models are based on current accruals: the current accrual model by Teoh, Welch and Wong (1998a); the cash flow model by Kasznik (1999);and the adjusted-performance discretionary accruals by Kothari, Leone and Wasley (2005).

Second, two empirical designs are used to test subsequent firm performance. The first design focuses on subsequent stock performance of KSCCs. Buy and hold abnormal returns (BHARs) and cumulative abnormal returns (CARs) with two market benchmarks—the General Global Index (GGI) and the Global Industry Index (GII) are implemented to test stock performance. The second design focuses on subsequent accounting performance. Return on assets (ROA) is chosen as the accounting measure of performance. The two approaches used are the industry-adjusted ROA and the median-raw ROA ratio.

The next chapter (chapter 6) will outline the research design used to test each hypothesis and present results with interpretations of the main findings.

## 6.1 INTRODUCTION

Several objectives are identified for this study as discussed in Chapter 1. First, it examines whether KSCC listing firms manage their pre-listing earnings. Existing shareholders may engage in earnings management before listing for several reasons: to meet the pre-listing profit requirement, to increase their personal proceeds by selling stocks at as high a price as possible and to seize the opportunity of having one external auditor compared to the two external auditors required after listing. Second, it is anticipated that auditors with high reputation intend to restrict opportunistic earnings management, as well as reducing the risk that the financial reports contain material misstatements or omissions (Balsam, Krishnan & Yang 2003; Datar, Felthman & Hughes 1991). Therefore, this study attempts to test the existence of a negative association between auditor reputation and pre-listing year earnings management. Third, this study examines the occurrence of earnings management behaviour by restricted KSCCs in the period after listing. Specifically, it focuses on investigating earnings management around the first lockup expiration period. Finally, most prior studies have documented a negative relationship between abnormal accruals and subsequent performance. Hence, this research also explores this association in the Kuwait setting. Five hypotheses were developed to address the study objectives and research sub-questions.

The sample firms used in this study (68 KSCCs) consists of all KSCCs listing on the KSE from 1997 through to 2007 excluding banks and regulated industries. For hypotheses testing purposes, this sample was, on occasion, split into different groups and study periods. This chapter will outline and sketch the research design used to test each hypothesis. Results are also presented with interpretations of the main findings.

## 6.2 SAMPLE SELECTION AND DATA SOURCES

## 6.2.1 Sample selection

The sample for testing H1a and H1b consists of all KSCCs listing on the KSE from 1997 through to 2007 in four sectors: real estate, service, industry, and food. Financial institutions such as banks and regulated industries are not included in the sample; the financial reporting practices of these firms are different because they have specific reporting criteria (Central Bank of Kuwait 2009). The main reasons for beginning the sample with 1997 and ending it with 2007 are as follows: First, as discussed in Chapter 2, the KSE was closed from August 1990 to September 1992 due to the Gulf War. Before 1995, the KSE was in the restructuring phase and the availability of data was a major concern. Two years of annual reports are required to calculate the earnings management in the pre- and listing year, so the sample was limited to KSCCs that list in the year of 1997 and after. Second, in early 1997, the MC of the KSE to show a two-year pre-listing net profit. This two-year profit requirement allows an examination of earnings management behaviour before listing.

The sample was terminated at 2007 to allow sufficient time to examine the long-run performance for a three-year window after listing.

Ninety-two firms listed on the KSE between 1997 and 2007. For inclusion in the final sample, the firm must be listed on the KSE official market and have at least two published annual reports before listing. This requirement is crucial to calculate the discretionary accruals in the pre-listing financial year. As in Table 6.1, 8 KSCCs were deleted from the sample because annual report data was not available. In addition, 7 firms were deleted because they were public shareholding companies (KSCs). An additional 9 firms were eliminated because they have reported sales figures of zero in one or both pre-listing financial statements. The earnings management measures computed for these firms could have resulted in extreme values in the calculations and consequently lead to difficulty in interpreting the level of earnings management (Burghstahler, Hail & Leuz 2006; Spohr 2004). Hence, the final sample consists of 68 KSCCs, as presented in Table 6.1.

| Listing Firms, 1997–2007               | Number of Firms |
|--|-----------------|
| Total number of new listed firms       | 92              |
| Less                                   |                 |
| KSCs firms                             | (7)             |
| Firms with sales $= 0$                 | (9)             |
| Pre-listing annual reports unavailable | (8)             |
| Final Sample                           | 68              |

Table 6.1 Sample used for Testing the Hypotheses (1997–2007)

## 6.2.2 Data sources

Most prior earnings management studies conducted in developed countries use online databases and data archives. However, no comparable facilities exist in Kuwait; making access to the data very difficult. Obtaining the required data, especially the pre-listing financial statements, is a time-consuming task that requires substantial amounts of paper work and permissions from officials to access the data.

For testing H1a and H1b, the sample firms are examined in two time periods: the pre-listing and listing years. To be consistent with other studies and for comparison purposes, the post-listing year is also included in the analysis. Two prelisting annual reports are required to calculate earnings management in the pre-listing year. Pre-listing annual reports were obtained from two different sources: the prospectuses and the MoCI. The prospectuses were requested directly from each listing KSCC for the years 1997 through to 2007. Thirty-three prospectuses were gathered, representing about 40% of the initial sample. For the remaining sample firms, pre-listing annual reports were obtained from the MoCI archive. Forty-nine firms' pre-listing annual reports were accessed from the MoCI archive, which is about 60% of the initial sample.

## 6.2.3 Timeline

Following prior studies and as in figure 6.1, Fiscal Year 0 is considered as the fiscal year ending immediately after listing, so that Fiscal Year 0 financial statements are the first financial statements reported after listing that includes both pre- and post-listing months. Similarly, Fiscal Year -1 ends before the date of listing and refers to the most recent set of pre-listing financial statements available to market participants (e.g., investors and regulators) and issued before listing. Fiscal Year -2

refers to the financial statement issued two years before listing. Fiscal Year +1 refers to the first post-listing financial year.



Figure 6.1.Timeline for Testing H1

## 6.2.4 Sample descriptive statistics

Table 6.2 shows the distribution of the sample by industry and year. It can be seen that the number of firms listing began an upward trend in 2004 and peaked in 2005. There is some clustering in the time period specifically in the years immediately after the elimination of Saddam Hussein's regime in 2003.

| Sectors | Real Estate | Industrial | Service | Food | Frequency | %     |
|---------|-------------|------------|---------|------|-----------|-------|
| 1997    | 0           | 3          | 1       | 0    | 4         | 5.8   |
| 1998    | 1           | 2          | 0       | 0    | 3         | 4.4   |
| 1999    | 3           | 0          | 0       | 0    | 3         | 4.4   |
| 2000    | 0           | 0          | 1       | 0    | 1         | 1.4   |
| 2001    | 0           | 0          | 0       | 0    | 0         | 0     |
| 2002    | 1           | 1          | 1       | 0    | 3         | 4.4   |
| 2003    | 0           | 2          | 1       | 0    | 3         | 4.4   |
| 2004    | 0           | 2          | 5       | 0    | 7         | 10.3  |
| 2005    | 7           | 1          | 10      | 0    | 18        | 26.5  |
| 2006    | 1           | 2          | 10      | 0    | 13        | 19.2  |
| 2007    | 4           | 1          | 7       | 1    | 13        | 19.2  |
| Total   | 17          | 14         | 36      | 1    | 68        | 100.0 |

 Table 6.2 Listing KSCCs by Industry and Year: Time Distribution of the Sample (1997–2007)

Four of the sample years—2004, 2005, 2006, and 2007—are very active and contain about 75% of the firms listed during the sample period. The highest level of listing is in 2005, which accounts for 26.5% of the sample. That is understandable since, as explained in Chapter 2, the year 2005 witnessed an enormous amount of financial growth and an economic boom. The number of listings in the food sector is only one firm. This is reasonable since the total number of listed food sector firms on the KSE at the end of 2010 is six. Listing firms in the service sector dominate the market during the sample period, with 52.9% of the total number of listed firms during the sample period. The main sample characteristics by sector in the listing year are reported in Table 6.3. The food sector is not considered in this discussion because it includes only one firm. Firms in the real estate sector are the most mature, the largest, and the most profitable compared to other sectors. Firms in the service

sector, on the other hand, go public at the relatively young age of about 14 years. The mean and medians for age show that most firms are well-established before listing. However, the minima indicate that there are at least some relatively new firms.

There are no substantial differences in the sample characteristics between the industrial sector and the service sector. The only difference can be seen in the size of firms in the service sector, with a mean of total assets of about KD 29 million, as compared with a mean of total assets of about KD 21 million in the industrial sector. This difference is even more pronounced when medians are considered.

|                                    | Mean  | Median | Minimum | Maximum |
|------------------------------------|-------|--------|---------|---------|
| *Age (years)                       |       |        |         |         |
| Real estate                        | 18.18 | 22.0   | 3.0     | 36.0    |
| Industrial                         | 15.36 | 14.0   | 4.0     | 34.0    |
| Service                            | 14.06 | 8.5    | 4.0     | 41.0    |
| ^ROA                               |       |        |         |         |
| Real estate                        | 0.21  | 0.13   | 0.00    | 1.30    |
| Industrial                         | 0.14  | 0.09   | 0.04    | 0.36    |
| Service                            | 0.14  | 0.11   | 0.01    | 0.68    |
| <b>#Total Assets (KD millions)</b> |       |        |         |         |
| Real estate                        | 62.2  | 36.9   | 8.6     | 252.0   |
| Industrial                         | 20.9  | 7.7    | 4.4     | 137.0   |
| Service                            | 29.2  | 18.0   | 3.4     | 243.0   |
| \$KD EPS                           |       |        |         |         |
| Real estate                        | 32.69 | 22.71  | -3.0    | 149.0   |
| Industry                           | 27.94 | 20.00  | 10.0    | 85.0    |
| Service                            | 35.06 | 24.52  | 6.0     | 153.0   |

Table 6.3 Sample Characteristics by Industry at Listing (Year 0)

Notes:

\*Age is measured from the date of incorporation to listing, reflecting the MC's 3-year minimum operating history requirement.

^ROA is the net income standardized by total assets and used to proxy for firm performance.

- #Total Assets is used as a proxy for firm size.

- \$EPS = earnings per share.

Having discussed sample selection, data and descriptive statistics, test statistics undertaken to examine all hypotheses will be addressed with interpretations in the following sections.

## 6.3 KSCCS PRE-LISTING YEAR EARNINGS MANAGEMENT

Given the institutional setting of the Kuwaiti market, H1a posits that KSElisting firms will exhibit positive earnings management in the pre-listing financial year. The primary measure used to test H1a is the discretionary accruals of Year -1. A statistically significant positive measure of discretionary accruals in Year -1 will lend support to H1a. Testing this hypothesis involves two steps. The first step is to estimate the discretionary accruals using six different versions of the Jones model: three models based on total accruals and three models based on current accruals. Models based on total accruals are the modified Jones model, the cash flow model and the adjusted- performance model. Models based on current accruals are the current accruals model, the cash flow model and the adjusted-performance model. Building on the results of the first step, the second step is to perform a statistical test using the two-tailed t-test and Wilcoxon signed-rank test to examine whether the means and medians of the discretionary accruals in the pre-listing year are significantly different than zero.

#### 6.3.1 Estimation of discretionary accruals

The initial regressions are estimated from out-of-sample listed KSCCs. A listed KSCC refers to any company trading on the KSE in the real estate, industry, service, and food sectors at any time during the period 1997 to 2007 that did not list in the previous three years<sup>33</sup>. Thirteen year-by-year portfolios (1996–2008) are formed to estimate the nondiscretionary accruals. Portfolios vary in size across time. The number of firms in portfolios ranges from a minimum of 19 firms in 1996 to a maximum of 77 firms in 2008. As discussed in Chapter 5, a cross-sectional regression was performed separately for each year-by-year portfolio to estimate the coefficients of the discretionary accruals models. Each listing firm in the study sample is assigned to one of the portfolios, based on the sample firm's year of listing.

Consistent with the extant literature, all firm-year observations that do not have sufficient data to calculate earnings management proxies are deleted (Kothari, Leone & Wasely 2005). In addition, all firm-year observations where accounting items are exactly equal to zero are eliminated (Burghstahler, Hail & Leuz 2006). To mitigate the influence of outliers<sup>34</sup>, specific observations were deleted at three standard deviations away from their mean (Xie, Davidson & DaDalt 2003). A Casewise Diagnostics table generated by SPSS was also inspected for any cases that have standardised residual values above 3.0 or below -3.0. These cases are investigated to ensure that they represent genuine scores, not data errors (Cotter 1996). The results of the regression coefficients and descriptive statistics are shown in Table 6.4.

| Models based on Total Accruals 1. Modified Jones Model   |             |                    |            |           |  |  |  |
|--|-------------|--------------------|------------|-----------|--|--|--|
| $\frac{TA_{j,t}}{A_{j,(t-1+t)/2}} = \alpha_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}} \right] + \alpha_3 \left[ \frac{PPE_{j,t}}{A_{j,(t-1+t)/2}} \right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$  |             |                    |            |           |  |  |  |
| Coefficients   | Mean        | Median             | Minimum    | Maximum   |  |  |  |
| $\alpha_0$   | 0.0487      | 0.0320             | -0.04      | 0.25      |  |  |  |
| $\alpha_1$   | -81333.8400 | -15746.2600        | -407014.11 | 13253.01  |  |  |  |
| $\alpha_2$   | -0.0516     | -0.0420            | -0.55      | 0.18      |  |  |  |
| $\alpha_3$   | -0.0967     | -0.0860            | -0.21      | 0.01      |  |  |  |
| RE Sector  | -0.0014     | 0.0130             | -0.17      | 0.11      |  |  |  |
| IND Sector   | 0.0462      | 0.0590             | -0.10      | 0.18      |  |  |  |
| SERV Sector  | 0.0055      | 5 0.0170 -0.14 0.1 |            |           |  |  |  |
| Adjusted-R <sup>2</sup> 29.17 %  | )           |                    |            |           |  |  |  |
| 2.Cash Flow Model  |             |                    |            |           |  |  |  |
| $\frac{TA_{j,t}}{A_{j,(t-1+t)/2}} = \alpha_0 + \alpha_1 \left[\frac{1}{A_{j,(t-1+t)/2}}\right] + \alpha_2 \left[\frac{\Delta REV_{j,t}}{A_{j,(t-1+t)/2}}\right] + \alpha_3 \left[\frac{PPE_{j,t}}{A_{j,(t-1+t)/2}}\right] + \alpha_4 \left[\frac{\Delta CFO_{j,t}}{A_{j,(t-1+t)/2}}\right] + \sum_{i=1}^4 IND_i + \varepsilon_{j,t}$ |             |                    |            |           |  |  |  |
| Coefficients   | Mean        | Median             | Minimum    | Maximum   |  |  |  |
| $a_0$  | 0.0293      | 0.0050             | -0.08      | 0.27      |  |  |  |
| $\alpha_1$   | -58026.9000 | -9287.2200         | -409639.87 | 145385.33 |  |  |  |
| $\alpha_2$   | -0.0094     | 0.0390             | -0.54      | 0.19      |  |  |  |
| <i>a</i> <sub>3</sub>  | -0.0892     | -0.0740            | -0.28      | -0.01     |  |  |  |

Table 6.4 Estimated Coefficients of the Discretionary Accrual Models

<sup>&</sup>lt;sup>33</sup> The three-year condition is imposed in this study to allow the new listing KSCCs to clean their books of any opportunistic earnings management behaviour around lockup expiration periods, as discussed in Chapter 4.
<sup>34</sup>An outlier is a case that differs substantially from the main trend of the data (Field 2009).

| $\Delta CFO$   | -0.4661   | -0.4630   | -1.15  | 0.05                        |  |  |  |  |  |
|--|---|---|--|-----------------------------|--|--|--|--|--|
| RE Sector  | 0.0177  | 0.0230  | -0.18  | 0.13                        |  |  |  |  |  |
| IND Sector   | 0.0617  | 0.0700  | -0.11  | 0.20                        |  |  |  |  |  |
| SERV Sector  | 0.0161  | 0.0360  | -0.15  | 0.18                        |  |  |  |  |  |
| Mean Adjusted-R <sup>2</sup> 58.6 %  |   |   |  |                             |  |  |  |  |  |
| 3.Adjusted-Performa  | nce Model   |   |  |                             |  |  |  |  |  |
| $TA_{i,t}$   | $\begin{bmatrix} 1 \end{bmatrix} \begin{bmatrix} \Delta REV \end{bmatrix}$            | $V_{i,t} - \Delta T R_{i,t}$ [ P  | $PPE_{i,t}$ ] $\sum_{i=1}^{4}$                           |                             |  |  |  |  |  |
| $\frac{f_{i}}{A_{i}} = a_{0} + a_{1}$  | $\left \frac{1}{A_i(i-1+i)/2}\right  + a_2 \left \frac{1}{A_i}\right $                | $\frac{1}{(4-1+4)/2} + a_3 \left  \frac{1}{A_{i}} \right $  | $\frac{f_{j,t}}{1+t_{j,t}}$ +ROA <sub>j,t</sub> + $\sum$ | $IND_i + \varepsilon_{j,t}$ |  |  |  |  |  |
| Coefficients   | [-9,(t-1+t)/2] [ -9,  | $\frac{1}{1,(t-1+t)/2} \begin{bmatrix} \frac{1}{2},(t-1+t)/2 \end{bmatrix} \begin{bmatrix} \frac{1}{2},(t-1+t)/2 \end{bmatrix} = \frac{1}{t-1}$   |  |                             |  |  |  |  |  |
| coefficients   | 0.0052  |   | 0.15   | 0.10                        |  |  |  |  |  |
|  | 96387 6800  | 21720.0600  | 513830 /2  | 76452.15                    |  |  |  |  |  |
| $u_1$  | -90387.0800   | -21/20.0000   | -515659.42   | 0.13                        |  |  |  |  |  |
| <i>u</i> <sub>2</sub>  | -0.0801   | -0.0300   | -0.04  | 0.13                        |  |  |  |  |  |
|  | -0.0390   | -0.0890   | -0.19  | -0.01                       |  |  |  |  |  |
| ROA<br>RE Sector   | 0.4272  | 0.4210  | -0.02  | 0.11                        |  |  |  |  |  |
| IND Sector   | 0.0043  | 0.0030  | -0.14  | 0.11                        |  |  |  |  |  |
| SERV Sector  | 0.0381  | 0.0380  | -0.09  | 0.18                        |  |  |  |  |  |
| Moon Adjusted $P^2 A^3$  | 0.0117<br>8 270/  | -0.0070   | -0.14  | 0.20                        |  |  |  |  |  |
| Mean Aujusicu-A 4  | 5.2770  |   |  |                             |  |  |  |  |  |
| Models based on Cu   | want Acornals   |   |  |                             |  |  |  |  |  |
| 1 Current Accruals   | Model   |   |  |                             |  |  |  |  |  |
|  |   | 1 4   |  |                             |  |  |  |  |  |
| $\frac{CA_{j,t}}{A} = a_0 + \alpha_1$  | $\frac{1}{1}$ + $\alpha_2$ $\frac{\Delta REV_{j,t}}{1}$                               | $- + \sum IND_i + \varepsilon_{i,t}$  |  |                             |  |  |  |  |  |
| $A_{j,t-1}$ $A_{j,t-1}$  | $(t-1+t)/2$ $[A_{j,(t-1+t)/2}]$   | $2 \int \sum_{i=1}^{2} \sum_{i=1}^{n} $ |  |                             |  |  |  |  |  |
| Coefficients   | Mean  | Median  | Minimum  | Maximum                     |  |  |  |  |  |
| $\alpha_0$   | 0.0328  | 0.0200  | -0.07  | 0.23                        |  |  |  |  |  |
| $\alpha_1$   | -6259.7500  | 5099.7800   | -313083.31   | 502714.97                   |  |  |  |  |  |
| α <sub>2</sub>   | -0.0141   | 0.0100  | -0.56  | 0.38                        |  |  |  |  |  |
| RE Sector  | -0.0388   | -0.0480   | -0.29  | 0.10                        |  |  |  |  |  |
| IND Sector   | -0.0193   | 0.000   | -0.30  | 0.08                        |  |  |  |  |  |
| SERV Sector  | -0.0162   | -0.0060   | -0.32  | 0.13                        |  |  |  |  |  |
| Mean Adjusted- $R^2$ 1.  | .4 %  |   |  |                             |  |  |  |  |  |
| 2.Cash Flow Model  |   |   | 4  |                             |  |  |  |  |  |
| $CA_{j,t}$ [ 1 ] $\Delta REV_{j,t}$ ] $\Delta CFO_{j,t}$ ] $\sum_{i=1}^{4}$  |   |   |  |                             |  |  |  |  |  |
| $\frac{\alpha_{i}}{A_{i,t-1}} = a_0 + \alpha_1 \left  \frac{\alpha_{i,(t-1+t)/2}}{A_{i,(t-1+t)/2}} \right  + \alpha_2 \left  \frac{\alpha_{i,(t-1+t)/2}}{A_{i,(t-1+t)/2}} \right  + \alpha_4 \left  \frac{\alpha_{i,(t-1+t)/2}}{A_{i,(t-1+t)/2}} \right  + \sum_{i=1}^{N} IND_i + \varepsilon_{i,t}$ |   |   |  |                             |  |  |  |  |  |
| Coefficients   | Mean  | Median  | <sup><i>i</i>=1</sup> Minimum                            | Maximum                     |  |  |  |  |  |
| <i>a</i> <sub>0</sub>  | 0.0264  | -0.0050   | -0.10  | 0.22                        |  |  |  |  |  |
| $\alpha_1$   | 20278.5100  | 8455.3200   | -238958.79   | 628745.91                   |  |  |  |  |  |
| $\alpha_1$   | 0.0224  | 0.0350  | -0.49  | 0.40                        |  |  |  |  |  |
| $\Delta CFO$   | -0.3045   | -0.2630   | -0.87  | 0.23                        |  |  |  |  |  |
| RE Sector  | -0.0302   | -0.0190   | -0.26  | 0.10                        |  |  |  |  |  |
| IND Sector   | 0.0072  | 0.0090  | -0.25  | 0.10                        |  |  |  |  |  |
| SERV Sector  | 0.0050  | -0.0050   | -0.10  | 0.16                        |  |  |  |  |  |
| Mean Adjusted- $R^2$ 10  | 0.8%  |   |  |                             |  |  |  |  |  |
| 3-Adjusted-Performa  | nce Model   |   |  |                             |  |  |  |  |  |
| CA   |   | ι _ Ατρ ]   | 4  |                             |  |  |  |  |  |
| $\frac{c_{A_{j,t}}}{a} = a_0 + a_1$  | $\left \frac{1}{4}\right  + a_2 \left \frac{\Delta RL}{4}\right $                     | $\frac{\gamma_{j,t}}{  } + ROA_{j,t} + ROA_{j,t}$   | $+\sum IND_i + \varepsilon_{j,t}$                        |                             |  |  |  |  |  |
| $A_{j,(t-1+t)/2}$  | $\begin{bmatrix} A_{j,(t-1+t)/2} \end{bmatrix} \begin{bmatrix} A_{j,k} \end{bmatrix}$ | (t-1+t)/2 ]   | <i>i</i> =1  |                             |  |  |  |  |  |
| Coefficients   | Mean  | Median  | Minimum  | Maximum                     |  |  |  |  |  |
| $a_0$  | -0.0036   | -0.0260   | -0.10  | 0.20                        |  |  |  |  |  |
| α <sub>1</sub>   | -71773.8400   | -42676.5600   | -368396.86   | 196499.48                   |  |  |  |  |  |
| α <sub>2</sub>   | -0.0573   | 0.0030  | -0.74  | 0.34                        |  |  |  |  |  |
| ROA  | 0.5079  | 0.3440  | 0.13   | 1.69                        |  |  |  |  |  |
| RE Sector  | -0.0285   | -0.0360   | -0.30  | 0.12                        |  |  |  |  |  |
| IND Sector   | -0.0282   | -0.0090   | -0.35  | 0.08                        |  |  |  |  |  |
| SERV Sector  | -0.0158   | -0.0090   | -0.34  | 0.14                        |  |  |  |  |  |
| Mean Adjusted-R <sup>2</sup> 10.2 %  |   |   |  |                             |  |  |  |  |  |

Notes:

- This table presents descriptive statistics for the estimated coefficients that provide benchmarks used to estimate the pre-listing, listing, and post-listing nondiscretionary accruals for a sample of 68 KSCCs. Year-by-year regressions were estimated for the period (1996–2008) using portfolios of listing KSCC firms leading to a total number of observations of 552 firm-years. A "listed KSCC" refers to any company trading on the KSE that did not list on the KSE for the previous three years.
- Variables are defined as follows:  $TA_{j,t}$ = total accruals for estimation portfolio firm *j* in year *t*;  $CA_{j,t}$ = current accruals for estimation portfolio firm *j* in year *t*;  $A_{j,(t-1+t)/2}$ = average of the beginning and end of year total assets for estimation portfolio firm *j* in year *t*;  $\Delta REV_{j,t}$ = change in revenues for estimation portfolio firm *j* in year *t*;  $PPE_{j,t}$ = gross property, plant, and equipment for estimation portfolio firm *j* in year *t*;  $\Delta CFO_{j,t}$  = the change in cash flow from operation for KSCC sample firm *j* in year *t*;  $ROA_{j,t}$ = return on assets of the current year for estimation portfolio firm *j* in year *t*;  $\sum_{i=1}^{4} IND_{i}$  =series of industry dummies where variable equals 1 when the company is of the sector described by it and 0 otherwise;  $\varepsilon_{i,t}$  = error term for estimation portfolio firm *j* in year *t*.
- The variable  $a_1 \left[ \frac{1}{A_{j,(t-1+t)/2}} \right]$  is reported in unstandardized values, as in the studies by Bugshan (2005) and Whelan (2004) conducted in the Australian market, Koerniadi (2007) in the New Zeland market, and Shen, Coakley, and Instefjord (2008) in the Chinese market.

As expected, and similar to most other studies, the mean coefficient estimate on property, plant, and equipment (PPE) is negative for all models based on the total accrual method: the modified Jones model, the cash flow model based on total accruals, and the adjusted- performance model based on total accruals. The negative sign of the PPE coefficient is related to an income-decreasing accrual reflecting the impact of depreciation (Jones 1991). The signs for the changes in revenue coefficients were mostly negative. A mean positive coefficient for the change in revenue was generated by the cash flow model based on current accruals only. Jones (1991) observed that the sign of change in revenue may not be as obvious as the sign of the PPE. She gave a reasonable explanation by stating that 'a given change in revenue can cause income-increasing change in some working capital accounts (e.g., increase in account receivable) and income-decreasing changes in others (e.g., increases in account payable)' (p. 213). The percentage of positive coefficients of changes in revenue are 46% for the modified Jones model, 69% for the cash flow model based on total accruals, 31% for the adjusted-performance model based on total accruals, 62% for the current accruals model, 78% for the cash flow model based on current accruals and 54% for the adjusted-performance model based on current accruals. Consistent with Dechow and Dichev (2002), Kasznik (1999) and DuCharme, Malatesta and Sefcik (2001), both cash flow models-the cash flow model based on total accruals and the cash flow model based on current accruals generate a negative sign for cash flows from operations (CFO), reflecting the negative association between accruals and CFO.

Models using the total accruals method have more explanatory power than models using the current accrual method. The cash flow model based on total accruals provides the highest explanatory power at 58.6%, as compared with the adjusted-performance model based on total accruals and the modified Jones model, which show adjusted-R<sup>2</sup>s of 48.27% and 29.17% respectively. Both current accruals models—the cash flow model and the adjusted-performance model—show nearly the

same explanatory power of 10.8% and 10.2% as compared with the accruals model, which shows adjusted- $R^2$  of only 1.4%.

In this context, it is worth mentioning that Peasnell, Pope and Young (2000) generated relatively poor-fitting R-squared numbers for the cross-sectional expectations models used in their study<sup>35</sup>. They argue that the relatively high R-squared statistics do not certify that a particular model is sufficiently capable of partitioning accruals into discretionary and nondiscretionary components. They also state that 'the precise reasons why the models fit well in some settings and poorly in others remain unclear' (p. 321).

#### 6.3.2 Testing the existence of earnings management before listing (H1a)

Table 6.5 presents descriptive statistics for discretionary accruals and results for testing H1a based on the six discretionary accrual models in the three different testing periods: the pre-listing year (Year -1), the listing year (Year 0), and the postlisting year (Year +1). The estimated coefficients from the previous year-by-year regressions are then used in calculating the normal or nondiscretionary level of accruals for each listing firm. The magnitude of means and medians of discretionary accruals are positive in Year -1 for all models except for the Jones model, which reported a negative median of -0.39%, as shown in Panel A. It can be observed that the majority of models tested report discretionary accruals that are lower in the listing year (Year 0) than in the pre-listing year (Year -1), except for the cash flow model based on total accruals.

The highest number of firms with positive discretionary accruals is 45 in Year -1, generated by the cash flow model based on current accruals. On the other hand, the lowest number of firms with positive discretionary accruals is 33 in Year 0, generated by the modified Jones model. Model versions based on discretionary current accruals capture the highest level of pre-listing year earnings management, in contrast to model versions based on total accruals. All models except for the cash flow model based on total accruals have their average discretionary accruals peak in Year -1, decrease in Year 0, and then inflate in Year +1.

Hypothesis 1a predicts that KSE-listing firms exhibit positive earnings management in the pre-listing financial year. The parametric t-test and non-parametric Wilcoxonsigned rank test are used to assess whether the mean and medians of the pre-listing discretionary accruals are statistically different from zero. Due to the non-normal distribution of the discretionary accruals, and following Armstrong, Foster and Taylor (2009) and Teoh, Welch and Wong (1998b), the analysis of hypotheses H1a and H1b will rely on results extracted from the non-parametric Wilcoxon signedranked test<sup>36</sup>. However, results of the parametric t-test are also reported to allow

 $<sup>^{35}</sup>$  The majority of the adjusted- $R^2$  numbers reported by Peasnell, Pope and Young (2000) for their current accruals model are less than 5%. Habib and Hossain (2008), in their study of the Australian market, report 12%  $R^2$  or their modified Jones model. In the Spanish context, Delgado and Lara (2001) report adjusted- $R^2$  of 14.5% for both the modified Jones model and for the current accrual model. In addition, in his study of the Egyptian market, Kamel (2006) reports mean adjusted- $R^2$  figures of 11.30% and 11.50% for the modified Jones model and for the current accrual model.

<sup>&</sup>lt;sup>36</sup>Normality testing for the pre-listing year DA is based on the Kolmogorov-Simirnov and Sharipo-Wilk tests generated from SPSS. The normality results (p values) are as follows: 0.002 and 0.00 respectively for the Modified Jones model; 0.036 and 0.002 respectively for the Cash Flow model based on total accruals; 0.007 and 0.001 respectively for the Adjusted -Performance model based on total accruals; 0.017 and 0.00 respectively for the Current Accruals model; 0.026 and 0.00 respectively for the Cash Flow model based on current accruals and 0.001 and 0.00 respectively for the Adjusted -Performance model based on current accruals and 0.001 and 0.00 respectively for the Adjusted -Performance model based on current accruals.

comparison with other studies' results such as those of Ball and Shivakumar (2008) and Roosenboom, Van der Goot and Mertens (2003).

Table 6.5 Descriptive Statistics for the Discretionary Accrual Measures and Results for Testing H1a Classified by Testing Period for 68 KSCCs Sample Firms

|   | Median        | Mean         | Minimum  | Maximum | Number of     |  |
|---|---------------|--------------|----------|---------|---------------|--|
|   | DA            | DA           | DA       | DA      | firms         |  |
|   |               |              |          |         | with positive |  |
|   |               |              |          |         | DA            |  |
| Panel A. Modified Jones Mo                                    | del           |              | -        |         |               |  |
| Pre-listing year (Year -1)                                    | -0.0039       | 0.0429*      | -0.43    | 0.86    | 34            |  |
| Listing year (Year 0)   | -0.0096       | 0.0109       | -0.22    | 0.65    | 33            |  |
| Post-listing year (Year +1)                                   | 0.0192        | 0.0132       | -2.26    | 1.85    | 40            |  |
| Panel B. Cash Flow Model b                                    | based on Tota | l Accruals   |          |         |               |  |
| Pre-listing year (Year -1)                                    | 0.0044        | 0.0359*      | -0.38    | 0.72    | 36            |  |
| Listing year (Year 0)   | 0.0252        | 0.0343**     | -0.29    | 0.60    | 42            |  |
| Post-listing year (Year +1)                                   | 0.0155        | 0.0098       | -1.79    | 1.87    | 37            |  |
| Panel C. Adjusted-Performa                                    | nce Model ba  | sed on Total | Accruals |         |               |  |
| Pre-listing year (Year -1)                                    | 0.0244        | 0.0444*      | -0.39    | 0.86    | 37            |  |
| Listing year (Year 0)   | 0.0041        | -0.0099      | -0.40    | 0.32    | 36            |  |
| Post-listing year (Year +1)                                   | $0.0229^{+}$  | 0.019        | -1.82    | 1.54    | 39            |  |
| Panel D. Current Accruals M                                   | Aodel         |              |          |         |               |  |
| Pre-listing year (Year -1)                                    | 0.0511++      | 0.1225**     | -0.42    | 1.17    | 43            |  |
| Listing year(Year 0)  | 0.0129        | -0.0138      | -0.71    | 0.47    | 35            |  |
| Post-listing year (Year +1)                                   | 0.0243+       | 0.0330       | 1.81     | 1.10    | 42            |  |
| Panel E. Cash Flow Model b                                    | based on Curr | ent Accruals | 5        |         |               |  |
| Pre-listing year (Year -1)                                    | 0.0480++      | 0.1157**     | -0.45    | 1.18    | 45            |  |
| Listing year (Year 0)   | 0.0292        | 0.0044       | -0.67    | 0.48    | 42            |  |
| Post-listing year(Year +1)                                    | 0.0271        | 0.0283       | -1.52    | 1.10    | 40            |  |
| Panel F. Adjusted-Performance Model based on Current Accruals |               |              |          |         |               |  |
| Pre-listing year (Year -1)                                    | 0.0684++      | 0.1216**     | -0.39    | 1.13    | 41            |  |
| Listing year (Year 0)   | 0.0038        | -0.0298      | -0.80    | 0.45    | 35            |  |
| Post-listing year (Year +1)                                   | 0.0265++      | 0.0367       | -1.27    | 1.12    | 43            |  |

Notes:

- All values in the above table are reported as a fraction of average assets.
- \*\* and \* indicate significant difference between the means and zero at the 5% and 10% levels respectively, based on the two-tailed t-test. <sup>++</sup> and <sup>+</sup> indicate significant difference between the medians and zero at the 5% and 10% levels respectively, based on a two-tailed Wilcoxon signed-ranks test.
  - Some outliers were detected as described in section 6.3.1 for a number of KSCCs sample firms in the pre-listing year. These outliers were as follows:
- One outlier was reported by the modified Jones model for 1997 with a value of .86. Exclusion of this outlier would change the mean and median to .0307 and -.0113 respectively.
- Two outliers were reported by the current accruals model for 1998 and 2003 with values of 1.17 and .96 respectively. Exclusion of these outliers would change the means and medians to .0940\*\* and .0487<sup>++</sup> respectively.
- One outlier was reported by the cash flow model using total accruals for 1997 with a value of .72. Exclusion of this outlier would change the mean and median to .0257 and -.0036 respectively.
- Four outliers were reported by the cash flow model using current accruals, one for 1998 with a value of 1.18, one for 2003 with a value of .87, and two for 2005 with values of .90 and .79 respectively. Exclusion of these outliers would change the means and medians to .0647\*\* and .0316<sup>++</sup> respectively.
- One outlier was reported by the adjusted- performance model using total accruals for 1997 with a value of .86. . Exclusion of this outlier would change the mean and median to .0321 and .0188 respectively.

- Two outliers were reported by the adjusted- performance model using current accruals for 1998 and 2003 with values of 1.13 and .96 respectively. Exclusion of these outliers would change the means and medians to .0936\*\* and .0585<sup>++</sup> respectively.

Models based on current accruals in Panels D, E, and F yield the highest level of positive discretionary accruals (medians and means) in Year -1. The current accruals model reports medians (and means) of 5.11% (12.25%) and 4.8% (11.57%) for the cash flow model based on current accruals, and 6.84% (12.6%) for the adjusted-performance model based on current accruals. Further, they are statistically different from zero at the 5% level based on Wilcoxon signed-rank tests and *t*-tests.

Test results from models based on total accruals, reported in Panels A, B and C, also show medians that are only -0.39%, 0.44%, and 2.4% for the modified Jones model, the cash flow model, and the performance model, respectively. While the mean discretionary accruals are statistically significant, ranging from 4.29% for the modified Jones model, 3.59% for the cash flow model, and 4.44% for the adjusted-performance model, they are influenced by outliers. When outliers (reported at the bottom of Table 6.5) are excluded from the sample, the means continue to be positive but are no longer statistically significant.

In summary, the results provide some evidence of earnings management behaviour before listing in the Kuwaiti context by KSCCs over the study period. H1a is supported when current accrual models are considered, however, the results are not statistically significant when total accruals models are used.

The high magnitude of positive discretionary accruals in the pre-listing year detected using the current accruals-based models can be explained using two interpretations from the literature. The first interpretation is that KSCCs listing firms use current discretionary accruals to deliberately manage earnings in the pre-listing year to meet profit targets in order to list on the KSE. As a result, discretionary accruals immediately decline in the listing year (as reported by results) due to current accruals reversal (as the reversal of these accruals occurs within a year) and to the two-auditor requirement for public KSCCs (Dechow & Dichev 2002). The second interpretation is that managers have more discretion over current accruals and thus current accruals are the component most easily subject to successful managerial manipulation (Teoh, Welch & Wong 1998a). Athanasakou, Strong and Walker (2009) used the current accruals method in their study of analyst expectations and forecasts for three reasons. First, studies agree that working capital accruals account for most of the variation in total accruals (Dechow & Dichev 2002; Sloan 1996; Subramanyam 1996; Teoh, Welch & Wong 1998b). Second, current accruals are flexible than noncurrent accruals (e.g., depreciation, amortization, more impairments) due to their frequent occurrence and the higher degree of judgment involved in their estimation. Third, noncurrent accruals are more visible than current accruals and need more lead time to change before listing. Therefore, greater reliance is placed on the results of the current accruals models, which support H1a.

## 6.3.3 Testing the pre-listing earning management vs. listing-year earnings management (H1b)

As discussed in relation to the analysis section of H1a, significantly high positive levels of pre-listing earnings management were detected by discretionary accruals models based on current accruals. H1b posits that earnings management in Year -1 (pre-listing year) is greater than for Year 0 (listing year). Current accruals

models reported in Table 6.5 show a pattern consistent with Year 0 earnings management being mostly lower than earnings management in Year -1.

To determine if this pattern is statistically significant, the parametric matchedpairs t-test and the nonparametric Wilcoxon signed-rank test were used to examine whether the earnings management in Year -1 is statistically greater than that of Year 0. The t-test analyses the differences in the means of the discretionary accruals in the pre-listing and listing years. The nonparametric Wilcoxon signed-rank test examines the significance of the differences in the discretionary accruals in the pre-listing and listing years, which is based on the differences between negative and positive ranks. Effect sizes for group comparisons (r-score) are also calculated based on Cohen's (1988) criteria. Tabachnick and Fidell (2007, p. 54) define the effect size as 'a set of statistics that indicates the relative magnitude of the difference between means, or the amount of the total variance in the dependent variable that is predictable from knowledge of the levels of the independent variable'. Effect sizes are useful because they provide an objective and standardized measure of the magnitude of observed effect (Field 2009) and the strength of the association between variables (Pallant 2011). Table 6.6 shows the results of the parametric matched-pairs t-test and Table 6.7 summarizes the result of the nonparametric Wilcoxon signed-rank test for the discretionary accruals models used.

Table 6.6 Comparison between Pre-listing and Listing-Year Earnings Management based on Matched-Pairs t-Test

| Model tested                   | Testing period   | Mean DA | t      | p-value | r-score |
|--------------------------------|------------------|---------|--------|---------|---------|
| Models based on Total Accruals |                  |         |        |         |         |
| 1. Modified Jones              | Pre-listing Year | 0.042   | -1.075 | 0.143   | 0.13    |
|                                | Listing Year     | 0.010   |        |         |         |
| 2. Cash Flow Model             | Pre-listing Year | 0.035   | 0.079  | 0.469   | 0.00    |
|                                | Listing Year     | 0.034   |        |         |         |
| 3. Adjusted-Performance Model  | Pre-listing Year | 0.044   | 1.901  | 0.031*  | 0.23    |
| -                              | Listing Year     | -0.009  |        |         |         |
| Models Based on Current Accru  | als              |         |        |         |         |
| 1. Current Accruals Model      | Pre-listing Year | 0.122   | 2.605  | 0.005*  | 0.30    |
|                                | Listing Year     | -0.013  |        |         |         |
| 2. Cash Flow Model based on    | Pre-listing Year | 0.115   | 2.263  | 0.013*  | 0.27    |
| Current Accruais               | Listing Year     | 0.004   |        |         |         |
| 3. Adjusted-Performance Model  | Pre-listing Year | 0.121   | 2.712  | 0.004*  | 0.31    |
| based on Current Accruals      | Listing Year     | -0.029  |        |         |         |

Notes:

- r-score contributes to the effect size which can be obtained from  $r = \sqrt{\frac{t^2}{t^2 + df}}$  using Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

\*significant at 0.05 level (one-tailed t-test).

The parametric matched-pairs t-test in Table 6.6 indicates that means for the discretionary accruals derived from models based on current accruals were significantly greater in the pre-listing year than in the listing year. The r-score for those models ranges from a small to medium size effect of 0.27 for the cash flow model based on Cohen's (1988) criteria and from a medium to large effect of 0.30

and 0.31 for the current accruals model and for the adjusted performance model respectively. These results support the statement of H1b that KSCCs engage in earnings management in the pre-listing year more than in the listing year.

On the other hand, models based on total accruals report mixed results. The means of the three models are greater in the pre-listing year than in the listing year. However, the difference is not significant for the modified Jones or cash flow models, which respectively demonstrated a small effect size of 0.13 and a very small effect size of 0.009 based on Cohen's criteria. In contrast, the adjusted-performance model based on total accruals shows a significant difference in the means of the discretionary accruals in the pre-listing year as compared with the listing year, at 0.05 level with a small to medium Cohen effect size of 0.27. This result suggests that the discretionary accruals calculated using the adjusted-performance model based on total accruals were significantly higher in the pre-listing year as compared with the listing year. Therefore, results based on the matched-pair t-test suggests that KSE-listing firms show significantly greater positive earnings management in the pre-listing financial year than in the listing year for four of the models tested—which gives some support to hypothesis H1b.

In the Wilcoxon signed-rank test results in Table 6.7, positive ranks refer to situations in which the discretionary accruals variables in the pre-listing year were greater than those in the listing year. Negative ranks refer to situations in which the discretionary accruals variables in the pre-listing year were less than those in the listing year.

| Model Tested    | Testing period   | Median | Positive | Negative | Z-     | n-value | r-    |
|-----------------|------------------|--------|----------|----------|--------|---------|-------|
| Model Tested    |                  | DA     | Ranks    | Ranks    | score  | p value | score |
| Models based on | Total Accruals   |        |          |          |        |         |       |
| 1. Modified     | Pre-listing Year | -0.003 | 40       | 28       | -1.002 | 0.158   | 0.12  |
| Jones Model     | Listing Year     | -0.009 |          |          |        |         |       |
| 2. Cash Flow    | Pre-listing Year | 0.004  | 33       | 35       | -0.086 | 0.466   | 0.01  |
| Model           | Listing Year     | 0.025  |          |          |        |         |       |
| 3.Adjusted-     | Pre-listing Year | 0.024  | 41       | 27       | -1.448 | 0.074*  | 0.18  |
| Performance     | Listing Voor     | 0.004  |          |          |        |         |       |
| Model           | Listing Year     |        |          |          |        |         |       |
| Models based on | Current Accruals |        |          |          |        |         |       |
| 1.Current       | Pre-listing Year | 0.051  | 36       | 32       | -1.833 | 0.033** | 0.22  |
| Accruals Model  | Listing Year     | 0.012  |          |          |        |         |       |
| 2.Cash Flow     | Pre-listing Year | 0.048  | 40       | 28       | -1.491 | 0.068*  | 0.18  |
| Model           | Listing Year     | 0.029  |          |          |        |         |       |
| 3.Adjusted-     | Pre-listing Year | 0.068  | 36       | 32       | -1.900 | 0.028** | 0.23  |
| Performance     | Listing Voor     | 0.003  |          |          |        |         |       |
| Model           | Listing Tear     |        |          |          |        |         |       |

Table 6.7 Comparison between Pre-listing and Listing-Year Earnings Management based on Wilcoxon Signed-Rank Test

Notes:

- r-score contributes to the effect size, which can be obtained by dividing the z-score by the square root of N, where N = total number of cases using the Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect and 0.5 = large effect.

- \*\* indicates significant at 0.05 level and \* indicates significant at 0.10 level (one-tailed test).

- Positive rank = higher discretionary accruals in the pre-listing year than in the listing year; Negative rank = lower discretionary accruals in the pre-listing year than in the listing year. For the discretionary accruals derived from the current accruals–based models, there were more positive ranks than negative ranks for the discretionary accruals reported. In addition, the difference was significant at 0.05 level for the current accruals model and for the adjusted performance model, and significant at 0.10 level for the cash flow model. The r-score for these models ranges between the small to medium size effect based on the Cohen (1988) criteria of 0.22, 0.18 and 0.23 for the current accruals model, the cash flow model, and the adjusted-performance model respectively. This suggests that KSE-listing firms show significantly greater positive earnings management in the pre-listing financial year than in the listing year based on the current accrual models and supports H1b.

For the other set of models based on total accruals, the discretionary accruals variables with positive ranks are also greater than the discretionary accruals variables with negative ranks, except for the cash flow model based on total accruals, which has more negative than positive ranks. This also suggests that the pre-listing discretionary accruals were significantly greater than discretionary accruals in the listing year for the adjusted-performance model at the 0.10 level. However, the Wilcoxon signed-rank test finds no significant reduction in the earning management behaviour from the pre-listing year to the listing year among the modified Jones model and the cash flow model using total accrual method. The r-scores for these models are relatively smaller than those generated by the current accruals models and range between very small to small in size effect with scores of 0.12, 0.01 and 0.18 for the modified Jones model, the cash flow model, and the adjusted-performance model respectively.

Overall, the results of the Wilcoxon signed-rank tests reported in Table 6.7 are consistent with the matched-pairs t-tests results reported in Table 6.6 for all models based on current accrual and for the adjusted-performance model based on total accruals. Both results reveal a statistically significant reduction in earnings management behaviour by KSCCs in the listing year as compared with the pre-listing year. While the evidence relating to H1b is mixed, it tends to support this hypothesis when models based on current accruals are considered.

# 6.4 TESTING THE PRE-LISTING EARNINGS MANAGEMENT AND PROFIT REQUIREMENT (H2)

An interesting institutional feature of the KSE is the pre-listing profit requirement. The pre-listing profit requirement remained at 5% from 1997 until 29 November 2004. Then, as noted in Chapter 2, Resolution No. 3 (2004) increased the pre-listing profit requirement to a minimum average of 7.5% of a company's paid-in capital. Due to this substantial change, H2 posits that firms listed on the KSE from 30 November 2004 through to 2007 would have had a greater incentive to inflate their earnings in the pre-listing year than firms listed before 30 November 2004 due to the new listing requirement to increase earnings by an additional 2.5%.

## 6.4.1 Sample structure

The same sample for testing H1a and H1b is used for testing this hypothesis. The sample of 68 KSCCs firms is divided into two groups. Group 1 consists of 22 KSCCs listed before the profit requirement change (before 30 November 2004), while group 2 consists of 46 KSCCs listed during the profit requirement change (from 30 November 2004 through to 31 December 2007). Table 6.8 shows the

breakdown of the KSCCs sample into two groups, and test for difference in discretionary accruals between these two groups.

### 6.4.2 Testing hypothesis H2 and results

Due to the small number of sample firms in each group and to the non-normal distribution of discretionary accruals for these groups<sup>37</sup>, non-parametric tests are used to examine this particular hypothesis (Field 2009; Pallant 2011). Two nonparametric statistics were undertaken to check the validity of H2 as this type of test is not influenced by the existence of outliers. First, the nonparametric median test was performed to investigate if there is a significant difference in the discretionary accruals medians for the two groups. Second, the nonparametric Mann-Whitney U test was performed to investigate if group 2 exhibited significantly higher pre-listing discretionary accruals than group 1. As reported in Table 6.8, the median test shows no significant differences in medians for the two groups.

In addition, the Mann-Whitney U test indicates no statistically significant difference between the two groups' discretionary accruals. The p-values reported by the median and Mann-Whitney U tests are not significant. In addition, the size effect of all groups show a very small r based on Cohen's criteria. This finding does not support H2 and indicates that the increase in the profit requirement from 5% to 7.5% in 2004 was not associated with a significant increase in earnings management.

Table 6.8 Comparisons of Pre-listing Discretionary Accruals (DA) between Profit Requirement Groups

|                                  | Results based on Median test                    |        |       | Results based on Mann-<br>Whitney U test |         |
|----------------------------------|---|--------|-------|--|---------|
| Model tested                     | Group 1 DA<br>medianGroup 2<br>DA medianp-value |        |       | p-value                                  | r-score |
| Models based on Total Acc        | ruals   |        |       |  |         |
| 1. Modified Jones                | -0.007  | -0.003 | 0.795 | 0.453                                    | -0.01   |
| 2. Cash Flow Model               | 0.006   | 0.003  | 0.795 | 0.396                                    | -0.03   |
| 3. Adjusted-Performance<br>Model | 0.027   | 0.024  | 0.795 | 0.486                                    | 0.00    |
| Models based on Current A        | Accruals  |        |       |  |         |
| 1.Current accruals model         | 0.040   | 0.055  | 0.795 | 0.495                                    | 0.00    |
| 2.Cash Flow Model                | 0.029   | 0.066  | 0.795 | 0.479                                    | 0.00    |
| 3-Adjusted-Performance<br>Model  | 0.055   | 0.068  | 0.795 | 0.412                                    | -0.02   |

Notes.

 $r = \frac{Z}{\sqrt{N}}$  Where r denotes the effect size, Z = z-score, and N = total number of observations using the Cohen criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

Group 1 consists of 22 KSCCs listed before the profit requirement change (before 30/11/2004), while group 2 consists of 46 KSCCs listed during the profit requirement change (from 30/11/2004 through 31/12/2007).

<sup>&</sup>lt;sup>37</sup>The normality assumption is tested for each group using the Kolmogorov-Smirnov and Sharipo-Wilk tests provided by SPSS.
### 6.5 TESTING THE PRE-LISTING EARNINGS MANAGEMENT AND AUDITOR REPUTATION (H3)

H3 relates to auditor reputation and to the extent of KSCCs earnings management in the pre-listing year. H3 posits that the extent of discretionary accruals in the pre-listing year is inversely related to the auditor's reputation.

#### 6.5.1 Sample structure

To examine whether more prestigious auditors succeed in suppressing potential earnings management by KSCC firms, the pre-listing KSCCs sample is divided into two groups based on auditor reputation. It is worth mentioning here that no official ranking of auditors in Kuwait is available. Thus, six auditing firms are classified as higher reputational auditors as discussed in more detail in sections 3.5.3.4 and 4.4.3. These include the four local auditing firms affiliated with the Big Four international auditing firms: PricewaterhouseCoopers, KPMG, Ernst & Young, and Deloitte, Touche & Tohmatsu (Al-Shammari, Al-Yaqout & Al-Hussaini 2008). Based on their high market share, two other local firms-namely, Anwar Al-Qatami & Co. and Al-Bazei & Co.-are also considered as high-reputational auditing firms. All other auditing firms are classified as low-reputation. Group 1 comprises 56 KSCCs hiring high-reputation auditing firms and group 2 comprises 12 KSCCs hiring lowreputation auditing firms. It is important to point out here that auditor reputation is measured based on the one-auditor requirement rather than the two-auditor requirement. As discussed in Chapter two, pre-listing KSCCs are required by law to appoint one auditor only, the two auditor-auditor requirement applies for KSCCs only after they have listed.

#### 6.5.2 Testing H3 and results

Three nonparametric tests were undertaken to test H3. The median test is used to test for a statistical difference of the medians between the groups. The second test was undertaken to investigate whether there is any evidence that discretionary accruals differ between the two groups: that is, KSCCs audited by high-reputation firms and KSCCs audited by low-reputation firms. The comparison of discretionary accruals across these groups is accomplished by using the nonparametric Mann-Whitney (one-tailed) U test. The bivariate nonparametric Spearman's rank correlation test is also undertaken (the third test) to determine the association between pre-listing earnings management and auditor reputation and the direction of this association. Table 6.9 presents the results and corresponding test statistics for comparing discretionary accruals between the two KSCC subgroups based on auditor reputation.

The difference in discretionary accruals between the two groups (KSCCs employing high-reputation auditor and KSCCs employing a low-reputation auditor) are not significant for any models tested using the Median and the Mann-Whitney (one-tailed) U test. Moreover, the effect size is very small (less than 0.1) for all models tested using the Cohen criteria. While the Spearman's rank correlation shows a negative association between auditor reputation and pre-listing earnings management for all models, these correlation coefficients are not significant for any models tested. These results are inconsistent with the proposition of the existence of the inverse relationship between auditor reputation and pre-listing earning management as hypothesized in H3.

| Results based on Median test        |   |  |             | Results b<br>Mann-W<br>test | ased on<br>hitney | Results based<br>on Spearman's<br>test |             |
|-------------------------------------|---|--|-------------|-----------------------------|-------------------|--|-------------|
| Model tested                        | Median<br>DA for<br>High-<br>reputation<br>Auditor<br>group | Median DA<br>for Low-<br>reputation<br>Auditor | p-<br>value | p-value                     | r-score           | Correl<br>ation<br>Coeffi<br>cient     | p-<br>value |
| Models based on To                  | tal Accruals  |  |             |                             |                   |  |             |
| 1-Modified Jones                    | -0.011  | 0.029  | 0.750       | 0.355                       | -0.04             | -0.04                                  | 0.357       |
| 2-Cash Flow<br>Model                | 0.004   | -0.011   | 0.750       | 0.468                       | -0.00             | -0.01                                  | 0.468       |
| 3-Adjusted-<br>Performance<br>Model | 0.081   | 0.048  | 0.750       | 0.380                       | -0.03             | -0.03                                  | 0.381       |
| Models based on Cu                  | rrent Accruals  |  |             |                             |                   |  |             |
| 1-Current<br>Accruals Model         | 0.042   | 0.084  | 0.750       | 0.260                       | -0.07             | -0.07                                  | 0.262       |
| 2-Cash Flow<br>Model                | 0.032   | 0.091  | 0.750       | 0.244                       | -0.08             | -0.08                                  | 0.247       |
| 3-Adjusted-<br>Performance<br>Model | 0.058   | 0.096  | 0.750       | 0.292                       | -0.06             | -0.06                                  | 0.294       |

Table 6.9 Comparisons of Pre-listing Discretionary Accruals (DA) between Auditors Reputation Groups

Notes:

 $r = \frac{Z}{\sqrt{N}}$  Where r denotes the effect size, Z = z-score, and N = the total number of observations using the Cohen criteria of .1 = small effect, .3 = medium effect, and .5 = large effect.

- No official ranking of auditors in Kuwait is available. Thus, Big Six auditing firms are used. These include the four local auditing firms affiliated with the Big Four international auditing firms: Pricewaterhouse Coopers, KPMG, Ernst & Young, and Deloitte, Touche, & Tohmatsu (Al-Shammari, Al-Yaqout & Al-Hussaini 2008). Based on their high market share, two other local firms—namely, Anwar Al-Qatami & Co. and Al-Bazei & Co. —are also considered as Big Six auditing firms. Thus, the Big Six auditing firms (56 KSCCs) and Non-Big-Six auditing firms (12 KSCCs) are used in this study as proxies for high- and low-reputation auditors respectively.

Since there is no official ranking of auditors in Kuwait that can be used as guidance in this study, another sensitivity test is undertaken to ensure the results are not attributable to the classification system used for high and low reputation auditors'. The group separation criteria used to test H3 is modified and the sample firms are reconstructed into two new groups. The Big Four auditing firms (31 firms) include the four local auditing firms affiliated with the Big Four international auditing firms: PricewaterhouseCoopers, KPMG, Ernst & Young, and Deloitte, Touche, & Tohmatsu and the Non-Big-four auditing firms (37 firms). Thus, the local audit firms with large market share are no longer included in the high reputation auditor group. The (unreported) results are essentially the same as the initial tests results. There were no significant differences in the pre-listing year earnings management behaviour between firms with high- and low-reputation auditors. In

addition, there appears to be no link between auditor reputation and pre-listing earnings management shown by Spearman's rank correlation test.

Although results from the test statistics are inconsistent with the prediction of the existence of the inverse relationship between auditor reputation and pre-listing earnings management, the institutional setting of Kuwait discussed in Chapter 2 provides reasonable justification for them. It has been reported that Kuwaiti regulators have inadequate judiciary powers as evidenced by the low level of litigation against auditors (Alanezi 2006). As a result, the outcomes from examining H3 confirm that auditors, whether of high or low reputation, do not seem to behave as if they consider legal liability a major risk when conducting their audits. While the above univariate analysis provides a useful initial analysis of the relation between pre-listing earnings management and auditor reputation, multivariate analysis will enable exploration of this hypothesis by controlling for additional factors that may influence the level of the pre-listing earnings management.

#### 6.5.3 Multivariate analysis

The aim of this multivariate analysis is to further investigate the effect of auditor reputation on pre-listing earnings management (H3) while controlling for additional factors that may influence the level of earnings management. The level of pre-listing discretionary accruals is regressed on a dummy variable indicating auditor reputation and other control variables that have been identified in prior literature as potentially influencing the level of earnings management. These control variables are:

Auditor change: Auditor change usually signals an increased possibility of earnings management in financial reporting, which may result in lower-quality earnings numbers (Lin, Liu & Wang 2009; Nelson, Elliott & Tarpley 2002).When firms switch auditors, they can switch downward (from a large to small auditing firm) or switch upward (from a small to large auditing firm) (Francis & Krishnan 1999). Regardless of the direction of a change, Jeong and Rho (2004) find that new auditors tend to attribute previous accounting irregularities to the previous auditor. Therefore, prior year adjustments increase after the change and, thus, a positive coefficient in the auditor-change is expected.

Leverage ratio: Measured as the percentage of total debt to total assets (Katz 2009). It has been argued that firms with higher leverage are more likely to engage in earnings management (Aharony, Lin-Chan & Loeb 1993; Beneish 2001; Scott 2009). Violation of covenants and debt agreements impose high penalty rates and costs. Therefore, not breaching the conditions of debt covenants is thought to provide an incentive for firms to engage in earnings-management practice to avoid the cost of breach of covenant. This suggests an expected positive relationship between earnings management and leverage (Ahmad-Zaluki, Campbell & Goodacre 2011; Lee & Masulis 2006). Beatty, Weber and Yu (2008) argue that borrowers prepare more conservative financial statements in order to satisfy lenders' requirements, making it difficult for managers to engage in earnings management and, as a result, a negative relation between leverage ratio and earnings management could result (Lee & Masulis 2006).

*Firm age*: Is the firm age calculated from the date of incorporation to the issuing year. It can be argued that as firms age, they are more likely to use a sophisticated accounting system and have a lower level of information asymmetry

(Ahmad-Zaluki, Campbell & Goodacre 2011; Lee & Masulis 2006). Therefore, this implies a negative association between a firm's age and the level of earnings management.

*Firm size*: The size is a proxy for increased agency costs and a greater need for monitoring by auditors (Broye & Weill 2008). The size used is a control variable and is measured as the natural log of assets. Larger companies are expected to use larger audit firms (Knechel, Niemi & Sundgren 2008), thus reducing the chances of opportunistic earnings management (Ahmad-Zaluki, Campbell & Goodacre 2011). Previous studies suggest a negative relationship between firm size and earnings management (Aharony, Lin-Chan & Loeb 1993; Ahmad-Zaluki, Campbell & Goodacre 2011; Lee & Masulis 2006).

*Total Accruals*: Becker et al.(1998) argue that firms with larger absolute value of total accruals will show higher discretionary accruals. Therefore, firms with endogenous accruals-generating potential are most likely to hire a high reputational auditing firm to give a signal that earnings management is being constrained by the presence of a high reputation auditing firm (Becker et al. 1998). To control for the possibility that KSCCs sample firms with large absolute values of total accruals also have large pre-listing discretionary accruals, and following Becker et al.(1998) and Jeong and Rho (2004), the absolute value of total accruals is included as a control variable in the regression. As in Becker et al.(1998) and Jeong and Rho (2004), a positive coefficient is expected on this variable.

*Performance (ROA and CFO)*: Two performance-related variables are controlled for in the regression model: ROA and CFO. Dechow (1995) shows that accruals are influenced by current and past performance and that operating cash flows are negatively correlated with the level of accruals. In addition, Kothari, Leone and Wasley (2005) argue that discretionary accruals models are often mis-specified for high performance firms and should be controlled by using ROA. In models that already include ROA and CFO as a control variable in their original equation when estimating discretionary accruals, ROA and CFO are not going to be included as a control variable in the multivariate analysis again. ROA is defined as income before extraordinary items scaled by total assets; and CFO is defined as cash flow from operation scaled by total assets.

Therefore, the multiple regression model that is estimated to investigate the effect of auditor reputation on pre-listing earnings management while controlling for additional factors that may influence the level of this accruals is as follows:

 $DA_i = a_0 + AuditorRep_i + AuditorChange_i + LEVERAGE_i + AGE_i + SIZE_i + TotalAccruals_i + ROA_i + CFO_i + \varepsilon_i$ 

(20)

Where:

 $DA_i$  = the pre-listing discretionary accruals scaled by average assets generated from six discretionary accruals models; the current accruals model, the cash flow model based on current accruals, the adjusted-performance model based on current accruals, the modified Jones model, the cash flow model based on total accruals and the adjusted-performance model based on total accruals; AuditorRep<sub>i</sub> = dummy variable equal to one for firms hiring a high reputation auditor and zero

otherwise;

AuditorChange<sub>i</sub> = dummy variable equal to one for firms changing their auditor in year -1 and zero otherwise;

 $LEVERAGE_i$  = the percentage of total debt to total assets;

 $AGE_i$  = the log of firm age;  $SIZE_i$  = the log of total assets;  $TotalAccruals_i$  = the absolute value of total accruals;  $ROA_i$  = income before extraordinary items scaled by average assets;  $CFO_i$  = cash flow from operation scaled by average assets;  $\varepsilon_i$  = error term.

#### 6.5.3.1 Results of multivariate regression analysis

The results for the six multivariate regressions are reported in Table 6.10. Preliminary analysis of the regression residuals was undertaken. Some degree of non-normality for some models estimated was detected. Outliers were identified and treated via the same process described in section 6.3.1.

The coefficients of first variable *Auditor Rep* indicating whether firms are audited by high or low reputation auditing firms is not significant at all in any of the six regressions. This result is consistent with those generated by the study of Jeong and Rho (2004) in the Korean context that finds no significant difference in DA between firms audited by big-six and non-big-six auditing firms. Therefore H3 is not supported in the multivariate context.

The results for the control variables in the multivariate regression in Table 6.10 show that the coefficient on the absolute value of total accruals is significantly positive as expected for all models tested. It is also indicates that KSCCs sample firms with large absolute values of total accruals also have large pre-listing discretionary accruals. This entails that earnings management is influenced by total accruals and considered a major contributor to the pre-listing year earnings management for KSCCs sample firms.

Other significant associations are detected for the variables AGE, SIZE and LEVERAGE and the pre-listing discretionary accruals observed for some of the models tested. The coefficients for AGE are significantly negative and as expected for the cash flow model based on both current accruals and total accruals. In addition, a significantly negative association between pre-listing earning management and SIZE is found for the modified Jones model and the adjusted-performance model based on total accruals. These results are consistent with results generated by prior studies that found an inverse association between earnings management and the firm's size and age—considered important factors in explaining the pre-listing DA. As suggested by Ahmad-Zaluki, Compbell and Goodacre (2007) and Lee and Masulis (2006), a significant positive relation is found between LEVERAGE and pre-listing discretionary accruals observed by the modified Jones model only.

The variable CFO generates mixed results. Models based on current accruals, namely the current accruals model and the adjusted-performance model, show significantly positive coefficients, while the adjusted-performance model based on total accruals shows the opposite. Meanwhile, KSCCs Auditor Change and ROA do not appear to have a significant impact on the pre-listing year earnings management as shown by the results in Table 6.10.

Overall, results generated from the multivariate analysis after controlling for determinants that were found to be significant in earlier research to further investigate the association between pre-listing earnings management and auditor reputation confirmed the outcomes generated from the univariate analysis undertaken in section 6.5.2 to investigate H3.

The findings show that auditor reputation is not a determinant of pre-listing earnings management in a weak legal environment such as the one in Kuwait and, therefore, provides no-support for hypothesis H3. The outcomes from examining this hypothesis are consistent with results generated by Jeong and Rho (2004) in the Korean market that find no significant difference in DA between firms audited by big-six and non-big-six auditing firms and confirm that auditors, whether of high or low reputation, do not consider legal liability a major risk in countries where legal institution are weak compared to countries where legal institutions are strong.

|                            | Models based on Total Accruals |                     |         |             | Models Based on Current Accruals |                     |             |                      |         |             |                      |                |
|----------------------------|--------------------------------|---------------------|---------|-------------|----------------------------------|---------------------|-------------|----------------------|---------|-------------|----------------------|----------------|
|                            | Modi<br>N                      | fied Jones<br>Aodel | Cash F  | Flow Model  | Adjı<br>Performa                 | isted-<br>nce Model | Currer<br>N | nt Accruals<br>Iodel | Cash F  | low Model   | Adjusted<br>Performa | -<br>nce Model |
| Variables                  | Coeff.                         | t-Statistic         | Coeff.  | t-Statistic | Coeff.                           | t-Statistic         | Coeff.      | t-Statistic          | Coeff.  | t-Statistic | Coeff.               | t-Statistic    |
| Intercept                  | 0.320                          | 2.181**             | 0.077   | 0.381       | 0.347                            | 2.569**             | 0.043       | 0.082                | 0.461   | 1.176       | 0.361                | 0.681          |
| AuditorRep <sub>i</sub>    | 0.001                          | 0.067               | 0.011   | 0.359       | 0.015                            | 0.744               | -0.035      | -0.461               | -0.054  | -0.914      | -0.031               | -0.381         |
| AuditorChange              | 0.031                          | 1.363               | 0.022   | 0.694       | 0.018                            | 0.819               | -0.082      | -1.079               | -0.042  | -0.702      | -0.048               | -0.603         |
| LEVERAGE <sub>i</sub>      | 0.065                          | 1.802*              | -0.049  | -0.994      | 0.057                            | 1.707               | 0.062       | 0.500                | -0.054  | -0.553      | 0.166                | 1.276          |
| AGE <sub>i</sub>           | -0.009                         | -0.339              | -0.83   | -2.253**    | -0.036                           | -1.447              | -0.012      | -0.124               | -0.170  | -2.201**    | -0.035               | -0.357         |
| SIZE <sub>i</sub>          | -0.052                         | -2.525**            | 000     | 0.011       | -0.048                           | -2.521**            | -0.010      | -0.149               | -0.062  | -0.468      | -0.055               | -0.737         |
| TotalAccruals <sub>i</sub> | 1.45                           | 10.714***           | 0.720   | 12.442***   | 0.762                            | 8.228***            | 1.374       | 4.265***             | 0.393   | 3.431**     | 1.289                | 3.729***       |
| ROA <sub>i</sub>           | -0.012                         | -0.136              | -0.019  | -0.154      |                                  |                     | 0.135       | 0.451                | 0.059   | 0.245       |                      |                |
| CFO <sub>i</sub>           | 0.103                          | 1.115               |         |             | -0.164                           | -1.841*             | 0.972       | 3.176**              |         |             | 0.892                | 2.722**        |
| N of firms                 | 68                             |                     | 68      |             | 66                               |                     | 65          |                      | 61      |             | 66                   |                |
| Adjusted-R <sup>2</sup>    | 88.6%                          |                     | 70.2%   |             | 90%                              |                     | 17.5%       |                      | 13.3%   |             | 14.0%                |                |
| F                          | 65.887*                        | **                  | 23.529* | **          | 84.646***                        |                     | 2.695**     |                      | 2.318** |             | 2.508**              |                |

Table 6.10 Multivariate Regression Analysis Results

Notes:

This table reports the results of a six multivariate regressions for a total sample of 68KSCCs as follows:

 $DA_i = a_0 + AuditorRep_i + AuditorChange_i + LEVERAGE_i + AGE_i + SIZE_i + TotalAccruals_i + ROA_i + CFO_i + \varepsilon_i$ 

Variables are defined as follows: *DA* is the pre-listing year discretionary accruals based on six discretionary accruals models; *Auditor Rep* is a dummy variable equals one for firms hiring a high reputation auditor and zero otherwise; *Auditor change* is a dummy variable equal to one for firms changing their auditor in year -1 and zero otherwise; *LEVERAGE* is the percentage of total debt to total assets ;*AGE* is the log of firm age; *SIZE* is the log of total assets; *Total Accruals* is the absolute value of total accruals; ROA is income before extraordinary items scaled by average assets and *CFO* is the cash flow from operation scaled by average assets;. Regression residuals scanned for outliers and deleted resulting in variations in the number of firms analysed in each model tested.

\*\*\*, \*\*and\* denotes significantly different from zero at 0.01, 0.05 and 0.10 levels, respectively based on two-tailed test.

#### 6.6 TESTING THE LOCKUP RESTRICTION HYPOTHESIS (H4)

Another interesting institutional feature of the KSE is the lockup restriction. To guarantee the continuing participation of insiders in the firm even after going public, the lockup restriction was first imposed in November 2005. In Resolution no. 7 (2005), all listing KSCCs were required to retain 25% of the company's capital, specifically the strategic shareholders' stock. There are three fixed expiration periods after which strategic shareholders may dispose of shares. The first such period is after the first year of the listing, the second period is after the second year of the listing, and the third is after the third year of listing. A specific percentage of these shares may be sold in each period: 50% of the total restricted shares may be sold in the first expiration period, 25% in the second period, and the remaining 25% can be sold in the third period. Therefore, it is expected that issuers will continue to inflate earnings after listing to obtain a higher price for their stock after the lockup periods expire. Because the first expiration period allows issuers to sell the highest percentage of their restricted shares (50%) and also represents their first chance to gain wealth after listing, this study focuses on investigating the earnings management behaviour during the first lockup expiration period.

#### 6.6.1 Sample structure

The same sample firms used to test H1, H2 and H3 are used to test this hypothesis. The sample of 68 KSCCs firms is divided into two groups. The non-restricted group consists of 40 KSCCs firms that were listed before the lockup restrictions were imposed from (01/01/1997 through 31/10/2005). The restricted group consists of 28 KSCCs firms that were listed after the lockup restrictions were imposed (from 01/11/2005 through 31/12/2007). A significant positive earnings management finding for the restricted group as compared with the non-restricted group will lend support to H4.

#### 6.6.2 Testing H4 and results

Due to the small number of sample firms in each group and to the non-normal distribution of discretionary accruals for these groups<sup>38</sup>, Two nonparametric tests are used to examine this particular hypothesis (Field 2009; Pallant 2011). First, the median test was used to test for statistical differences in the medians of the groups. Second, the Mann-Whitney U (one-tailed) test was performed to determine if the restricted group exhibited significantly higher discretionary accruals than the non-restricted group. Table 6.11 shows the breakdown of the KSCCs sample into two groups and the test results for differences in discretionary accruals between the two groups.

As reported in Table 6.11, Panel A, models based on total accruals based on the Median and the Mann-Whitney U test indicate a statistically significant difference between the two groups' DA. The probability values (p) reported by the Median and the Mann-Whitney U tests are significant, with a medium reported size effect based on Cohen criteria.

<sup>&</sup>lt;sup>38</sup>The normality assumption is tested for each group by using the Kolmogorov-Smirnov and Sharipo-Wilk tests, provided by SPSS.

In contrast, when analysing the difference between the two groups' medians based on current accruals models reported in Panel B, the Median test and the Mann-Whitney U test find no statistically significant differences between the two groups with small size r effect reported for all models tested.

Overall, results obtained from testing post-year DA show that the restricted group exhibits a significant level of post-DA when using models based on total accruals only. Therefore, H4 is supported when the total accrual models are considered; however, the results are not statistically significant when the current accruals models are used. These results can be explained using two interpretations from the literature. The first interpretation is that KSCCs listing firms use current discretionary accruals to deliberately manage earnings in the pre-listing year to meet profit targets in order to list on the KSE.

As a result, discretionary accruals immediately decline afterwards due to current accruals reversal and to the two-auditor requirement for public KSCCs (Dechow & Dichev 2002). For that reason, KSCCs issuers cannot use the current accruals to inflate earnings since it is quite difficult to continue managing earnings after listing through current accruals. On the other hand, issuers of restricted firms need to gain investor confidence and thereby obtain a higher price for their stock to maximize their personal wealth from selling shares when the first lockup period expires. Therefore, the second interpretation is that issuers of restricted firms use total accruals (as this requires a longer time to reverse) to manage earnings since this represents their first chance to gain wealth after listing (Brau, Lambson & McQueen 2005; Brav & Gompers 2003).

| Table 6.11 Comparisons of the First-listing Financial Year Discretionary Accruals (DA) between |  |
|--|--|
| Restricted and Non-Restricted Groups   |  |

| Re                               | Results based on<br>Mann-Whitney U test |  |         |         |         |
|----------------------------------|---|--|---------|---------|---------|
| Model tested                     | Median DA<br>for Restricted<br>Group    | Median DA for<br>Non-restricted<br>Group | p-value | p-value | r-score |
| Panel A: Models be<br>Accruals   | ased on Total                           |  |         |         |         |
| 1-Modified Jones                 | 0.065                                   | 0.000                                    | 0.085*  | 0.025** | 0.23    |
| 2-Cash Flow Model                | 0.075                                   | -0.032                                   | 0.007** | 0.001** | 0.36    |
| 3-Adjusted-<br>Performance Model | 0.068                                   | 0.005                                    | 0.085*  | 0.035** | 0.21    |
| Panel B: Models bas<br>Accruals  | ed on Current                           |  |         |         |         |
| 1-Current accruals model         | 0.032                                   | 0.022                                    | 0.805   | 0.460   | 0.01    |
| 2-Cash Flow Model                | 0.043                                   | 0.027                                    | 0.805   | 0.480   | 0.006   |
| 3-Adjusted-<br>Performance Model | 0.027                                   | 0.020                                    | 0.805   | 0.426   | 0.09    |

Notes:

 $r = \frac{Z}{\sqrt{N}}$  Where r denotes the effect size, Z = z-score, and N = total number of observations using the Cohen criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

- Non-restricted group consists of 28 KSCCs listed before the lockup restrictions were imposed (from 01/01/1997 through 31/10/2005); while restricted group consists of 40 KSCCs listed after the lockup restrictions were imposed (from 01/11/2005 through 31/12/2007).
- \*\* and \* denote a significant level at 5% an 10% respectively.

#### 6.7 TESTING LONG-RUN PERFORMANCE

The next sets of tests aim to examine the long-run performance around listing. Two types of performance measures will be used to test this association: stock return performance measures and accounting performance measures. In the following section, stock performance is discussed first, then accounting performance.

#### 6.7.1 Data sources for stock performance

H5a posits an association between pre-listing earnings management and subsequent stock performance. To be consistent with other studies and for comparison purposes, the sample firms for testing H5a are examined for a window period of up to 36 months after the first financial reports are released as public companies. Since the sample period for this particular hypothesis begins from 1997 through to 2007, stock data for sample KSCCs and market indices must be available for the years 1998 to 2011. The share closing price data for sample firms are needed to calculate the initial raw returns for the 36-month window. Closing prices for the years 1998–2008 were gathered from the Al-Shall database. After 2008, the same data were obtained from the Global database. If closing share prices were not available from the Alshal or Global databases, share prices were collected directly from the historical stock index at the KSE website, <u>www.kuwaitse.com</u>.

#### 6.7.2 Sample structure for stock performance

To test the association between pre-listing discretionary accruals and post-firm performance, the same 68 KSCC sample firms used to test H1 are used. Building on the results generated from testing H1, significantly positive discretionary accruals are supported only when current accrual models are considered. Thus, the testing of H5a relies on the results obtained from discretionary current accruals models.

#### **6.7.3** Timeline for stock performance

This study uses a three-year time frame (as in Figure 6.2) to facilitate comparisons with other earnings management studies. Following Teoh, Welch and Wong (1998b), and Roosenboom, Van der Goot andMertens (2003), year -1 is the fiscal year-end immediately before the date of the listing. Year 0 is defined as the fiscal year in which the listing on the KSE occurs, which includes the pre-and post-IPO months.

Long-run returns are calculated four months after the close of the fiscal year 0 to allow for any reporting lag and to ensure the public availability of financial statements to investors. Therefore, month 0 is defined as 4 months after the closing of fiscal year 0. Hence, the analysis of stock returns for the three-year period begins from month 5 to month 40 (total of 36 months) following the end of the fiscal year of listing.



Figure 6.2 Timeline for Testing Stock Performance (H5a)

#### 6.7.4 Testing stock performance (H5a)

As emphasized in the methodology chapter, BHARs and CARs are calculated for 12-, 24- and 36-month windows for all sample KSCCs. In testing this hypothesis, as with a number of previous studies such as Rangan (1998), Cai, Liu and Mase (2008), Armstrong, Foster and Taylor (2009) and Drobetz, Kammermann and Wälchli (2005), the returns of sample firms are compared with the stock market indices GGI and GII as the first step. Building on the results from the first step; the second step explores the association between pre-listing earnings management and subsequent firm performance.

A major violation of the normality assumption is detected using the Kolmogorov-Smirnov and Sharipo-Wilk tests provided by SPSS for most of the BHARs and CARs results. Therefore, in testing H5a it was decided that non-parametric tests would be used. Following Rangan (1998) and Ahmad-Zaluki, Campell and Goodacre (2011), the medians of the abnormal returns are reported. Table 6.12 reports the CARs and BHARs medians for the three different holding periods for a sample of 68 KSCCs.

Panels A and B in Table 6.12 show that KSCC sample firms significantly underperform the two market benchmarks: the GGI and GII indices. The highest median underperformances for CARs are reported in the second-year holding period of -18.97% when the GGI index is used; and in the third-year holding period of -20.53% when the GII index is used. For both market indices, the highest BHARs median underperformances are reported in the two-year holding period of -17.20% and -12.50% when the GGI and GII indices are used respectively. These results support the existence of the poor stock performance of the KSCC sample firms after issue. This is consistence with Teoh, Welch and Wong(1998b) in the U.S. market,

Ahmad-Zaluki, Campell and Goodacre (2011) in the Malaysian market, Kamel (2006) in the Egyptian market and Kao, Wu and Yang (2009) and Cai, Liu and Mase (2008) in the Chinese market.

Table 6.12 CARs and BHARs Medians for 68 Sample KSCCs over Three Holding Periods

|  | CARs 1   | CARs 2    | CARs 3    | BHARs 1 | BHARs 2    | BHARs<br>3 |
|--|----------|-----------|-----------|---------|------------|------------|
| Panel A: The Global<br>General Index<br>benchmark (GGI)  | -9.45**  | -18.97*** | -14.98*** | -8.10** | -17.20 *** | -2.8 ***   |
| Panel B: The Global<br>Industry Index (GII)<br>benchmark | -10.24** | -19.56*** | -20.53*** | -5.55** | -12.05***  | -5.05***   |

Notes:

This table shows the CARs and BHARs, in percentage, using two benchmarks; the GGI and the GII. The CARs denote the medians market-adjusted cumulative abnormal returns. The BHARs denote the median adjusted buy-and-hold abnormal returns. The calculation of CARs and BHARs has been repeated over three holding periods (years); CARs 1 and BHARs 1 for months 5–16;CARs 2 and BHARs 2 for months 5–28 and CARs 3 and BHARs 3 for months 5–40.

\*\*\*, \*\* and \* indicate a significant level at the 1%, 5% and 10% levels respectively, based on the two-tailed Wilcoxon signed-ranks test.

Building on results from step one, the association between DCA and postperformance is examined. Following Ahmad-Zaluki, Campell and Goodacre (2011), the association between the level of pre-listing DCA and subsequent firm performance is determined by splitting the sample firms into groups based on their levels of DCA. Splitting the sample firms into groups allows the study of variations in the long-term performances between these groups. Ahmad-Zaluki, Campell and Goodacre (2011) perform their analysis by splitting the sample firms into tertiles of low, medium and high DCA. As a robustness check, they also perform their analysis by splitting the sample firms into quartiles rather than tertiles based on the level of DCA. In this study and due to the small number of sample firms, the sample firms are to split into two groups based on their DCA. The low-DCA group contains KSCCs firms with a DCA of 0 > to 0.3 and the high-DCA group contains firms with a DCA that exceeds  $0.3^{39}$ .

Table 6.13 reports the median data on long-run stock performance by the two DCA groups using two index benchmarks. It can be observed from panels A and B that results show that high-DCA groups significantly underperform their benchmarks for all models using CARs and BHARs and for all periods tested using the market indices benchmarks GGI and GII.

The results of the Mann-Whitney U test, which tests the difference in medians between the high- and low-DCA groups for the three-year holding period, show that the difference is significant at the 1% or 5% levels with a medium to large size effect for CARs and BHARs—except for periods two and three when using the CARs in the cash flow model as seen in panel B, which shows the differences in underperformance between the two groups are not statistically different with a small reported size effect.

<sup>&</sup>lt;sup>39</sup> The cut-off DCA of 0.3 criterion has been arbitrarily determined as the sample is too small to use quartiles.

|                        | CARs 1        | CARs 2            | CARs 3    | BHARs 1   | BHARs2    | BHARs3     |  |  |
|------------------------|---------------|-------------------|-----------|-----------|-----------|------------|--|--|
| Panel A · Global Ger   | oral Index (( | GI) Renchm        | ark       | Dimites I | DIMING    | DIMINSS    |  |  |
| Current Acornals Model |               |                   |           |           |           |            |  |  |
| High DCA group         | 15 20***      | 21 75***          | 23 07***  | 17 /6***  | 28 20***  | 36 17***   |  |  |
| Low DCA group          | 0.01          | 1 33**            | 0.48      | 0.59      | 3.23*     | 1 /15*     |  |  |
| Z statistics and (P    | 3 026         | -4.33             | 7.084     | -0.39     | -5.25     | 7.073      |  |  |
| value) for the         | (000)         | (000)             | (000)     | (000)     | (000)     | (000)      |  |  |
| difference between     | (000)         | (000)             | (000)     | (000)     | (000)     | (000)      |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r-score                | 0.48          | 0.68              | 0.86      | 0.49      | 0.67      | 0.85       |  |  |
| Cash Flow Model        | 0.40          | 0.00              | 0.00      | 0.49      | 0.07      | 0.05       |  |  |
| High-DCA group         | _1/ 97***     | _21 /2***         | _15 20*** | -18 60*** | -30 08*** | -30 86***  |  |  |
| Low DCA group          | 5 03***       | 10.02***          | 8.07***   | 7 10***   | 10.08***  | -30.00     |  |  |
| Z statistics and (P    | 3 233         | 3 018             | 3 277     | 3 175     | -10.08    | -2.07      |  |  |
| Z-statistics and (1 -  | (0.001)       | (000)             | (0.001)   | (0.001)   | -4.598    | (000)      |  |  |
| difference between     | (0.001)       | (000)             | (0.001)   | (0.001)   | (000)     | (000)      |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r-score                | 0.39          | 0.47              | 0.39      | 0.39      | 0.56      | 0.78       |  |  |
| A diusted Derformer    | nco Model     | 0.47              | 0.39      | 0.39      | 0.50      | 0.78       |  |  |
| High DCA group         | 13 66***      | 21 08***          | 21 08***  | 16 16***  | 28 01***  | 31 00***   |  |  |
| Low DCA group          | -13.00        | -21.08            | -21.00    | 6.12**    | 7 40***   | 1 20       |  |  |
| Z statistics and (P    | -3.01         | -7.04             | -14.2     | -0.13     | -7.49     | -1.20      |  |  |
| Z-statistics and (F-   | -3.234        | -4.289            | -3.800    | -5.400    | -4.823    | -0.090     |  |  |
| difference between     | (.001)        | (000)             | (000)     | (.001)    | (000)     | (000)      |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r score                | 0.30          | 0.52              | 0.70      | 0.41      | 0.58      | 0.81       |  |  |
| 1 30010                | 0.37          | 0.52              | 0.70      | 0.41      | 0.50      | 0.01       |  |  |
| Panel R. Global Ind    | ustry Inder ( | GII) Ronchm       | ark       |           |           |            |  |  |
| Current Accruals N     | lodel         | 011) Denenm       | urr       |           |           |            |  |  |
| High-DCA group         | _11 51***     | _13 /7***         | _17 30*** | -17 /6*** | -28 20*** | -36 /12*** |  |  |
| Low DCA group          | 1 3/          | 6 /6***           | 3 66***   | 0.59      | 3 73**    | 1 45*      |  |  |
| Z statistics and (P    | -1.54         | -0.40             | -5.00     | -0.39     | -5.25     | 7.073      |  |  |
| z-statistics and (r -  | -3.811        | (000)             | -5.800    | -4.041    | -5.520    | (000)      |  |  |
| difference between     | (000)         | (000)             | (000)     | (000)     | (000)     | (000)      |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r-score                | 0.46          | 0.44              | 0.70      | 0.49      | 0.67      | 0.85       |  |  |
| Cash Flow Model        | 0.10          | 0.11              | 0.70      | 0.19      | 0.07      | 0.05       |  |  |
| High-DCA group         | -11 38***     | -12 66***         | -10 90*** | -18 60*** | -30 08*** | -30 86***  |  |  |
| Low-DCA group          | -2 31***      | -10.91***         | -11 28*** | -7 19***  | -10.08*** | -2 67      |  |  |
| Z-statistics and (P-   | -3 291        | -1 134            | - 732     | -3.175    | -4 598    | -6.465     |  |  |
| value) for the         | (0.001)       | (0.257)           | (0.464)   | (0.001)   | (000)     | (000)      |  |  |
| difference between     | (0.001)       | (0.237)           | (0.404)   | (0.001)   | (000)     | (000)      |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r-score                | 0.40          | 0.14              | 0.09      | 0.38      | 0.56      | 0.78       |  |  |
| Adjusted-Performa      | nce Model     | 0.14              | 0.07      | 0.50      | 0.50      | 0.70       |  |  |
| High-DCA group         | _12 20***     | -15 06***         | -16 38*** | -16 16*** | -28 01*** | _31 00***  |  |  |
| Low DCA group          | -12.29        | -15.00<br>8.64*** | 7 55***   | 6 57**    | 7.02***   | -31.09     |  |  |
| Z statistics and (n    | 2 820         | 2 151             | 4 370     | 3 3/0     | 4 701     | 6 6 7 2    |  |  |
| z-statistics and (p-   | -2.829        | (0.014)           | (000)     | -3.349    | (000)     | (000)      |  |  |
| difference between     | (0.005)       | (0.014)           |           | (.001)    |           |            |  |  |
| the two groups         |               |                   |           |           |           |            |  |  |
| r_score                | 0.34          | 0.30              | 0.53      | 0.41      | 0.57      | 0.80       |  |  |

Table 6.13 Results between High and Low DCA Groups (Medians)

Notes:

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This table shows the CARs and BHARs, in percentage, using two benchmarks GGI and GII. The CARs denote the medians market-adjusted cumulative abnormal returns. The BHARs denote the median adjusted buy-and-hold abnormal returns. The calculation of CARs and BHARs has been repeated over three holding periods; for months 5–16, for months 5–28 and for months 5–40. CARs 1 and BHARs 1 for months 5–16;CARs 2 and BHARs 2 for months 5–28 and CARs 3 and BHARs 3 for months 5–40.

- The normality assumption in each group is tested using the Kolmogorov-Smirnov and Sharipo-Wilk tests provided by SPSS.
- \*\*\*, \*\* and \* indicate a significant level at the 1%, 5% and 10% levels respectively, based on the two-tailed Wilcoxon signed-ranks test.
- P-values results are based on the Mann-Whitney U test for the difference in the median between the two groups.
- r-score contributes to the effect size  $=\frac{Z}{\sqrt{N}}$ , Z = z-score, and N = total number of observations using the Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

These results are consistent with those generated by Ahmad-Zaluki, Campell and Goodacre (2011) in the Malaysian market; Kamel (2006) in the Egyptian market; and Kao, Wu and Yang (2009) and Cai, Liu and Mase (2008) in the Chinese market that show the high-DCA group consistently underperform (based on BHARs and CARs) in all holding periods relative to the low-DCA group.

Another sensitivity test is undertaken to ensure the results from testing the association between DCA and post-performance is not attributable to the use of the cut-off 0.3 DCA for high and low DCA groups. The group separation criteria used to examine the association between DCA and post-performance is modified and the sample firms are reconstructed into two new groups. The sample firms are first ranked based on their DCA and then split into two evenly groups –high and low-rather than using a cut-off 0.3 DCA. The (unreported) results are essentially the same as the initial tests results which show that the high-DCA groups significantly underperform the low-DCA groups for all holding periods

Overall, results obtained from testing CARs and BHARs show that the high-DCA group significantly underperform the market benchmarks for all holding periods. In addition, examining CARs and BHARs between high and low DCA groups indicate that the high-DCA groups significantly underperform the low-DCA groups for all holding periods. These results support the managerial opportunism hypothesis and the existence of a negative correlation between DCA in pre-listing and post-listing stock performance found in prior studies—such as those of Ahmad-Zaluki, Campbell and Goodacre (2011) in the Malaysian market; Teoh, Welch, and Wong (1998a, 1998b) in the U.S. market; Gajewski and Gresse (2006) in European markets; Aharony, Wang and Yuan (2005) in the Chinese market—that revealed, on average, IPO firms underperform in the long run in most capital markets.

#### 6.7.5 Accounting performance

In addition to examining stock performance, examining H5 also includes testing accounting performance measures. H5b posits an association between prelisting earnings management and subsequent performance. As discussed in the methodology chapter, accounting performance is measured using ROA. Two methods are used to evaluate and compare the actual performance of the sample KSCCs: the industry-adjusted ROA and the median-raw ROA ratios. The following sections detail the sample selection, the timeline and the results generated from testing the accounting performance.

#### 6.7.6 Data sources on accounting performance

Details of the accounting performance data and its sources are discussed for each approach in the following section. For the industry-adjusted ROA, the annual industry-median ROA is needed for non-listing sample firms to be compared with those of the sample firms. The annual median ROA is obtained for years 2000–2007 from the Al-Shall index. No annual industry-median ROA index is available before the year 2000; therefore, industry-median ROAs are manually calculated for all non-sample firms before the year 2000. ROAs for non-sample firms before the year 2000 are gathered directly from public annual reports obtained from the Auto Documentation and Archival Department at the KSE.

Five different years of median ROAs are calculated for testing accounting performance using the median-raw ROA ratio approach: two years before listing, the listing year and two years after listing. Data for the pre-listing median ROA are obtained from the sample firms' prospectuses, while the median ROA in the listing and post-listing years are gathered from published financial statements.

#### 6.7.7 Timeline for accounting performance

Two different timelines are used for testing accounting performance, as depicted in Figure 6.3. The first timeframe relates to the industry-adjusted ROA approach and the second timeframe relates to the median-raw ROA ratios approach. Following prior studies, fiscal year 0 is considered as the fiscal year ending immediately after listing; therefore, fiscal year 0 financial statements are the first financial statements reported after listing that include both pre- and post-listing months. Fiscal years +1 and +2 refer to the first and second post-listing financial statements. Similarly, fiscal year -2 refers to the financial statement issued two years before listing. Fiscal year -1 ends before the date of listing and refers to the most recent set of pre-listing financial statements available to market participants (e.g., investors and regulators) and issued before listing.



Figure 6.3 Timeline for Testing Accounting Performance (H5b)

Examining the accounting performance using the industry-adjusted ROA approach involves testing ROA for the sample firms as compared to their industry benchmarks for a four-year window, starting from the pre-listing year to year +2. On the other hand, the timeframe used to test the median-raw ROA ratios approach involves comparing the ROA of each sample firm in a five-year window, starting from year -2 to year +2.

#### 6.7.8 Testing accounting performance and results

Table 6.14 presents the results for testing changes in accounting performance over the timeframes outlined above. Results for industry-adjusted ROA are presented in Panel A, while results based on median-raw ROA are shown in Panel B. The analysis focuses on the median level of ROA following the approach of Mikkelson, Partch and Shah (1997) and Loughran and Ritter (1997). The matched-pair Wilcoxon signed ranks test is implemented to test for statistical differences between periods (Pallant 2011). Effect sizes for year comparisons (r-score) are also calculated based on Cohen's (1988) criteria.

|                                | Year -2 | Year -1 | Year (0) | Year +1 | Year +2  |
|--------------------------------|---------|---------|----------|---------|----------|
| Panel A: Industry-adjusted ROA |         |         |          |         |          |
| Adjusted median ROA            |         | -0.53   | 0.48     | -0.50   | -1.00    |
| Z-score                        |         |         | -0.205   | -0.553  | -2.260*  |
| p-value                        |         |         | (0.837)  | (0.581) | (0.024)  |
| r-score                        |         |         | 0.03     | 0.06    | 0.30     |
| Panel B: Median-Raw ROA Ratio  |         |         |          |         |          |
| Median ROA                     | 9.09    | 9.86    | 10.86    | 9.86    | 5.43     |
| z-score                        |         | -0.067  | -0.849   | -0.849  | -3.867** |
| p-value                        |         | (0.946) | (0.396)  | (0.396) | (000)    |
| r-score                        |         | 0.01    | 0.10     | 0.10    | 0.47     |

Table 6.14 Median Accounting Performance (ROA) and Differences between Years for 68 KSCC Sample Firms

Notes:

- This table shows the ROA in percentage, using two approaches. Years -2 and -1 refer to the financial statements issued before the second and first year of listing respectively, years +1 and +2 refer to the first and second post-listing financial statements, while year (0) refers to the financial statements issued in the year of listing.

-  $ROA = \frac{NetIncome}{TotalAssets - Cashandequivelants}$ 

 \*\* and \* indicate a significant level at the 1% and 5% levels respectively, based on the twotailed Wilcoxon signed-ranks test.

- r-score contributes to the effect size  $=\frac{Z}{\sqrt{N}}$ , Z = z-score, and N = total number of observations using the Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

The results presented in Panel A use the industry-adjusted ROA approach and compares adjusted-median ROA for each year to the ROA in year -1. The matchedpair Wilcoxon-signed rank test reveals a significant reduction at the 5% level between the median adjusted-industry ROA in year -1 and year +2 only, with a medium effect size (r-score) of 0.30. This result reveals that KSCCs sample firms exhibit a significant subsequent decline relative to their industry benchmark in the second year after listing, but not in other years.

Panel B in Table 6.14 reports the results generated using the median-raw ROA ratios. Researchers argue that if issuing firms tend to window dress their financial statements around issue, then it is expected the median ROA will peak in years -1

and 0 and then deteriorate afterwards (Mikkelson, Partch & Shah 1997). Analysing the results generated from testing the median-raw ROA ratio reveals that the ROA peaks in listing year (year 0) at 10.86% and deteriorates after listing to 9.86% in year +1 and 5.43% in year +2. To determine if this pattern is statistically significant, the matched-pair Wilcoxon-signed rank test is used to see whether the difference between the median ROA for each year and its subsequent year are significantly different. The results show a highly significant difference in median ROA between years +1 and +2 with a medium effect size (r-sore) of 0.47, while differences for previous sequential pairs of years are not significant. The declining pattern of ROA reported in this study using the median-raw ROA are consistent with the results reported by Mikkelson, Partch and Shah (1997), who found a decline of 55% in median ROA in the post-IPO years 2 to 5.

Overall, results generated from comparing accounting performance (ROA) across years for the KSCC sample firms revealed the existence of significant underperformance in year +2 when using both the industry-adjusted ROA median and the median-raw ROA ratios approaches.

To test H5b, and following the methodology applied for testing stock performance, two groups are formed based on their levels of positive pre-listing discretionary accruals. Splitting the sample firms into two groups allows the study of variations in the long-term performances between these two groups. Therefore, the low-DCA group contains KSCCs firms with a DCA of 0 to +0.3 and the high-DCA group contains firms with a DCA exceeding +0.3. Tables 6.15 and 6.16 report the results and comparisons between these two groups based on three models: the current accruals model, the cash flow model and the adjusted-performance model.

Table 6.15 reports the differences between high and low-DCA groups using the industry-adjusted ROA median approach, while table 6.16 reports the differences between high and low-DCA groups using the raw-median ROA approach.

|   | Year -1 | Year 0   | Year +1 | Year +2 |
|---|---------|----------|---------|---------|
| Current Accruals Model                        |         |          |         |         |
| High-DCA group adjusted median ROA            | 1.18    | 14.0     | 6.00    | -6.00   |
| Low-DCA group median ROA                      | -2.89   | -1.0     | -2.00   | -1.0    |
| Z-statistics and (P-value) for the difference | -1.374  | -2.735   | -1.661  | -1.161  |
| between the two groups                        | (0.169) | (0.006)* | (0.509) | (0.246) |
| r-score                                       | 0.20    | 0.41     | 0.10    | 0.17    |
| Cash Flow Model                               |         |          |         |         |
| High-DCA group adjusted median ROA            | -2.97   | -2.00    | -2.00   | 0.00    |
| Low-DCA group median ROA                      | 0.18    | 1.00     | -2.00   | -0.30   |
| Z-statistics and (P-value) for the difference | -0.773  | -0.464   | -0.671  | -1.311  |
| between the two groups                        | (0.44)  | (0.642)  | (0.502) | (0.190) |
| r-score                                       | 0.12    | 0.07     | 0.10    | 0.21    |
| Adjusted-Performance Model                    |         |          |         |         |
| High-DCA group adjusted median ROA            | -2.59   | -1.50    | -1.50   | -1.00   |
| Low-DCA group median ROA                      | 0.40    | 1.00     | -1.50   | -1.50   |
| Z-statistics and (P-value) for the difference | -0.293  | -0.222   | -0.473  | -0.779  |
| between the two groups                        | (0.770) | (0.825)  | (0.636) | (0.436) |
| r-score                                       | 0.10    | 0.035    | 0.07    | 0.12    |

Table 6.15 Results from Testing the Difference in Industry-Adjusted ROA between High- and Low-DCA Groups based on Mann-Whitney U Test

Notes:

- This table shows adjusted ROA in percentage, based on three DCA models: the current accruals model, the CFO model and the adjusted- performance model. Year -1 refer to the financial statements issued before the first year of listing; years +1 and +2 refer to the first

and second post-listing financial statements, while year (0) refers to the financial statements issued on the year of listing.

$$ROA = \frac{NetIncome}{TotalAssets - Cashandequivelants}$$

- P-value results based on the Mann-Whitney U test.
- r-score contributes to the effect size  $=\frac{z}{\sqrt{N}}$ , Z = z-score, and N = total number of observations using the Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

Table 6.16 Results from Testing the Difference in Raw-Median ROA between High- and Low-DCA Groups based on Mann-Whitney U Test

|                                    | Year -2 | Year -1 | Year 0  | Year +1 | Year +2 |
|------------------------------------|---------|---------|---------|---------|---------|
| Current Accruals Model             |         |         |         |         |         |
| High-DCA group median ROA          | 10.69   | 11.02   | 12.19   | 11.02   | 6.11    |
| Low-DCA group median ROA           | 8.50    | 9.11    | 9.62    | 9.62    | 6.09    |
| Z-statistics and (P-value) for the | -0.244  | -1.170  | -1.428  | -1.170  | -0.185  |
| difference between the two groups  | (0.807) | (0.242) | (0.153) | (0.242) | (0.853) |
| r-score                            | 0.03    | 0.17    | 0.21    | 0.17    | 0.02    |
| Cash Flow Model                    |         |         |         |         |         |
| High-DCA group median ROA          | 10.69   | 11.02   | 12.19   | 11.02   | 7.32    |
| Low-DCA group median ROA           | 8.41    | 8.73    | 11.83   | 8.73    | 5.98    |
| Z-statistics and (P-value) for the | -0.079  | -0.951  | -0.872  | -0.951  | -0.149  |
| difference between the two groups  | (0.948) | (0.354) | (0.383) | (0.342) | (0.881) |
| r-score                            | 0.01    | 0.14    | 0.13    | 0.14    | 0.02    |
|                                    |         |         |         |         |         |
| Adjusted-Performance Model         |         |         |         |         |         |
| High-DCA group median ROA          | 9.37    | 10.67   | 12.12   | 10.67   | 6.72    |
| Low-DCA group median ROA           | 8.32    | 9.11    | 10.69   | 9.11    | 6.06    |
| Z-statistics and (P-value) for the | -0.630  | -0.659  | -1.033  | -0.659  | -0.148  |
| difference between the two groups  | (0.528) | (0.510) | (0.302) | (0.510) | (0.883) |
| r-score                            | 0.09    | 0.10    | 0.16    | 0.10    | 0.02    |

Notes:

This table shows the ROA in percentage, based on three DCA models: the current accruals model, the CFO model and the adjusted- performance model. Years -2 and -1 refer to the financial statements issued before the second and first year of listing respectively, years +1 and +2 refer to the first and second post-listing financial statements, while year (0) refers to the financial statements issued on the year of listing.

$$ROA = \frac{NetIncome}{TotalAssets - Cashandequivelants}$$

- P-value results based on the Mann-Whitney U test.
- r-score contributes to the effect size =  $\frac{Z}{\sqrt{N}}$ , Z = z-score, and N = total number of observations using the Cohen (1988) criteria of 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect.

It can be observed in table 6.15 that the differences in the industry-adjusted ROA medians for most of models and years tested reveal no significant differences between the two groups, except for the current accruals model in the listing year.

Similarly, there are no significant differences in raw-median ROA between the two groups in any time period as reported in table 6.16. Therefore, these findings do not support the existence of an association between accounting performance and prelisting year DCA. Thus, the finding does not support H5b when the sample firms are split into groups based on their pre-listing year DCA. In summary, it is hypothesised that the level of pre-listing earnings management is associated with subsequent firm performance. Testing H5 yields mixed results. Results generated from testing the stock performance for all sample KSCC firms tend to indicate the existence of a negative association between prelisting DCA and stock performance using market benchmarks. This result is consistent with results reported by Ahmad-Zaluki, Campbell ans Goodacre (2011); Teoh, Welch and Wong (1998b); and DuCharme, Malatesta and Sefcik (2001). Another finding that supports the existence of a negative association between prelisting DCA and post stock performance is generated from testing the high- and low-DCA groups, which indicates that the high-DCA group significantly underperforms the low-DCA group for all market index benchmarks, and for the three holding periods tested when using CARs and BHARs.

Results gathered from testing accounting performance for all sample KSCCs reveal that accounting performance (ROA) peaks in year (0) and then deteriorates afterwards, specifically in the second year post listing. While median accounting performance exhibits a significant decline in the second year after listing (see table 6.14), results in tables 6.15 and 6.16 show this decline is unrelated to the level of pre-listing DCA.

#### 6.8 SUMMARY

This chapter has demonstrated the statistical tests undertaken to investigate all hypotheses developed in this dissertation. These include descriptive statistics, multivariate regression analysis, correlation analysis, parametric and non-parametric test statistics. The results show that, on average, KSCC firms opportunistically advance current accruals in an attempt to improve earnings in the pre-listing year. However, the high level of earnings management in the pre-listing year is not sustained in the listing year.

Due to the substantial change in the pre-listing profit requitement that occurred in 2004, it is hypothesized that this change would have provided a great incentive for firms listing during the profit change period to manage earnings in the pre-listing year. However, the empirical tests for the profit requirement condition indicate that the increase in the profit requirement from 5% to 7% in 2004 was not associated with a significant increase in earnings management. As previously discussed, signalling and the one pre-listing auditor requirement provide incentives in addition to meeting the listing profit requirement for Kuwaiti firms, The lack of difference in the level of earnings management between firms listing before and after the increased profit requirement at listing is consistent with KSCCs lacking the capacity to increase earnings management further.

Contrary to results found in some other studies, the outcomes from exploring the association between auditor reputation and pre-listing year earnings management reveal no significant differences in DA between firms audited by big-auditing firms and other auditing firms. However, the finding is in agreement with results generated by Jeong and Rho (2004) who found no significant differences in DA based on auditor reputation in the Korean market. These results suggest that markets with distinctive institutional settings and legal characteristics may have different relationships between DA and auditor reputation.

As explained in chapter 2, three stages of lockup restrictions are mandated by law on new listing KSCCs. The empirical tests of earnings management behaviour

during the first lockup expiration period give support to H4 when the total accrual models are considered. This study finds evidence that issuers of restricted firms use total accruals to manage earnings and to seize the opportunity to gain wealth from selling the highest portion of their restricted shares on the first expiration period.

Finally, consistent with most other studies, this chapter has reported evidence of the existence of a negative association between pre-listing DCA and stock performance using market benchmarks. In contrast, testing accounting performance shows insignificant results. Results from testing the accounting performance using ROA reveals that KSCCs sample firms exhibit a significant subsequent decline in the adjusted-median ROA and in the raw-median ROA in the second post-year period, but not in the other years. However, when the sample firms are split into groups based on their levels of DCA, result suggests no significant differences observed in the adjusted-median ROA and in the raw-median ROA between groups.

Chapter 7 draws together the discussions from the five hypotheses developed and research questions posed in this dissertation. It is also outlines the contributions and implications, states the limitation and highlights a number of avenues for future research.

#### 7.1 INTRODUCTION

This chapter draws together the discussions from the previous chapters and presents the overall conclusions of the research. This chapter is organised as follows: Section 7.1 introduces and summarises the chapter; Section 7.2 discusses the conclusions established from the five hypotheses developed and the research questions proffered in Chapter 4; Section 7.3 outlines the contributions and implications of this research; Section 7.4 states the limitations of this research; and Section 7.5 highlights a number of avenues for future research.

#### 7.2 CONCLUSIONS ABOUT HYPOTHESES AND RESEARCH QUESTIONS

This section summarises the key findings from testing the hypotheses that addressed the research sub-questions articulated in Chapter 1. Five hypotheses were developed to address the study objectives and research sub-questions.

Table 7.1 lists the main research question and the three sub-research questions investigated in this dissertation, the five corresponding hypotheses developed, and summarises the test results from examining these hypotheses.

#### 7.2.1 Pre-listing year earnings management

In the context of agency theory, there are incentives for KSCC issuers to manage their companies' earnings upward prior to listing. Issuers may engage in earnings management before listing to meet the pre-listing profit requirement, to increase their personal proceeds by selling stocks at as high a price as possible and to seize the opportunity of having only one external auditor, compared to the two external auditors required after listing. In addition, as described by signalling theory, managing pre-listing earnings upward can be viewed as a positive signal. Brau and Fawcett (2006), Qintao (2007), McKee (2005), and Scott (2009) note that increased earnings are sometimes viewed by investors as a positive signal of the firm's high quality and value, while decreased earnings can be viewed by investors as a negative signal.

Due to the reversal nature of accruals, inflated earnings cannot be sustained in subsequent periods and, thus, increasing accruals in one period must be offset by lowering accruals in subsequent periods (Roosenboom, Van der Goot & Mertens 2003). Therefore, if KSCC issuers deliberately inflate earnings prior to listing, then they cannot continue to overstate earnings in subsequent periods. Developed from the extant literature of agency and signalling theory, the first research sub-question asks: Do KSCCs new listing firms manage earnings in the pre-listing financial year? Two hypotheses were developed to examine the existence of earnings management before listing as follows:

H1a: KSE-listing firms exhibit positive earnings management in the prelisting financial year.

| Table 7.1 Research | Ouestions and | Corresponding | Hypotheses ar | nd Hypotheses | Test Results |
|--------------------|---------------|---------------|---------------|---------------|--------------|
|                    | C             |               |               |               |              |

| Research Question  | Hypotheses  | Results  |
|--|---|--|
| <b>Research Main Question:</b><br>Do Kuwaiti closed shareholding companies (KSCCs)<br>manage earnings around listing?              |   |  |
| <b>Sub-question 1</b> :<br>Do KSCCs new listing firms manage earnings in the pre-<br>listing financial year?                       | H1a: KSE-listing firms exhibit positive earnings management in the pre-listing financial year.  | Supported when models based on current<br>accruals are used<br>Not supported when models based on total<br>accruals are used |
|  | H1b: KSE-listing firms exhibit greater positive<br>earnings management in the pre-listing financial<br>year than in the listing year.   | Supported when models based on current<br>accruals are used<br>Not supported when models based on total<br>accruals are used |
|  | H2: Relative to firms listing before the profit-<br>requirement change, firms listing following the<br>change (from 2004 through 2007) exhibit higher<br>positive earnings management in the pre-listing<br>financial year. | Not supported  |
| <b>Sub-question 2</b> :<br>Is there a negative association between auditor reputation<br>and pre-listing year earnings management? | H3: There is a negative association between auditor reputation and pre-listing year earnings management.  | Not supported  |
| Sub-question 3:<br>Do restricted firms manage earnings in the first post-listing<br>year?  | H4: Relative to non-restricted firms, restricted firms<br>exhibit higher positive earnings management in the<br>first post-listing financial year.  | Supported when models based on total accruals<br>are used<br>Not supported when models based on current<br>accruals are used |
| Sub-question 4:<br>Is pre-listing earnings management associated with<br>subsequent firm performance?                              | H5a: The level of pre-listing earnings management<br>is associated with subsequent firm stock<br>performance.   | Negative association is supported  |
|  | H5b: The level of pre-listing earnings management<br>is associated with subsequent firm accounting<br>performance.  | No significant association found when the sample firms split into groups.  |

### H1b: KSE-listing firms exhibit greater positive earnings management in the pre-listing financial year than in the listing year.

Based on estimates derived using six discretionary accruals models, parametric t-tests and non-parametric Wilcoxon signed-rank tests were undertaken to determine the validity of hypothesis H1a. Significant positive discretionary accruals in the prelisting year were detected by models based on current accruals. These models yield the highest level of positive discretionary accruals means (and medians) in Year -1 and are statistically different from zero at the 5% level based on the t-test and Wilcoxon signed-rank test. On the other hand, results based on the t-test and Wilcoxon signed-rank test are not statistically significant when models based on total accruals are used. Therefore, this result indicates that H1a is supported only when models based on current accruals are considered. Two explanations for this can be found in the literature. Firstly KSCCs listing firms use current discretionary accruals to deliberately manage earnings (Dechow & Dichev 2002) in the pre-listing year to meet profit targets mandated by law in order to be list on the KSE. Secondly, managers have more discretion over current accruals and thus current accruals are the component most easily subject to successful managerial manipulation (Teoh, Welch & Wong 1998a)). Athanasakou, Strong and Walker (2009) used the current accruals method in their study of analyst expectations and forecasts for three reasons: studies agree that working capital accruals account for most of the variation in total accruals (Dechow & Dichev 2002; Sloan 1996; Subramanyam 1996; Teoh, Welch & Wong 1998b); current accruals are more flexible than non-current accruals (for example, depreciation, amortisation, impairments) due to their frequent occurrence and the higher degree of judgment involved in their estimation; and non-current accruals are more visible than current accruals and need more lead time to change before listing. Therefore, greater reliance is placed on the results of the current accruals models, which support H1a.

The parametric matched-pairs t-test and the non-parametric Wilcoxon signedrank test were undertaken to test the validity of H1b. The results found that the means and medians for the discretionary accruals were significantly greater in the pre-listing year than in the listing year for four of the six models tested. Three of these models were based on current accruals and one model was based on total accruals, namely the adjusted-performance model. The results of both tests support H1b and the existence of the accruals reversal in the listing year when models based on current accruals are considered. However, there is only limited evidence of the existence of the accruals reversal when models based on total accruals are considered.

Overall, consistent with the extant of agency theory and adverse selection, the findings from testing H1a and H1b suggest that managers of the KSCC companies opportunistically advance current accruals in an attempt to improve earnings in the pre-listing year. However, the high level of earnings management in the pre-listing year is not sustained in the listing year. An interesting institutional feature of the Kuwaiti market is the pre-listing profit requirement. Issuers of the KSCCs may have incentives to inflate earnings in the pre-listing year to meet the pre-listing profit target. Therefore, another investigation for the pre-listing earnings management was conducted using the pre-listing profit requirement, as explained in next section.

#### 7.2.2 Pre-listing year earning management and profit requirement

Starting from 1997, the KSE imposed a profit requirement condition for all KSCCs pursuing listing. In 2004, a change was made to this condition, increasing the pre-listing profit requirement from 5% to 7.5% of a company's paid-in-capital. Due to this substantial change, the second hypothesis posits that:

# H2: Relative to firms listing before the profit-requirement change, firms listing following the change (from 2004 through to 2007) exhibit higher positive earnings management in the pre-listing financial year.

The KSCCs sample firms were divided into two groups: Group 1 consisting of firms listing before the profit requirement change, and Group 2 consisting of firms listed during the profit requirement change. Results obtained from testing the prelisting profit requirement found no evidence to support H2. Analysing the difference between the pre-listing earnings management of each group using the median and the Mann-Whitney U tests revealed no significant differences between the two groups. The probability values (p) reported by the Mann-Whitney U test are not significant and thus give no support for H2.

These results indicate that both groups are inflating their pre-listing profits evenly. This result can be justified reasonably by considering Kuwait's institutional setting and the managerial opportunism hypothesis. The institutional setting of Kuwait provides evidence that both groups have the same incentives to inflate their pre-listing earnings to its maximum level: to meet the pre-listing profit requirement imposed by law; to signal the firm's high quality; and to seize the opportunity to take advantage of the looser regulations for financial reporting as a private company as opposed to tighter regulations for public companies (Ball & Shivakumar 2005). In addition, the literature provides evidence that managers often opportunistically inflate their company's earnings before listing in highly regulated markets such as the U.S. market (Teoh, Welch & Wong 1998a, 1998b). Therefore, managerial opportunism is even more likely to exist in less-regulated markets such as Kuwait's (Bouresli 2009; International Monetary Fund 2005).

To test the next hypothesis, another investigation for the pre-listing earnings management was undertaken by examining the association between pre-listing earnings management and auditor reputation, as discussed next.

#### 7.2.3 Pre-listing year earnings management and auditor reputation

Audits conducted by a highly-regarded independent professional with a good reputation serve a very important role in improving both the financial reporting and the information credibility of a company. Auditors with high reputation intend to restrict opportunistic earnings management, as well as reduce the risk that the financial reports contain material mis-statements or omissions (Balsam, Krishnan & Yang 2003; Datar, Felthman & Hughes 1991).

Signalling theory suggests that auditor reputation may serve as a positive signal of company value, audit quality and the credibility of financial statements (Chang et al. 2008). It is anticipated that KSCCs issuers will signal the high quality of their firm by employing an auditor with an established name and strong reputation. Developed from the extant signalling theory, the second sub-question asks: Is there a negative association between auditor reputation and pre-listing year earnings management? Therefore, the third hypothesis is:

#### H3: There is a negative association between auditor reputation and prelisting year earnings management.

Testing this hypothesis started with segmenting the sample into two groups: Group 1 (consisting of KSCCs employing high-reputation auditors) and Group 2 (consisting of KSCCs employing low-reputation auditors). This study reveals that, contrary to the results observed by Becker et al. (1998) and Francis and Krishnan (1999), the differences between pre-listing discretionary accruals between the two groups were not significant based on the median and the non-parametric Mann-Whitney U tests . In addition, the bivariate non-parametric Spearman's rank correlation test results reported in Section 6.5.2 show there is no clear evidence of a negative association between earnings management and auditor reputation for all models tested.

A similar result was obtained from the multivariate analysis, which further investigated the existence of a negative correlation between the pre-listing year earnings management and auditor reputation. After controlling for determinates that were found to be significant in the literature such as auditor change, leverage ratio, firm age, firm size, total accruals and firm performance, the outcomes from the multivariate analysis confirmed the outcomes from the univariate analysis, which show that auditor reputation is not a determinant of pre-listing earnings management. Therefore, no evidence was found to support H3.

These results contradict most international studies, for example, the studies of Becker et al. (1998), Francis and Krishnan (1999), Teoh and Wong (1993), McMeeking, Peasnell and Pope (2007) and Clatworthy, Makepeace and Peel (2009). However, as discussed in Chapter 2, the institutional setting of Kuwait provides reasonable justification for these results. It has been reported that Kuwaiti regulators have inadequate judiciary powers, as evidenced by the low level of litigation against auditors when compared to other markets (Alanezi 2006). The outcomes from the non-parametric Wilcoxon signed-rank test revealed that the auditors of both groups, whether of high or low reputation, do not seem to behave as if they consider legal liability a major risk when conducting their audits, as both groups showed significant positive pre-listing discretionary current accruals, as reported in Section 6.2.9.2. This result is in agreement with results generated by Jeong and Rho (2004) in the Korean market, which has similar legal characteristics to the Kuwaiti market. They also found no significant difference in DA between firms audited by big 6 and non-big 6 auditing firms.

In summary, for the first and second sub-research questions, there was some evidence to support the idea that earnings management had been exercised by KSCCs issuers in the pre-listing financial year. This conclusion was based on the existence of the significant positive discretionary accruals of the mean and medians generated by models based on current accruals. However, a significant result was not found when models based on total accruals were used. A possible reason for this inconsistent result is that KSCCs issuers have more discretion over current accruals because they are the component most easily subject to successful managerial manipulation (Teoh, Welch & Wong 1998a)). In addition, total accruals are more visible than current accruals and need more lead time to change before listing (Athanasakou, Strong & Walker 2009; Dechow & Dichev 2002). On the other hand, there was no clear evidence that the pre-listing profit requirement change or auditor reputation had a significant impact on the pre-listing year earnings management.

The subsequent section discusses the unique institutional setting of the Kuwaiti market with its three stage lockup restrictions and the results for the second sub-research question.

#### 7.2.4 Earnings management and lockup restrictions

In contrast to most countries where lockups are voluntary agreements made by insiders of stock-issuing firms who agree to abstain from selling shares for a specific period of time after their issue (Brau, Lambson & McQueen 2005), in Kuwait, lockups are mandated by law. Resolution No.7 (2005) is important in the history of the KSE because it introduced the concepts of *strategic shareholders* and *lockup restrictions*. In their study of the Taiwanese market, Huang and Lin (2007) found a positive association between DAs in first-stage lockups and subsequent insider selling activity. Therefore, KSCCs issuers are expected to inflate earnings during the first expiration period to gain wealth.

The second sub-question asks: 'Do restricted firms manage earnings in the first post-listing year? The fourth hypothesis is developed from the extant literature of agency theory and moral hazard cost.

## H4: Relative to non-restricted firms, restricted firms exhibit higher positive earnings management in the first post-listing financial year.

A comparison between the levels of the post-listing discretionary accruals between the non-restricted group (consisting of KSCC firms that were listed before the lockup restrictions were imposed) and the restricted group (consisting of KSCC firms that were listed after the lockup restrictions were imposed) based on the nonparametric Median and Mann-Whitney U tests suggest that the restricted group exhibits a significant level of post-listing discretionary accruals when using models based on total accruals. Conversely, no evidence was found to support H4 when models based on current accruals were used.

The inconsistent results between models based on total accruals and models based on current accruals can be explained by considering the institutional setting of Kuwait and results obtained from testing H1a. The results of H1a suggest that KSCC issuers deliberately managed their pre-listing earnings through the current accruals. As a result, accruals immediately decline after listing due to current accruals reversal. For that reason, KSCC issuers cannot use the current accruals to inflate earnings, since it is quite difficult to continue to manage earnings after listing through current accruals (Huang & Lin 2007). Therefore, issuers of restricted firms use total accruals to manage earnings (as this requires a longer time to reverse) and to seize the opportunity to gain wealth from selling the highest portion of their restricted shares to the public on the first expiration period.

Having discussed results from the lockup restriction and earnings management hypothesis, exploring the relationship between the pre-listing earnings management and subsequent firm performance will be addressed in the following section.

#### 7.2.5 Earnings management and post-issue performance

Earnings management and the post-issue performance phenomenon have been investigated by numerous prior empirical studies. These studies found international evidence of long-term firm underperformance following IPOs and revealed that, on average, IPO firms underperform in most capital markets over the long run (Aharony, Lee & Wong 2000; Cai, Liu & Mase 2008; DuCharme, Malatesta &

Sefcik 2001; Fan & Thomas 2010; Gajewski & Gresse 2006; Kao, Wu & Yang 2009; Shivakumar 2000; Teoh, Welch & Wong 1998a).

The adverse effect of any past manipulation made by the KSCCs issuers will lead to a moral hazard cost associated with a decline in future earnings. The third sub-question asks: 'Is pre-listing earnings management associated with subsequent firm performance?' Therefore, the fifth hypothesis is:

### H5a: The level of pre-listing earnings management is associated with subsequent firm stock performance.

### H5b: The level of pre-listing earnings management is associated with subsequent firm accounting performance.

Results obtained from testing stock performance (H5a) using CARs and BHARs suggest that the high-DCA group significantly underperforms when compared to the market benchmarks for all holding periods. In addition, examining CARs and BHARs between high and low DCA groups indicate that the high-DCA groups significantly underperform when compared to the low-DCA groups for all holding periods. These results support the managerial opportunism hypothesis that lead to a moral hazard cost and the existence of a negative correlation between DCA in pre-listing and post-listing stock performance found in prior studies, such as in the study of Ahmad-Zaluki, Campbell and Goodacre (2011) of the Malaysian market; Teoh, Welch and Wong (1998a, 1998b) of the U.S. market; Gajewski and Gresse (2006) of the European markets; and Aharony, Wang and Yuan (2005) of the Chinese market. These studies revealed that, on average, IPO firms underperform in the long run in most capital markets.

Results obtained from testing accounting performance (H5b) using the industry-adjusted ROA approach and the median-raw ROA ratio approach show the existence of underperformance in year +2. This trend demonstrates that firms engaged in opportunistic earnings management in the pre-listing year tend to perform poorly in Year +2. However, when analysing the pattern of the adjusted-median ROA and the raw-median ROA across the years between high- and low-DCA groups, results suggest no significant difference observed for both groups. Thus, there is no support for the existence of an association between pre-listing year DCA and accounting performance when the sample firms are split into groups.

In summary, results from testing H5a using the stock return performance (BHARs and CARS) and H5b using accounting performance (ROA) for the KSCC sample firms before and after grouping provide inconsistent results. While results of H5a suggest the existence of managerial opportunism explanation and a negative association between DCA in the pre-listing year and post-listing stock performance, results from testing the accounting performance using ROA for KSCC sample firms reveals the existence of a negative association between pre-listing year DCA and the second post-year period, but not in the other years. When the sample firms split into groups based on their DCA, result suggests no significant association between pre-listing year DA and post accounting performance.

#### 7.3 CONTRIBUTIONS AND IMPLICATIONS

The findings presented in this research have implications for and make a number of contributions to the international earnings management literature, the Kuwaiti financial market's policy and practice, and Kuwaiti investors.

Given the apparent conflicting evidence concerning earnings management in the literature, examining earnings management practices around the KSCCs' listing provides further evidence for the continued debate of the existence of the earnings management phenomenon. This research is based on the analysis of earnings management behaviour related to closed shareholding companies around listing, which represent 90% of companies listed on the KSE. This investigation is undertaken in a setting that has not been examined by previous literature, where the focus has been on the earnings management behaviour around IPOs and SEOs. Moreover, unlike most other studies examining earnings management in more highly regulated markets such as the United States, the United Kingdom and Australia, this study examines earnings management practice in an emerging market. Kuwait has a less transparent system, weak accounting regulations and few institutional investors (El-Temtamy & Chaudhry 2009). This study, thereby, extends the existing body of research and represents the first contribution in this setting to the earnings management international literature.

Second, this study reviews and documents the evolution of the listing requirements imposed by the KSE on KSCCs in Kuwait between the years 1984 to 2010 for both the official market and the parallel market. A close analysis was conducted on earnings management practices, paying attention specifically to the pre-listing profit, the mandatory lockup restrictions imposed by law and the two-auditor requirement for listed KSCCs. As a result, the enforcement bodies of the KSE could find results of this research useful in assessing improvements to their listing requirements and to the two-auditor requirement. In addition, the findings of this study will inform Kuwaiti regulators about the incidence of earnings management and thereby may encourage them to reinforce their judiciary powers, improve the quality of financial reporting, intensify compliance with accounting standards and encourage auditors to perform high-quality audits.

Third, results from this study provide a new framework for investors to improve their decision-making processes. The earnings management result and the poor subsequent stock performance found by this study should encourage investors to be cautious when investing in newly-issued firms and to be discerning when faced with a high magnitude of earnings and performance around the time of issue to avoid potential losses.

Fourth, the examination of the lockup restriction, which is mandated by law in the Kuwaiti market, has an interesting implication. This research finds that KSCCs issuers opportunistically advanced total accruals in an attempt to improve earnings during the first lockup expiration period. Additionally, results show that firms which listed after the lockup restrictions were imposed exhibited a significant level of postlisting earnings management when compared to firms that listed before the lockup restriction was imposed. As a result, this study finds evidence that KSCCs issuers used current accruals to manage their pre-listing earnings to be able to list on the KSE. Meanwhile, they used total accruals to manage post-listing year earnings to gain wealth from selling the highest portion of their restricted shares at the highest price possible. These findings support the opportunism hypothesis and illustrate the agency conflict that exists between the agent (KSCCs issuers) and principal (investors). Therefore, markets such as Kuwait and Taiwan, which have mandatory lockup restrictions, should consider reviewing their listing requirements and possibly reassess them in light of these results.

Fifth, previous studies theorise that an auditor's reputation is anticipated to restrict opportunistic earnings management and serve as a signal of a company's value (Balsam, Krishnan & Yang 2003; Chang et al. 2008; Datar, Felthman & Hughes 1991). However, the findings of this research were contrary to results reported by studies conducted in markets with high legal liability. In this study, results from testing the earnings management behaviour between KSCCs hiring high-reputation auditors and KSCCs firms hiring low-reputation auditors found that there were no differences in the pre-listing earning management exhibited by firms with high-reputation or low-reputation auditors in the Kuwaiti context. Consequently, the study's finding that auditors, whether of high or low reputation, do not have a significant difference in their pre-listing earnings management does raise concerns about the power of the legal system and enforcement bodies in an emerging market such as Kuwait. In addition, there is no evidence that suggests investors can interpret the use of high reputation auditors as an indicative of lower levels of earnings management. Therefore, KSCCs issuers based on the out coming results should consider constructing a cost-benefit analysis before hiring an audit firm.

#### 7.4 LIMITATIONS

Despite the overall strength of this research, the results and implications of this study should be considered in the context of the following limitations. The first limitation of this study is that findings are based on Kuwaiti KSCCs, which may limit the generalisability of results to other jurisdictions such as developed markets, although this research took into consideration all of the KSCCs new listing firms (68 firms). Also, the sample of this study does not include KSCs public companies, which represent 10% of the listing firms during the sample period. The KSCs were excluded from the sample of this research because these companies have different listing requirements to the KSCCs. Therefore, these results should be generalised with a high degree of caution.

The second limitation is the sample size. The small sample is subject to an unavoidable size limitation bias. In addition, when the sample firms were divided into groups for some tests, the non-normal distribution of the small size sample in each group required the use of the non-parametric tests; which makes some results difficult to compare with the results obtained from studies that use large samples.

Third, due to data availability and political circumstances, the study period investigating the pre-listing earnings management was limited to 12 years, as this was the maximum period with available data. Examining the firms' subsequent performance in this study spanned three years and this may be an inadequate length of time for gains/losses to be revealed by the listing companies. However, as explained in Chapters 5 and 6, using the three-year window provided the opportunity for comparisons with other studies of a similar length, as well as being considered the maximum time period to test firm performance in terms of data availability. The pre-listing earnings management was analysed for only one year due to difficulty obtaining the pre-listing data.

A fourth limitation is the use of the discretionary accruals models as a proxy for earnings management. These models have been criticised often in the literature. Researchers argue that these models provide biased and noisy estimates of discretionary accruals, leading to mixed results (Dechow, Sloan & Sweeney 1995; Guay, Kothari & Watts 1996; Kang & Sivaramakrishnan 1995; Kothari, Leone & Wasely 2005). In addition, Guay, Kothari and Watts (1996) state that all discretionary accruals models estimate discretionary accruals with imprecision. Teoh, Wong and Rao (1999) argue that, regardless of which model is used, the discretionary accrual proxy can be noisy. Although these criticisms occur repeatedly, nonetheless a great deal of the earnings management literature continues to employ these models to investigate earnings management due to the lack of any other suitable models. The best estimation approach to detect earnings management remains an open empirical question that is beyond the scope of this research. However, in an attempt to control for mis-specification and to improve the reliability of the discretionary accruals measures, this research employed six versions of the discretionary accrual models.

Fifth, there are some conceptual and statistical problems associated with the use of both the BHARs and CARs methods of measuring abnormal performance in the long-run (Sahin 2005). Loughran and Ritter(1995); Fama (1998); Drobetz, Kammermann and Wälchli (2005); and Gajewski, Jean-Francois and Gresse, Carole (2006), among others, argue that long-term performance is sensitive to benchmark selection and the way the tests are conducted (for example, BHARs versus CARs). Despite the problems associated with the use of BHARs and CARs approaches to measure long-run performance, they have been used often by researchers given the absence of acceptable measure for long-run stock performance.

The sixth limitation of this research is the use of market indices as a benchmark to compute long-run returns. The selection of the appropriate benchmark to measure long-run abnormal returns is another major debate in the asset-pricing literature. Using market indices biases the results, since the index may contain the sample firms or new issuing firms (Fama 1998). Therefore, Barber and Lyon (1997) advocate the use of the control or matched-firm approach to adequately correct the bias. As shown by prior research, the matched-firm approach is the theoretically preferred method, however, it cannot be operationalised in the Kuwaiti market. The small number of available non-issuing matching firms in the Kuwaiti market produces an overlapping application of non-issuing matching firms with KSCCs sample firms, leading to a major violation of the matching criteria. Many other studies have chosen not to use the matching approach even though they have more sample firms and bigger markets than the one in this study. Prior research that was unable to use the matching benchmark due to the limited number of non-issuing firms and small sample size include Drobetz, Kammermann and Wälchli (2005) who used the Swiss Performance Index (SPI) and the Vontobel Small Companies Index (VSCI) for 109 Swiss IPOs; Cai, Liu and Mase (2008), who used the Shanghai Stock Exchange A-share Index for a sample of 335 Chinese IPOs; Kamel (2006), who used the Capital Market Authority Index (CMA), the Egyptian Financial Group Index (EFGI) and the Herms Financial Index (HFI) for 57 Egyptian IPOs; and Rangan (1998), who used a CRSP value-weighted market index to measure the stock returns of 230 U.S. IPOs.

#### 7.5 FURTHER RESEARCH

There are several avenues for future research that arise from the limitations addressed in the previous section. Although the earnings management phenomenon has been widely discussed in the international capital markets literature, it is a topic that has not, until this research, been investigated in the Kuwaiti capital market. As a consequence, the following topics represent interesting potential extensions to the current research. The data collection could be extended to include Kuwaiti KSCs (public companies), which represent 10% of the listing firms during the sample period. This would help determine if the results from this research also hold for KSCs and would also allow for comparisons with other international studies that focused on IPOs. However, examining the pre-listing earnings management cannot be performed if KSCs are used because there will be no available data to calculate discretionary accruals<sup>40</sup>. Therefore, the examination of earnings management should include the first year of listing beyond.

Another alteration to the listing requirements that was not relevant to the sample period of this study occurred in 2008 with Resolution No.2. The primary change made in Resolution No.2 was to cancel the concept of strategic shareholders. Instead, 25% of the paid-in capital of a company must be retained at the clearinghouse for two years from the date of listing. Therefore, after two years of listing, strategic shareholders have only one lockup expiration period to dispose their restricted shares. As this is a major change, it would be useful to investigate the influence of this requirement on earnings management behaviour with the existence of one lockup period, as opposed to three lockup periods in the previous resolution.

This study investigates the association between the KSCCs' pre-listing earnings management and post-listing performance using univariate analysis instead of performing a regression analysis. This is because the objective of this study encompasses an examination the long-run stock and accounting performance, rather than investigating the determinants of post-listing performance. Although outside the scope of this study, investigating the determinants of post-listing performance using regression analysis provides an interesting avenue for future research.

Finally, the scope of this study was focused on investigating the relationship between auditor reputation and earnings management. The study findings ascertained that there was no difference in the earnings management behaviour between auditors with a high or low reputation, which raises a serious concern about the quality of auditors in this market. Therefore, a more comprehensive approach to investigate earnings management and auditor choice and auditor change around listing would be an interesting topic for future study.

<sup>&</sup>lt;sup>40</sup>KSCs can be members in the KSE once their first financial statement are issued, in contrast, KSCCs should be established for at least three years before listing.

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## Appendix A

|  |      | Capital      |  |   |
|--|------|--------------|--|---|
| Legislation  | Year | requirement  | Profit requirement   | Additional requirements   |
| Resolution No. 1   | 1984 | 5 million KD | No less than 5%<br>profit for three years<br>prior to listing  | - Companies applying for listing<br>must be established for three<br>years prior to the application   |
| Resolution No. 4   | 1988 | 5 million KD | Not less than 6% of<br>operational profit for<br>three years prior to<br>listing   | <ul> <li>Distributed cash dividend of at<br/>least 5% during the year prior to<br/>listing</li> <li>At least three audited annual<br/>financial statements issued prior<br/>to listing</li> <li>Prospectus prepared for<br/>approval by company<br/>management and external auditor</li> <li>Shares traded based on book<br/>value or other value approved by<br/>the Market Committee</li> </ul> |
| Resolution No. 1   | 1993 | 1 million KD | No reported losses<br>during the financial<br>year prior to listing  | <ul> <li>Prospectus prepared for<br/>approval by company<br/>management and external auditor</li> <li>Shares traded based on book<br/>value or other value decided by<br/>the Market Committee</li> </ul>   |
| Resolution No. 1   | 1997 | 2million KD  | Net operational profit<br>not less than 5% of<br>its paid-in-capital for<br>two years prior to<br>listing  | - If company has effectively<br>increased its capital, one year<br>must elapse prior to listing<br>-Capital must be distributed<br>among a sufficient number of<br>shareholders; if not, the Market<br>Committee may require the<br>company to offer 25% of its<br>capital for private subscription<br>- Prospectus prepared for<br>approval by company<br>management and external auditor        |
| Resolution No. 3<br>"Amended<br>Resolution No. 1<br>of 1997" | 1998 |              | Average operational<br>profit not less than<br>5% of paid-in-capital<br>for two years prior to<br>listing<br>Company must have<br>reported operational<br>profit for the<br>financial year prior to<br>listing | <ul> <li>Shareholders' names and<br/>ownership percentages to be<br/>submitted immediately after<br/>Market Committee listing<br/>approval</li> <li>Complete listing procedures<br/>within 45 days of listing approval</li> </ul>   |
| Resolution No. 3   | 2004 | 3 million KD | Average operational<br>profit not less than<br>7.5% of paid-in-<br>capital for two of the<br>three years prior to<br>listing   | <ul> <li>If company has effectively increased its capital, one year must elapse prior to listing</li> <li>If capital is 3 million KD, there must be at least 150 shareholders, each with 20,000 shares representing in total at least 20% of the paid-in-capital</li> </ul>   |

| Table A 1 | Evolution | of Listing | Requirements. | The | Official Market |
|-----------|-----------|------------|---------------|-----|-----------------|
| Table A.I | Lyonunon  | of Listing | Requirements. | Inc | Official Market |

| Logislation   | Voor  | Capital       | Drofit requirement   | Additional requirements  |
|---|-------|---------------|--|--|
| Legislation<br>Desclution No. 7                           | 1 ear | requirement   | Prom requirement   | Additional requirements  |
| "Add new<br>conditions to<br>Resolution No. 3<br>of 2004" | 2003  |               |  | <ul> <li>A strategic shareholder is one who owns, directly or indirectly,</li> <li>5% or more of a company's capital shares</li> <li>A strategic shareholder in a</li> </ul>   |
|   |       |               |  | company seeking listing must<br>hold at least 25% of the<br>company's capital, whether<br>owned by one or a group of<br>strategic shareholders<br>- Lockup restrictions are<br>imposed. 50% of the strategic<br>shareholder's shares must not be<br>sold during the first year of  |
|   |       |               |  | listing, 25% during the second<br>year of listing  |
| Resolution No. 1  | 2007  | 10 million KD | Not less than 7.5% of<br>paid-in-capital for<br>each of the two years<br>prior to listing                    | <ul> <li>If a closed company has increased its capital by more than 50%, one year must elapse from the date of notice in the commercial registry to listing</li> <li>Companies must offer 30% of their capital for private subscription and the offer is to be managed by a specialized company that must be independent from the company seeking listing</li> <li>Shareholders' equity to be not less than 115% of paid-in capital for each of the last 3 years</li> <li>Strategic shareholders must hold at least 25% of the company's capital, whether owned by one or more strategic shareholders</li> <li>50% of the strategic shareholder's shares must be retained for the first year after listing, 25% for the second year of the listing.</li> </ul> |
| Resolution No. 2  | 2008  | 10 million KD | Not less than 7.5% of<br>the weighted average<br>of the paid-in-capital<br>for each of the last<br>two years | <ul> <li>If a closed company has increased its capital by more than 50%, one year must elapse from the date of notice in the commercial registry to listing</li> <li>30% of a company's capital must be distributed among a sufficient number of shareholders which is specified by the Market Committee. If the percentage is not achieved, the company must offer 30% of its capital for private subscription with the offer managed by a specialized company</li> <li>ratio of paid-in capital to shareholders' equity to be not</li> </ul>   |

|             |      | Capital     |                    |                                 |
|-------------|------|-------------|--------------------|---------------------------------|
| Legislation | Year | requirement | Profit requirement | Additional requirements         |
|             |      |             |                    | less than 115% of weighted      |
|             |      |             |                    | average paid-in capital for the |
|             |      |             |                    | last 2 years                    |
|             |      |             |                    | - 25% of the company's capital  |
|             |      |             |                    | must be retained at the Kuwait  |
|             |      |             |                    | clearing company for two years  |
|             |      |             |                    | after the day of listing        |

## Appendix B

## Listing requirements for the Parallel Market

As discussed in section 2.4.2 and following the reorganization of the KSE in 1983, a new market was established called the Parallel Market (Annual Economic Report of the KSE 1988). The first requirement issued by the Market Committee to regulate listing on the Parallel Market is not available. Only GCC companies are allowed to list on this market, especially for those company stocks previously traded during the Al-manak crisis. Hence, the Official Market includes only Kuwaiti companies.

Toward the end of 1988, the Market Committee decided to suspend trading on the Parallel Market, which specialized in listing GCC companies. GCC companies were allowed to list directly on the Official Market in May 1989, when the government opened the market to citizens of the GCC, allowing them to buy stocks in Kuwaiti companies and allowing the cross-listing of shares (Annual Economic Report of the KSE 1988).

On June 11, 1989, the Market Committee reopened the Parallel Market with a new set of listing requirements that allowed GCC and Kuwaiti companies to list on the Parallel Market. This time, the Parallel Market permitted the listing of companies that do not meet the requirements for listing on the Official Market, regardless of their nationality (Annual Economic Report of the KSE 1989). Resolution No. 6 of (1989) consisted of twelve articles. The most important of these was the requirement to have a minimum paid-in-capital of KD 1 million compared to KD 5 million on the Official Market. Also, companies seeking listing on this market should have issued at least two audited annual financial reports before listing as compared to three audited financial reports before listing for the Official Market. There is no pre-listing profit requirement for listing on the Official Market.

Four years later, on June, 13, 1993, Resolution No. 1 was issued. In this resolution, the Market Committee combined the Parallel Market with the Official Market to form one Official Market with a single set of listing requirements. The one Official Market continued for about seven years. At the end of 2000, Resolution No. 4 came into effect, which again split the market into an Official and Parallel market (Annual Economic Report of the KSE 2000). The Parallel Market recommenced with new listing requirements, set forth in Resolution No. 34 of (2000). Among the most significant rules were the requirements that the capital of companies seeking listing be at least a half million KD and that shareholders' equity be at least KD 1 million. It also mandated that such companies be established for at least three years and have at least fifty shareholders. Fifty percent of those shareholders' shares are restricted and cannot be disposed of during the first year of listing.

In 2003, Resolution No. 1 allowed companies listed on the Parallel Market to transfer to the Official Market if they have been listed on the Parallel Market for at least one year and meet the listing requirements of the Official Market. The next and last set of requirements related to listing companies on the Parallel Market was issued by the Market Committee in January 2007. That year, the Market Committee strengthened the entry requirements for the Parallel Market in Resolution No. 2 of

(2007), which replaced Resolution No.4 of (2000). For the first time in the history of the Parallel Market, a 5% pre-listing profit was required for companies seeking listing. The new resolution also required companies to have KD 3 million in capital as opposed to only a half million KD in the previous resolution. In the new resolution, companies listing on the Parallel Market must retain 25% of the company's capital, specifically the strategic shareholders' shares, at the clearinghouse of the KSE. Two fixed expiration periods were introduced in this resolution. The first expiration period is during the second year of the listing, at which strategic shareholders can dispose of 25% of their total restricted shares. The second expiration period is during the third year of the listing, at which strategic shareholders can dispose of their strategic shares. .

Regulations for the Parallel Market have undergone numerous reforms. During the past three decades, this market has been thrice activated, once suspended, and once merged with the Official Market. Listing requirements for the Parallel Market are flexible and relaxed compared to those for the Official Market. This flexibility can be seen, for instance, in the fact that the Parallel Market's pre-listing profit and capital requirements are less than those for the Official Market (Resolution No.1 1997; Resolution No.2 2007; Resolution No.34 2000); as a direct consequence, contends Al-Nefeesi (2008), the Parallel Market contains higher-risk companies than the Official Market. The listing requirements for the Parallel Market are summarised in Table A.2.

|  |          | Capital           | Profit           |   |
|--|----------|-------------------|------------------|---|
| Legislation  | Year     | requirement       | requirement      | Other requirements                          |
| Established  | 1984     |                   |                  | -Only GCC companies are allowed to          |
|  |          |                   |                  | list  |
| Parallel Market suspended (Annual Economic Report of the KSE 1988) |          |                   |                  |   |
| Resolution No.   | 1989     | 1 million KD      | Not required     | - Kuwaiti and GCC companies are             |
| 6  |          |                   |                  | admitted                                    |
|  |          |                   |                  | - At least two audited annual financial     |
|  |          |                   |                  | statements issued prior to listing          |
|  |          |                   |                  | - Shares traded based on book value or      |
|  |          |                   |                  | other value decided by the Market           |
|  |          |                   |                  | Committee                                   |
|  |          |                   |                  | - Company founders (vendors) retain         |
|  |          |                   |                  | 30% of their shares for two years           |
| Parallel Market n  | nerged v | with the Official | Market, 1993 (Re | esolution No.1 1993)                        |
| Resolution No.   | 2000     | 0.5million        | Not required     | - Shareholders equity is at least 1 million |
| 34   |          | KD                |                  | KD  |
|  |          |                   |                  | - At least three audited annual financial   |
|  |          |                   |                  | statements issued prior listing             |
|  |          |                   |                  | - Minimum of 50 shareholders                |
|  |          |                   |                  | - Not more than 50% of shares at listing    |
|  |          |                   |                  | to be sold in the first year of listing     |
| Resolution No.   | 2007     | 3 million KD      | Average profit   | - Minimum of 50 shareholders                |
| 2  |          |                   | must be at       | - If a closed company has increased its     |
|  |          |                   | least 5% of      | capital by more than 50%, one year must     |
|  |          |                   | paid-in-capital  | pass from the date of notice in the         |
|  |          |                   | for the last     | commercial registry until listing           |
|  |          |                   | two years, and   | - Non-Kuwaiti companies must be listed      |
|  |          |                   | company must     | on their own domestic exchanges             |
|  |          |                   | have reported    | - Strategic shareholders must hold at       |
|  |          |                   | net profit       | least 25% of the company's capital,         |

Table A.2 Evolution of Listing Requirements: The Parallel Market

|  | during the      | whether owned by one or more strategic     |
|--|-----------------|--|
|  | previous two    | shareholder                                |
|  | financial years | - 50% of the strategic shareholders'       |
|  |                 | shares cannot be sold in the first year of |
|  |                 | listing, 25% during the second year of     |
|  |                 | listing                                    |
|  |                 | - If a closed company has changed its      |
|  |                 | legal structure, a period of three years   |
|  |                 | must pass from the date of notice in the   |
|  |                 | commercial registry before listing         |

## Performance-Matched discretionary accruals by Kothari, Leone and Wasley (2005)

In their examination of the specification and power of the performancematched discretionary accruals model, Kothari, Leone and Wasley (2005, p. 166) find that 'discretionary accruals estimated using the Jones or the modified-Jones model, and adjusted for a performance-matched firm's discretionary accrual, tend to be the best specified measures of discretionary accruals across a wide variety of simulated event conditions."

$$TA_{j,t} = EBXI_{j,t} - CFO_{j,t}$$

(1)

Where:

 $TA_{j,t}$  = total accruals generated from the cash flow statement with the indirect method;  $EBXI_{j,t}$  = earnings before extraordinary items and continued operations;  $CFO_{j,t}$  = cash flow from operation; The variables j and t are industry and time subscripts, respectively.

The second step is to use the OLS regression to estimate total accruals by regressing total accruals on the change in adjusted revenues and gross property, plant and equipment (PPE) for each group of control firms matched with a given sample firm. The regression provides coefficients that are estimated cross-sectionally by industry and year and then used to estimate the nondiscretionary accruals.

$$\frac{TA_{j,t}}{A_{j,(t-1)}} = \alpha_0 + \alpha_1 \left[ \frac{1}{A_{j,(t-1)}} \right] + \alpha_2 \left[ \frac{\Delta REV_{j,t} - \Delta TR_{j,t}}{A_{j,(t-1)}} \right] + \alpha_3 \left[ \frac{PPE_{j,t}}{A_{j,(t-1)}} \right] + \varepsilon_{j,t}$$
(2)

Where:

 $TA_{j,t}$ = total accruals in year *t* for firm j from equation (1);  $A_{j,(t-1)}$ = total assets in year *t*-1 for firm j;  $\Delta REV_{j,t} - \Delta TR_{j,t}$ = change in revenues adjusted for the change in trade receivables in year t for firm j;  $PPE_{j,t}$ = gross property, plant and equipment in year *t* for firm j;

 $\varepsilon_{j,t}$  = error term in year *t* for firm j and *t* is the years included in the estimation period;

All variables including the intercept are scaled by lagged total assets to mitigate heteroskedasticity. The variables j and t are industry and time subscripts, respectively.

After estimating the model by each industry and year, the coefficient from the regression model estimates from the first step are then used to obtain a fitted value for expected accruals or nondiscretionary accruals. In other words, the regression model provides the benchmarks for the nondiscretionary accruals. Thus, the second step yields the following:

$$PNDA_{i,t} = \alpha_0 + \widehat{\alpha_1} \left[ \frac{1}{A_{j,(t-1)}} \right] + \widehat{\alpha_2} \left[ \frac{\Delta REV_{i,t} - \Delta TR_{i,t}}{A_{j,(t-1)}} \right] + \widehat{\alpha_3} \left[ \frac{PPE_{i,t}}{A_{j,(t-1)}} \right]$$
(3)

Where:

 $PNDA_{i,t}$  = predicted nondiscretionary accruals in year t for firm i (scaled by lagged total assets); All other variables are previously defined.

The next step estimates discretionary accruals for each sample firm and matched firm. This is accomplished by taking the difference between the firm's reported total accruals and the predicted nondiscretionary accruals. Expected discretionary accruals are then defined as follows:

$$EDA_{i,t} = \frac{TA_{i,t}}{A_{i,t-1}} - PNDA_{i,t}$$

(4)

Where:  $EDA_{i,t}$  = expected discretionary accruals in year t for firm i (scaled by lagged total assets);  $\frac{TA_{i,t}}{A_{i,t-1}}$  = total accruals in year *t* for firm i scaled by lagged total assets for firm i in year t-1; All other variables are previously defined.

Last, the expected discretionary accruals calculated by each matched firm are subtracted from the expected discretionary accruals calculated by each sample firm to arrive at the expected performance-matched adjusted discretionary accruals as follows:

$$EMDA_{i,t} = EDA_{i,t} - EDA_{m,t}$$
(5)

Where:

 $EMDA_{i,t}$ =expected performance-match adjusted discretionary accruals in year t for firm i;  $EDA_{i,t}$ = expected discretionary accruals in year t for firm i;

 $EDA_{m,t}$  = expected discretionary accruals in year t for firm m; where m is the match firm subscript