CORPORATE OWNERSHIP & CONTROL

Postal Address:

Postal Box 36
Sumy 40014
Ukraine

Tel: +380-542-611025
Fax: +380-542-611025
e-mail: alex_kostyuk@mail.ru
alex_kostyuk@virtusinterpress.org
www.virtusinterpress.org

Journal Corporate Ownership & Control is published four times a year, in September-November, December-February, March-May and June-August, by Publishing House “Virtus Interpress”, Kirova Str. 146/1, office 20, Sumy, 40021, Ukraine.

Information for subscribers: New orders requests should be addressed to the Editor by e-mail. See the section "Subscription details".

Back issues: Single issues are available from the Editor. Details, including prices, are available upon request.

Advertising: For details, please, contact the Editor of the journal.

Corporate Ownership & Control

ISSN 1727-9232 (printed version)
1810-0368 (CD version)
1810-3057 (online version)

Certificate № 7881

КОРПОРАТИВНАЯ СОБСТВЕННОСТЬ И КОНТРОЛЬ

Почтовый адрес редакции:

Почтовый ящик 36
г. Сумы, 40014
Украина

Тел.: 38-542-611025
Факс: 38-542-611025
эл. почта: alex_kostyuk@mail.ru
alex_kostyuk@virtusinterpress.org
www.virtusinterpress.org

Журнал "Корпоративная собственность и контроль" издается четыре раза в год в сентябре, декабре, марте, июне издательским домом Виртус Интерпресс, ул. Кирова 146/1, г. Сумы, 40021, Украина.

Информация для подписчиков: заказ на подписку следует адресовать Редактору журнала по электронной почте.

Отдельные номера: заказ на приобретение отдельных номеров следует направлять Редактору журнала.

Размещение рекламы: за информацией обращайтесь к Редактору.

Корпоративная собственность и контроль

ISSN 1727-9232 (печатная версия)
1810-0368 (версия на компакт-диске)
1810-3057 (электронная версия)

Свидетельство КВ 7881 от 11.09.2003 г.

CORPORATE OWNERSHIP & CONTROL

Volume 11, Issue 3, 2014, Continued - 1

CONTENTS

FACTORS OF FRAUD OCCURRENCE AND CORPORATE GOVERNANCE STRUCTURES: EVIDENCE FROM EMERGING MARKET MALAYSIA

Zuraidah M. Zam*, Wee Ching Pok**, Abdullahi D. Ahmed*

Abstract

The main objective of this research is to examine the possible factors of the corporate environment which may contribute to the occurrence of fraud by investigating whether there are any differences in corporate governance, earnings management activities and compensation structures between scandal and non-scandal firms. The sample of this study consists of 57 scandal firms matched with non-scandal firms in the Malaysian financial environment. The scandal firms are the Malaysian publicly listed companies which have been reported to be involved in fraud over the period 1995 to 2008. Non-parametric tests such as Paired t-test and the Wilcoxon signed-rank test are conducted to investigate the differences in characteristics of the two sub-groups (scandal firms vs. non-scandal firms). The results show that the independent directors of scandal firms were holding fewer directorships. In addition, there is evidence to show that scandal firms are reporting lower earnings and therefore paying lower dividends. However, no significant differences are found in the compensation structures of the executive directors in both sets of our sample. The results of the logistic regression reveal that factors such as the nature of dividend payments; the effectiveness of independent committees and the influence of powerful/dominant positions in a company may have been contributing to fraud.

Keywords: Fraud, Malaysia, Corporate Governance, Earnings Management, Compensation

** Faculty of Accountancy, Universiti Teknologi MARA, Shah Alam, Malaysia*
*** Flinders Business School - Flinders University, Sturt Road, Bedford Park, SA 5042, Australia.*
Tel +618 8201 3266
Fax: +618 8201 2644
Email: abdullahi.ahmed@flinders.edu.au
**** Flinders Business School - Flinders University, Sturt Road, Bedford Park, SA 5042, Australia.*
Tel +618 8201 2474
Fax: +618 8201 2644
Email: weeching.pok@flinders.edu.au

1. Introduction

The acts of fraud of executives in companies have resulted in the collapse of many high profile companies. Examples of companies which had become victims to fraud include Enron (U.S.A.), WorldCom (U.S.A.), Cendant (U.S.A.), Adelphia (U.S.A.), Parmalat (Italy), Royal Ahold (Netherlands), Vivendi (France) and SK Global (Korea). The fall of these high profile companies illustrates the fact that fraud occurrence in companies is an international phenomena (Albrecht et al., 2008). These companies which have been convicted of fraudulent activities would also have to face legal actions from regulatory authorities. The directors of these companies were punished through heavy penalty charges and subsequently companies are also delisted from the exchange or are being subjected to bankruptcy (Beasley et al., 1999). In addition to the offending directors and auditors being charged in court, unfortunate employees have been traumatised with unemployment when the companies closed down (Beasley et al., 1999; Rezaee, 2005; Wright, 2007). Furthermore, the convictions ruined the reputation of the companies involved; often the amount of compensation damage or losses is huge and irreparable.[1] Rezaee (2005) and Jia, Ding, Li and Wu (2009) point out that frauds in financial reporting have eroded public confidence in the reliability of the

[1] Rezaee (2005) revealed that the Enron fiasco caused losses amounting to USD70 billion to the company's total market capitalization. Wright (2007) mentioned the estimated losses of Enron (USD1.5 billion), WorldCom (USD3.8 billion) and Barings £827 million (USD1.4 billion) all of which reflect the heavy toll such crimes bear on the business environment. Therefore, it was not surprising when the recent global fraud report for year 2010 by The Association of Certified Fraud Examiners (ACFE) estimated that the value of fraud incurred across the world within 2008 to 2009 is estimated to be about USD2.9 trillion.

financial statements of the affected companies and reduced the overall integrity of capital market.

According to The Committee of Sponsoring Organizations of the Treadway Commission (COSO) report in 1999, the losses of the U.S. companies that were involved in financial statement fraud for the period 1987 to 1997 were attributed to weak boards of directors. The report stated that most of the fraudulent acts committed in during that period were associated with the senior management, with the majority of the cases involving CEOs and CFOs of the firms. It also highlighted the phenomena of a high percentage of directors and/or topmanagement personnel possessing a substantial share ownership in these companies (Beasly et al., 1999). Ramaswamy (2005) also confirms the link between weak corporate governance and the likelihood of fraud occurrence when the author notes that firms involved in major fraud such as Adelphia, Royal Ahold, Enron and Worldcom had a poor corporate governance rating prior to their collapse. Poor corporate governance indicates weaknesses in the monitoring and controlling systems employed by the company. When a company's corporate governance is weak or lacks effective control mechanisms, there is a tendency for its management to commit financial transgressions. Prior studies have found that board structure characteristics have a correlation to the likelihood of fraud occurrence. Among these characteristics are large board size, small percentage of outside or external directors and busy directors.[2] Besides board structure, the CEO leadership structure can also be a contributing factor to a company's vulnerability to malpractices or misconduct. To ensure effective leadership, it is expected that the CEO's functions be independent of the position of the chairman of its board and that the CEO has not been serving too long in the company. The early studies revealed that CEO leadership issues in relation to duality function and tenure of service of the CEO are factors that may contribute to the likelihood of companies being involved in fraud.[3] In addition, management owning substantial shares in company is said to be another factor which could be linked to fraud occurrence. Ownership of a large percentage of a company's shares provides a company's management great voting power which in turn creates opportunities for management to commit fraud. The COSO report of 1999 revealed that on average, the CEOs/Presidents, the directors and senior officers held nearly 50% from share ownership in the U.S. firms that were involved in fraud (Beasley et al., 1999). This suggests the idea of rewarding share ownership to top managers is not an effective mechanism in solving agency problems in the companies.

Other than weak corporate governance, activities of earnings management are seen as another factor linked to fraud occurrence. Wilfully engaging in earnings management has been found to be the most common method used in fraudulent financial reporting (Rezaee, 2005). Rezaee (2005) and Lou and Wang (2009) have also established that among the motives influencing companies to manipulate their earnings are the perceived need to achieve targeted profits, to create an impression of financial stability, to satisfy analysts' forecast, to attempt to conform to earnings trend and to allocate performance-based compensation for top management. Another possible causative factor of fraud occurrence in companies is the make-up of the top managements' compensation structure. According to Albrecht et al. (2008), inappropriate executive/management compensation or incentives can be one of the reasons which cause large-scale fraudulent acts. These potential benefits motivated the beneficiaries of the top management to focus on increasing the relevant share prices of the company instead of effectively managing the companies (Cheng and Warfield, 2005; Crutchley, Jensen and Marshall, 2007; Albrecht et al., 2008).

Malaysians have also been surprised by the many organisational fraud cases over the last four decades.[4] The recent scandal of Transmile Group Berhad revealed accounting irregularities in financial statements with overstated revenue amounting to RM622 million for the financial years 2004, 2005 and 2006. Due to the fraudulent acts in financial reporting, Transmile Group Berhad encountered a significant fall in its share price from a previous price of RM14.40 to a mere 35.5 cents on 28th September 2010. Consequently, the company owed more than RM500 million to its creditors (Jayaseelan, 2010). According to Lou and Wang (2009), directors or the top management can be strongly persuaded into fraudulently enhancing a firm's performance through manipulation of a firm's earnings. In return, they will earn their performance-based incentives as a reward for supposed good performance. Therefore, these assertions support the position that weak corporate governance practices, aggressive earnings management activities and compensation structures are the possible factors that contribute to the fraud occurrence in Malaysia.

---

[2] See Beasly (1996), Uzun, Szewczyk and Varma (2004), Farber (2005), Helland and Sykuta (2005), Persons (2006), Schnake and Williams (2008).

[3] For further reading see Hermalin and Weisbach (1991), Beasley et al. (1999), Farber (2005) and Persons (2006).

[4] For instance, the Sime Darby Berhad fraud case in 1973 resulted in the executive chairman and the director of Sime Darby Berhad being charged for embezzling RM3.1 million company's money. Later in 1983, the Bumiputra Malaysia Finance (BMF) fraud case caused the company to incur huge losses amounting to RM2.5 billion. BMF was a subsidiary of Bank Bumiputra Malaysia Berhad (BBMB). The BMF scandal was the result of the application of improper loan processes involving a Hong Kong company. It was found that the fraudsters were among the members of the top management who were charged and sentenced to jail. In 1996, a giant steel company, Perwaja Steel became insolvent with debts amounting to RM8 billion. Further investigation exposed the criminal act committed by the managing director of the firm. The managing director was charged with misappropriation of RM76.4 million for fictitious cost.

Empirical research on the issue of corporate governance and firm value have so far either produced little coverage on fraud assessment or have entirely neglected fraud risks (see HKICPA, 2010). Recent studies have further indicated that lack of fraud assessment seems to be greatest in the Asia-Pacific region where it is reported that more than 25 per cent of existing businesses have never conducted a fraud risk assessment (Law, 2011; HKICPA, 2010). Given this fact, Law (2011) argues that it is critical for heads of compliance and chief financial officers of organizations in the region to better understand corporate governance structures if they are to manage risks related to fraud so that they can put in place controls to prevent corporate failures.

This paper intends to contribute to the existing literature in two ways. Firstly, there is some prior literature on fraud being conducted within commercial entities in developed countries.[5] Unfortunately, less research had been initiated in emerging countries such as Malaysia and this study aims to fill the aforementioned gap to existing literature. Secondly, in 2001, Malaysia has implemented the disclosure based regime (DBR) whereby the Securities Commission (SC) would regulate the disclosure of material information while the onus of assessing the merits of any securities rests with the investors.[6] The reason for this significant shift in responsibility is to uplift the assessment duty of SC to focus more in regulating the high standard of disclosure, due diligence and corporate governance practise by publicly listed companies. Under this new regime, directors and top company officers are expected to practise a great level of due diligence in ensuring that the information disclosed are accurate and timely, consequently promoting good corporate governance practises. It is now clear that companies' organizational leadership are held accountable for any false, misleading statements and omissions of material information given to the public. Consequently, this seems to be the fact behind a higher proportion of publicly listed companies reported to be involved in fraud after 2001 (46 out of 57 samples). This revelation formed the basis for the objectives of the present study to examine the factors which may contribute to the existence of a conducive or encouraging environment for Malaysian companies to attempt fraud. In view of all these instances of potential management malpractice, it is worthwhile to examine the differences in corporate governance practices, existences of earnings management activities and management compensation structures between Malaysian scandal firms and non-scandal firms.

2. Literature Review

2.1 The Theory of Fraud

The theory of fraud with reference to white-collar crime was originally developed by Edwin Sutherland in 1949 (Albrecht and Dolan, 2007). Accordingly, persons who committed white-collar crimes are often the trusted persons who held accountable positions in an organisation. These offenders often perceive themselves as good people and not criminals. In 1953, Donald Cressy further extended the initial discovery by Sutherland through his research on the circumstances which lead fraudsters to violate ethical standards to commit fraud. Cressy's research findings established three elements that cause fraud acts, namely, perceived pressure, perceived opportunity, and rationalization. These three elements have also been highlighted in the Statement on Auditing Standards (SAS) No. 99, Consideration of Fraud in a Financial Statement Audits (Hogan, Rezaee, Riley and Velury, 2008).

Perceived pressure refers to element that causes someone to commit a fraudulent act. According to Albrecht et al. (2007), top management will be under huge pressure to ensure earnings show a continual upward trend or to meet expectation by market analysts, thus reflecting the company's positive performance. The perceived pressure may also be due to the fragile economic conditions which force managers and employees to face tougher challenges of fear and uncertainty stemming from personal, financial and workplace pressures. In committing a fraudulent act, there must exist some opportunity for someone to proceed with the action without being detected. The opportunity to commit fraud usually emerges from weaknesses in corporate governance mechanisms such as ineffective or a weak board of directors. In particular, a lack of independent directors, omissions of the audit committee, CEO duality control, an insufficient number of audit committee meetings, poor internal controls, insufficient training, poorly articulated procedures and weak ethical culture in the organisation all encourage fraud commission (Farber, 2005; Dorminey, Fleming, Kranacher and Riley, 2010). The third element identified in the fraud triangle is rationalization. It is the ability to explain, defend or make excuses to defend the criminal behaviour or the fraudulent action(s) (Albrecht et al., 2007). When one has a well-developed ability to rationalise, it will increase the possibility of the person to commit fraud and usually people who are dishonest have the tendency to rationalise more than an honest person. One will attempt to convince oneself of some justification and indulge in seemingly rational means

[5] See for example, research done in the United States of America (U.S.A.) - Erickson, Hanlon and Maydew (2004), Farber (2005), Uzun et al. (2004), Erickson, Hanlon and Maydew (2006), Persons (2006), Crutchley et al. (2007), Perols and Lougee (2010) and United Kingdom (U.K.) – Hemraj (2004), Hsu and Wu (2010), etc.

[6] Prior to this, the Malaysia securities market is regulated on a merit-based system (MBR). It is a system whereby regulation and review of securities rest with the authorities.

of moral acceptance for his wrongdoing (Dorminey et al., 2010).

2.2 Fraud and Corporate Governance Literature

For the purpose of this study, the literature will be discussed along three possible areas which are considered to have links with fraud elements. These areas are the company's weak corporate governance practices (perceived opportunity); earnings management activities (perceived pressure) of the firm; its compensation structure (perceived pressure). Corporate governance in an organization is important because it ensures accountability, supports better decision making process and encourages independence and objectivity in business activities. Rezaee (2005) asserts that weak corporate governance (perceived opportunity) is one of the factors that caused the fraud events in Enron, WorldCom and other scandal firms.[7] There are three corporate governance features which are strongly related to fraud, namely board structure, leadership structure and ownership structure.[8]

A board of directors is responsible for a company's governance and it plays a critical role in ensuring compliance by offering proper direction and guidance to the company (Rezaee, 2005; Kyereboah-Coleman and Biekpe, 2007). A poorly structured board may encourage opportunities for fraud occurrence. The following literature focuses on the components of board structure such as board of director size, percentage of outside directors in board/committees and also the number of directorships held by the directors in determining the effectiveness and level of independence of a firm's board of directors in relation to fraud occurrence. Jensen (1993) posited that a smaller board is more functional and amenable CEO to control. In contrast, Helland and Sykuta (2005) found that larger boards can be effective monitors. In the U.K, Hsu and Wu (2010) found that failed companies have fewer directors on the board than the non-failed firms but the study was unable to establish a link between board size and fraud occurrence. Beside the board size, many studies examine the percentage of independent directors in a company's board. It is crucial to have independent directors in the board because they would monitor management in order to solve agency problems and institute decision control over top management to prevent any involvement in financial statement fraud (Beasley, 1996). In an early research in the US, Beasley (1996) compares 75 US fraud firms with 75 non-fraud firms and found that boards in non-fraud firms have a significantly higher percentage of independent directors compared to fraud firms.[9] A Malaysian study conducted by Mohd et al. (2005) found that even though many independent directors sat on a board, they failed to prevent the CEO/Chairman from manipulating company earnings. In Australia, Davidson, Goodwin-Steward and Kent (2005) revealed a significant negative association between boards with a majority of non-executive directors and earnings management. Similar results were also found in the US by a recent study undertaken by Ahmed et al. (2008). Hsu and Wang (2010) reveal a negative link between failed companies in the UK and the percentage of non-executive directors on their boards. Another aspect related to outside directors is the optimal number of external directorship appointments. Beasley's (1996) study indicated that the fewer the number of appointments of director positions held by independent directors in other firms, the less likely the occurrence of financial statement fraud. Schnake and Williams (2008) lent further support to the reported negative relationship across several firms between governance and the holding of multiple directorships. Holding multiple directorships resulted in disruptions in work and attentiveness when servicing larger boards ultimately leading to a probability of fraud occurring in the U.S companies. However, Ferris, Jagannathan and Pritchard (2003) in their research found no link between multiple directorships and the likelihood of securities fraud litigation in the country. In Malaysia, there is limitation on number of directorship imposed by the Bursa Malaysia Listing Requirement. A director of a Malaysian publicly listed company cannot hold more than 25 directorships in companies.[10] Nevertheless, a Malaysian study conducted by Saleh et al. (2005) found that multiple directorships are negatively associated to earnings in firms with negative unmanaged earnings.[11]

Assigning separate board functions to different committees implies a clean separation of tasks and functions in controlling boards (Laux and Laux, 2009). Uzun et al. (2004) found that the existence of

[7] The researcher explained that among the weak corporate governance practices that contributed to these debacles are (1) a lack of vigilant oversight functions (e.g. by the board of directors and/or the audit committee), (2) arrogant and greedy management, (3) improper business conduct by top executives, (4) ineffective audit functions, (5) lax regulations, (6) inadequate and less transparent financial disclosures, and (7) inattentive shareholders (p. 288).

[8] See for example, Beasley (1996), Beasley et al. (1999), Uzun et al. (2004), Farber (2005), Helland and Sykuta (2005), Persons (2006), Efendi, Srivastava and Swanson (2007).

[9] The result is consistent with other US studies conducted by Uzun et al. (2004), Farber (2005), Helland and Sykuta (2005) and Persons (2006), etc.

[10] Limitation of 25 directorship inclusive of 10 in publicy listed companies and 15 in other non-listed companies , available at http://www.bursamalaysia.com/website/bm/regulation/rules/listing_requirements/downloads/bm_mainchapter15.pdf for main market and http://www.bursamalaysia.com/website/bm/regulation/rules/listing_requirements/downloads/bm_acechapter15.pdf for ACE market.

[11] According to Saleh et al. (2005), unmanaged earnings are earnings minus discretionary accruals.

independent directors in audit committees and compensation committees are significantly related to fraud occurrence. Davidson et al. (2005) showed that in Australia, there is a significant association between audit committees with earnings management. But, a study carried out by Yammeesri and Herath (2010) on 245 non-financial firms listed on the Stock Exchange of Thailand failed to establish any connection between a percentage of independent directors on the three board committees and firm value. In Malaysia, the MCCG (2007) has highlighted the duties and provides useful reference for how audit, remuneration and nomination committees should operate in Malaysian publicly listed companies. Therefore, our first main hypothesis in this research is:

H1: There are significant differences in board structure between scandal firms and non-scandal firms.

There are debates on whether the company's leadership structure should be either a combination or enforcing a separation between the roles of a CEO and chairman of the board (Epps and Ismail, 2009). Agency theory asserts that the CEO indulging in dual functions is bad for a company's performance as it can compromise his/her monitoring and control duties. On the other hand, stewardship theory argues that CEO duality enhances a firm's performance because there is the leadership unity of command. In the US, Farber (2005) examined 87 fraud firms by matching them to non-fraud firms and found fraud firms have a higher percentage of CEOs who are also board chairperson. Persons (2006) revealed that existence of CEO duality leads to a higher possibility of companies experiencing fraud. Efendi et al. (2007) posited that the likelihood of firms having misstated financial statements was greater when the CEO was also the chairman of the company's board. Ahmed et al. (2008) found a positive correlation between CEO duality and managing earnings among the US companies, a finding which was consistent with the study conducted in Thailand by Yammeesri and Herath (2010). In contrast, Uzun et al. (2004) showed no evidence that US fraud companies are more likely to have CEOs with duality functions. Similar results were found by Davidson et al. (2005) which indicated that there is no relationship between separation of CEO duality functions and earnings management. In the UK, Hsu and Wu (2010) found that leadership duality is not linked with corporate failure incidents.

Another measure to the underlying agency problem is the duration tenure of directors. Hermalin and Weisbach's (1991) findings suggest that the CEO who holds the job for a long time will become entrenched in his ways and this may provide the impetus to commit fraudulent acts. Other US studies such as Beasley (1996) and Uzun et al. (2004) however, found that number of years a CEO is on the board is not a significant factor to contribute to the possibility of fraud occurrence. In contrast, Persons (2006) found the longer the CEO's tenure on the board, the lesser the likelihood of fraud. An exception was in Hsu and Wu (2010) whose results indicated that CEOs in corporate failures in the UK had shorter tenures. The second main hypothesis of this research is:

H2: There are significant differences in leadership structure between scandal firms and non-scandal firms.

It is said that awarding share ownership can align a manager's interest with those of the shareholders (Jensen and Meckling, 1976). This is because when managers own a company's stocks it may motivate them to act to enhance the firm's value (Hermalin and Weisbach, 1991). When they are thus motivated to improve their own position and the firm's, there is less likelihood to manipulate earnings or commit fraud (Ahmed et al., 2008). However, much prior literature revealed conflicting results to that of Ahmed et al. (2008).[12] Therefore, the third main hypothesis is:

H3: There are significant differences in management ownership between scandal firms and non-scandal firms.

2.3 Earnings Management in Corporate Accounting

There are many reasons why management may manipulate a firm's earnings. Some of the reasons include, to report higher earnings; to avoid reporting pre-tax losses; to meet or exceed analysts' forecast of the firm's earnings growth; to engineer a significant increase in the price of the firm's stock; to engineer an artificial demand for new issuance shares; to meet with minimum listing requirement by the local exchange to avoid being delisted; and to hide misappropriation of assets and to camouflage the firm's performance deficiencies.[13] Kalbers (2009) elaborates that some of the forms of earnings management may be considered fraudulent.

Crutchley et al. (2007) have used discretionary current accruals (DCA) and absolute DCA as proxies to detect the earnings management activities in scandal companies. The study found that, on average, the scandal firms recorded a significantly higher DCA in the year before the fraud was committed (and also in the third year) compared to that of the matched

[12] For example, Hermalin and Weisbach's (1991) findings suggest there is an optimal limit to managerial ownership in a firm. Beasley's (1996) findings show with large managerial ownership, it provides the clout to indulge in fraudulent activities. Persons (2006) also conducted in the U.S.A. revealed that equity ownership by outside directors and outside blockholders did not reduce the likelihood of non-financial reporting fraud. Sen (2007) found that an increase in the proportion of ownership of a firm may not necessarily minimize the propensity to commit fraud. Similar results were reported by Hsu and Wu (2010) who found the managerial stockholding as a control variable was not showing significant variance between failed and non-failed firms in the UK.

[13] See for example, Beasly et al. (1999), Cox and Weirich (2002), Jensen (2005), Crutchley et al. (2007), Albrecht et al. (2008), etc.

non-scandal firms. Erickson et al. (2004) analysed a sample of firms in the U.S.A. on whether firms which practiced fraudulent earnings overstatement had paid income tax on the overstated earnings which were in fact non-existent earnings. The findings of their study revealed that firms tend to over-pay their firms' taxes by inflating their accounting earnings. According to Crutchley et al. (2007), deferred tax expense can suggest the existence of earnings management. This is because provision for deferred tax can imply an over-aggressive style of management in tax planning strategies to falsely report higher or lower earnings than the true earnings of a firm. Md Noor et al. (2007) examined financial statements prepared for the years 2001 to 2003 by firms of Bursa Malaysia. Their findings suggested that firms used deferred tax expense to avoid reporting a loss. Ettredge et al. (2008) found a strong link and a positive relationship between deferred tax expense and the likelihood of fraud occurrence. Generally, companies which are prone to fraud incidents are the ones that report to the market a more rapid and greater rate of business expansion than is actually the case.[14] Crutchley et al. (2007) suggests that when a firm is paying dividends to its shareholders, the action provides a strong indication that the firm is having cash in hand to cater for the payment which in turn suggests an absence of any earnings management. Therefore, dividend payment can be used as a measurement to detect earnings management activities in a firm. This study proposes the fourth main hypothesis as follows:

H4: There are significant differences in earnings management activities between scandal firms and non-scandal firms.

2.4 Compensation Structure

The compensation structure of top management can also act as an incentive for the management to commit fraudulent activities. Gao and Shrieves (2002) report that the compensation structure (which includes bonuses and stock options) and its intensity are associated with the earnings management. An earlier study carried out by Baker, Collins and Reitenga (2003), which examines details of pay packages of CEOs of 350 wall street firms, provide a strong evidence suggesting that discretionary current accruals (DCA) is influenced by the share options. Cheng and Warfield (2005) observe that managers with large stock-based compensation are motivated to be involved in managing the firm's earnings which enables them to then sell their shares at higher price. Denis, Hanouna and Sarin (2006) found CEOs in fraud firms sample receive more share options compared with those in non-fraud firms. Similar results are reported by Efendi et al. (2007) who reveal that the possibility for misstated financial statements is higher when the CEO has a substantial amount of share options.15 Thus, our fifth main testable hypothesis is:

H5: There are significant differences in compensation structure between scandal firms and non-scandal firms

3. Data Analysis and Research Methodology

3.1 Selection of the Sample Firms and Data Collection

The sample of fraud firms was selected from the Securities Commission of Malaysia (SC) website and also Bursa Malaysia database. The SC database listed about 60 publicly listed companies being charged (insider trading, market manipulation and false or misleading of submission statements) and investigated during the years 1996 to 2010. However, only 31 companies were selected for examination.[16] The Bursa Malaysia database listed 38 companies which had been reprimanded and fined by the Bursa Malaysia for breach of paragraph 16.11(b) 17 of Listing Requirement for the years 2007 to 2010.18 Out of 38, only 26 companies were used for further considerations.[19] Therefore, the final sample of this

[14] See for example, Bell and Carcello (2000), Albrecht et al. (2007), Crutchley et al. (2007), Hogan et al. (2008), Lou and Wang (2009), Perols and Lougee (2010).

[15] There are also studies conducted in the U.S.A. that showed different results from the above. Dechow, Sloan and Sweeney (1996) did not find any evidence to support the notion that managers manipulating firms' earnings are awarded with high earnings-based bonus. Erickson et al. (2006) examined the U.S.A. companies that had been alleged by the SEC to be involved in accounting fraud with the purpose to investigate whether there is a link between executive equity-based incentives and the occurrence of firm's accounting irregularities in the firms. The study found no significant evidence to support their contention. Similarly with Laux and Laux (2009) propose that the increase in CEO equity incentives does not necessarily lead to a higher level of earnings management.

[16] From the population of 60 companies, we have excluded 2 financial institutions, 14 companies which had incomplete information on the fraud incidents and 13 companies with inadequate other relevant data from its sample selection, which resulted in 31 companies being included as sample.

[17] In this study, companies are deemed to be committing fraud with intent if the directors were found in breach of paragraph 16.11(b) of Listing Requirement which states that directors permitting knowingly or where they had reasonable means of obtaining such knowledge that the company is committing the breach.

[18] This study had categorised the scandal firms into (1) financial statement fraud, (2) securities fraud, (3) breach of trust, and (4) other offences. For companies which had breached the SC and Bursa Malaysia regulations regarding the accuracy and timely submission of financial statements are identified as those committing financial statement fraud. Companies which violate any of the SC regulations which were associated with matters such as offences of insider trading and market manipulations are categorised as securities fraud. The offences involving the misuse of company funds for personal benefits were considered as breach of trust. Meanwhile, any of the companies' offences other than the first three categories were categorised under other offences.

[19] Out of these 38 companies, 12 companies are reported by both SC and Bursa Malaysia for the same fraud incident. Therefore, only 26 companies are used.

study consists of 57 fraud firms which will be known as 'scandal firms'.

Table 1. Scandal firms according to the year of fraud incidents and type of offences

Fraud year	Type of offences				Total
	Financial statement fraud	Breach of trust	Securities fraud	Other offences	
1995	-	-	1	-	1
1996	3	-	1	-	4
1997	1	-	1	-	2
1998	2	-	-	-	2
1999	1	1	-	-	2
2001	-	-	1	-	1
2003	1	-	-	-	1
2004	6	1	-	1	8
2005	5	-	-	-	5
2006	5	-	2	2	9
2007	11	2	1	-	14
2008	7	-	-	1	8
Total	42	4	7	4	57

Table 2. The details of financial statement fraud, securities fraud, breach of trust and other offences committed by the 57 scandal firms

Type of offence	Total companies involved	Total directors being charged	Total amount involved (RM)	Total fines to the directors (RM)
Panel A : Financial statement fraud				
Non-compliance of approved accounting standard	2	4	NA	160,000
Submission of financial statements which contain misleading information and/or delay in its submission to the SC and Bursa Malaysia	40	125	NA	Abt 11.5 mil.
Panel B : Securities fraud				
Breach of SC regulations of share transactions (buy and sell) in the market	2	10	20 mil.	NA
Insider trading	1	1	NA	NA
Utilisation of proceeds from share or bond issued for purpose other than approved by SC	4	7	Abt 149 mil.	NA
Panel C : Breach of trust				
Misused company's fund for personal benefit	4	6	Abt 222.5mil.	NA
Panel D : Others				
Disposed assets without shareholders' approval	1	7	20 mil.	NA
Delayed announcement to publicly on default payment of credit facilities	1	6	Abt 273 mil. (USD91mil.)	NA
Provided financial assistance to non-permitted persons or companies	2	11	Abt 35 mil.	NA
Panel E : Total				
9 type of offences	57		Abt 719.5 mil.	Abt 11.66mil.

Note: NA refers not available, mil. denotes million

Table 1 consists of the details of the companies according to the fraud years and types of offences. It shows that 42 companies committed financial statement fraud, followed by 7 companies involved in securities fraud and 4 companies were associated with breach of trust incidents and other offences, respectively. Most of the scandal firms had been involved in financial statements fraud as it implied that financial reporting is among the preferred tools used to intentionally misrepresent their firms' conditions to the stakeholders. Moreover, the highest number of reported offences committed by the scandal firms were recorded in year 2007 with 14 cases compared to other fraud years. This suggests that there is a spike in intentional breaches of regulations during a period of economic downturn. The details of the type of offence, the amount involved and the total fines are summarised in Table 2. Each of the scandal firms were matched with a firm of similar nature in business and size (selecting those with similar total assets and supported with the closest book-to-market ratio and market capitalisation as at the year before the reported fraud year) that was not reported for any fraud before. These matched firms are termed 'non-scandal firms' in this study.

Of the sample of 57 scandal firms, the highest number of scandal firms was recorded by the industrial products sector with 18 firms (31.58%) followed by the trading and services sector with 13 firms (22.81%). The 9 firms from the technology sector experienced the third highest number (15.79%) of fraud cases (This information can be provided upon request).

Table 3(a). Summary of measurement of firms' characteristics

Proxies	Details
Panel A : Matching measurements	
Total assets	In thousands of Ringgit Malaysia (RM)
Book-to-market ratio	Book value of common stock divided by market value of common stock
Total market capitalization	Market value of firm's outstanding common stock. In thousands of Ringgit Malaysia (RM)
Age	Years from incorporation
Panel B:Initial Comparisons	
Total sales	In thousands of Ringgit Malaysia (RM)
Operating income before tax	Earnings before interest, taxes, depreciation and amortization (EBITDA). In thousands of Ringgit Malaysia (RM)
Net income	In thousands of Ringgit Malaysia (RM)
Panel C: Profitability ratios	
Operating ROA ratio	EBITDA divided by total assets
ROA ratio	Net income divided by total assets
Panel D: Debt ratios	
Debt to assets ratio	Percentage of total debt divided by total assets
Panel E: Market test ratios	
Operating income to price ratio	EBITDA divided by total market capitalization
Earnings to price ratio	Net income divided by total market capitalization

Table 3(b). Summary of measurement of corporate governance variables

Proxies	Details
Panel A: Board structure	
Board size	Number of directors
Board independence	Percentage of independent directors in the board
Audit committee independence	Percentage of independent directors in the audit committee
Remuneration committee independence	Percentage of independent directors in the remuneration committee
Nominating committee independence	Percentage of independent directors in the nominating committee
Additional directorship	Number of additional director position held by independent directors in other publicly listed companies
Panel B: Leadership structure	
Duality	Equals to 1 if the chairman and CEO is the same person, 0 if there is a separate functions
CEO tenure	Number of years the CEO held the position
Panel C: Ownership structure	
Management ownership	The percentage of common stock owned by executive directors

3.2 Firm characteristics and corporate governance variables

Most of the proxies adopted as measurement variables in the current study are selected on a similar basis to those used by Crutchley et al. (2007). However, some modifications and omissions on selected proxies were necessary because of the unavailability of data and due to the incompatibility with the Malaysian environment. There are 12 variables being used to compare the firms' characteristics between scandal firms and their matched non-scandal firms. The details of the measurements are elaborated in Table 3(a). To examine whether there are significant differences in corporate governance practices between scandal firms and non-scandal firms, this study used nine proxies to cover the corporate governance's three main features i.e. (1) board structure, (2) leadership structure, and (3) ownership structure. The details of the proxies for each of the above can be found in Table 3(b).

3.2.3 Earnings management and compensation structure variables

In order to measure the earnings management variables, this study used 13 proxies. The details of the proxies are recorded in Table 4. In the current endeavour it was not possible to distinguish the compensation structures of CEOs and the executive directors due to the aggregation of data reporting by Malaysian publicly listed companies in their annual reports. Furthermore, it was also not possible to measure the share options value received by executive directors due to the constraints in information. Therefore, the current study can only use total cash compensation to understand the compensation structure in both scandal firms and non-scandal firms. The details of the proxies are shown in Table 5.

3.3 Methodology

Adopting the approach of Crutchley et al. (2007), the respective mean and median for both firm types were established by using paired t-test and complemented with the Wilcoxon signed-rank test. The Wilcoxon signed-rank test is considered to be more appropriate for working on a small data pool or on data which are not normally distributed (Pallant, 2001). At a later stage, the factor analysis was applied to summarize the structure of numerous variables used in this study. By using factor analysis, further insights are provided into the underlying factors or fundamentals represented by the various variables used in expressing the possible factors that are related to the Malaysian fraud occurrence. According to Hair et al. (2006), "factor analysis provides the tools for analysing the structure of the interrelationships (correlation) among a large number of variables by defining sets of variables that are highly interrelated, known as factors. These groups of variables (factors), that are by definition highly inter-correlated, are assumed to represent dimensions within the data" (p.104). In the present study, KMO and Barlett's Test of Sphericity are used to evaluate the appropriateness of the variables (Hair et al., 2006).[20] Furthermore, the conceptual underpinnings of the variables and using their judgement is required to look into the appropriateness of the variables (Hair et al., 2006, p.110). In the second stage, we use the results of the factor analysis in performing logistic regression analysis.

4. Results and Discussion

4.1 Preliminary Results

Table 6 compares the firm's characteristics of scandal firms and their matched non-scandal firms. Panel A shows that the scandal firms have a slightly lower total market capitalization compared to non-scandal firms. Nevertheless, the average age in both sets of samples is similar i.e. 22 years. Panel B reveals that the scandal firms have a lower median in total sales and operating income before tax than those recorded by the non-scandal firms. The scandal firms also have less average net income compared to those earned by non-scandal firms. The results of Panel C show that the scandal firms have on average, a lower operating ROA ratio (ROA) significant at the 0.01 level. Likewise, the ROA is lower for scandal firms compared to non-scandal firms. Panel D of Table 6 indicates that scandal firms have significantly higher ratio debt ratio with 0.297 (mean) and 0.314 (median) compared to 0.218 (mean) and 0.172 (median) for the non-scandal firms. Panel E in Table 6 show that the scandal firms have a lower operating income to price ratio and earnings to price ratio compared to the matched non-scandal firms. As a whole, the results suggest that during the year before the fraud year, the scandal firms were facing financial problems i.e. experiencing losses, or were less profitable and had greater debt commitment compared to the non-scandal firms. Furthermore, the poor financial conditions of scandal firms may not possibly attract potential investors to invest in the firms. Hence, the above discussion suggests the scandal firms were in a weaker financial condition compared to their matched non-scandal firms during the year prior to the fraud incidents.

Table 7 compares the corporate governance of scandal and their matched non-scandal firms. Panel A reveals, except for additional directorship, there is no significant differences between the scandal firms and non-scandal firms in terms of (i) the number of directors in board, (ii) percentage of independent directors in board composition, (iii) percentage of

[20] According to Hair et al. (2006), a minimum overall KMO value of above 0.5 and a significant Barlett's Test of Sphericity before proceeding with the factor analysis.

independent directors in audit committee, (iv) percentage of independent directors in remuneration committee, and (v) percentage of independent directors in nominating committee. Overall, we can thus conclude, except for the additional directorship, there are no significant differences in the corporate governance of the scandal firms and non-scandal firms. Panel B of Table 7 show no significant differences in leadership structure between the scandal firms and non-scandal firms which implies that Malaysian firms practice identical styles of leadership in their respective organisations. This result rejects Hypothesis 2. As shown in Panel C of Table 7, the study shows no significant differences were found in mean (17.4% for scandal firms and 14.5% for non-scandal firms) and median (13.7% for scandal firms and 7.2% for non-scandal firms) in management ownership. This result thus rejects Hypothesis 3.

Table 4. Summary of measurement of earnings management variables

Proxies	Details
Panel A : Discretionary current accruals (DCA)[21]	
Discretionary current accruals (DCA)-1	The residuals between expected and actual accruals in the year before the fraud year
Absolute value of DCA-1	Absolute DCA in the year before fraud year
Absolute value of DCA-3	Absolute DCA in the third year before fraud year
Change in AbsDCA	Change between absolute DCA in the year and third year before fraud year
Panel B : Taxation	
Current tax paid	The ratio of total tax paid divided by earnings before tax in the year before fraud year
Deferred tax expense	The ratio of total deferred tax expense divided by earnings before tax in the year before fraud year
Panel C : Growth	
% Change in total assets	The percentage change of total assets in the year before fraud year minus total assets the third year before fraud year divided with total assets in the third year before fraud year
% Change in total sales	The percentage change of total sales in the year before fraud year minus total sales the third year before fraud year divided with total sales in the third year before fraud year
Panel C : Dividend	
Average payout ratio	Average dividends divided by average net income over a three year period
Payout ratio -1	Dividends divided by net income in the year before the fraud year
Payout ratio -2	Dividends divided by net income in the second year before the fraud year
Payout ratio-3	Dividends divided by net income in the third year before the fraud year
% Change in payout ratio	Percentage change of the total dividend in the year before fraud year minus dividend in third year before fraud year divided with dividend in the third year before fraud year

Table 5. Summary of measurement of compensation structure variables

Proxies	Details
Total cash compensation	Average total of salary, bonus and other cash compensation received by executive directors in the year before the fraud year
Total cash compensation per total assets ratio	The average total cash compensation received by executive directors divided by total assets in the year before the fraud year
Total cash compensation per total sales ratio	The average total cash compensation received by executive directors divided by total sales in the year before the fraud year

[21] See Teoh et al. (1998) and Yang et al. (2009)

Table 6. Firms' characteristics of 57 scandal firms and 57 non-scandal firms

					Paired difference (Scandal - Match)		
Firm characteristics		Scandal firms	Matched non-scandal firms				
	N	Mean	Median	Mean	Median	Mean	Median
Panel A: Matching							
Total assets ('000)	57	496,523	287,171	579,616	284,377	-83,093	2,794
Book-to-market ratio	49	1.29	1.13	1.20	0.89	0.08	0.24
Total market capitalization ('000)	51	249,632*	86,347*	449,290	126,394	-199,658*	-40,047*
Age	38	22.1	17.0	22.0	21.5	0.1	-4.5
Panel B:Initial comparison							
Total sales ('000)	56	178,501	109,836***	413,463	147,900	-234,961	-38,064***
Operating income before tax ('000)	55	19,982	14,453**	55,116	18,206	-35,134	-3,753**
Net income ('000)	57	649**	3,063***	19,064	7,048	-18,414**	-3,985***
Panel C :Profitability ratio							
Operating ROA ratio	55	0.038***	0.057***	0.094	0.087	-0.056***	-0.030***
ROA ratio	57	-0.013	0.017**	0.013	0.032	-0.026	-0.015**
Panel D :Debt ratio							
Debt to assets ratio	57	0.297**	0.314***	0.218	0.172	0.079**	0.142***
Panel E :Market test ratio							
Operating income to price ratio	49	-0.037**	0.094**	0.168	0.140	-0.205**	0.046**
Earnings to price ratio	51	-0.236**	0.013*	0.005	0.050	-0.241**	-0.037*

** Indicates statistical significance at the 0.10 level*
*** Indicates statistical significance at the 0.05 level*
**** Indicates statistical significance at the 0.01 level*

All variables are measured as at the year before the fraud incident experienced by the scandal firms. Book-to-market ratio is book value of common stock divided by market value of common stock, Total market capitalization is the market value of firm's outstanding common stock, Age is years from incorporation, Operating income before tax is earnings before interest, taxes, depreciation and amortization (EBITDA) and ROA is return on assets. Operating ROA ratio and ROA ratio are EBITDA and net income divided by total assets respectively, Debt to assets ratio is total debt divided by total assets and Operating income (Earnings) to price ratio is EBITDA (net income) divided by total market capitalization respectively. T-test used to test means and Wilcoxon signed-rank test used to test medians. In Scandal firms column, significance indicates mean or median is difference from its matched non-scandal firms sample and in Paired difference column indicates mean or median is difference from zero.

Panel A of Table 8 shows the results of the computation to measure the extent of earnings management activities in both groups of firms. First, the findings reveal the mean and median of DCA-1 for scandal firms (-0.04 and -0.02 respectively) was significantly lower than mean and median of non-scandal firms (0.01 and 0.00 respectively) which indicate that scandal firms tend to manage earnings by lowering earnings figures. Second, there were differences in the mean and median for the absolute value of DCA-1 for scandal firms (0.08 (mean) and 0.07 (median) for scandal and 0.05 (mean) and 0.04 (median) for matched non-scandal firms, respectively) and the absolute value of DCA-3 also found to have significant differences in mean and median (0.13 and 0.08 for scandal firms, 0.04 and 0.04 for non-scandal firms) at the 0.10 and 0.01 levels respectively. However in terms of change in absolute DCA, both sample groups showed similar results. These results provide support to the assertion that earnings management activities even existed in scandal firms from three years prior to the fraud year. Panel B of Table 8 shows no differences in means between current tax paid and deferred tax expense but a weak median difference at the 0.10 level for current tax paid was indicated. Panel C of Table 8 presents no evidence of significant differences of growth rate between both groups of sample firms. The results imply that scandal firms were not under greater pressure to meet the expectations of analysts and investors on the firms' expansion compared to non-scandal firms.

Panel D of Table 8 presents the findings of a comparison between dividends distributed by scandal firms and their matched non-scandal firms. It was found that both mean and median were significantly different at the 0.01 level of significance for the period covering three years prior to the fraud year. The differences between the mean of scandal firms (0.13) and that of non-scandal firms (0.46) indicates that non-scandal firms are paying out dividends more than three times that paid out by scandal firms. Indeed, in average, the scandal firms had consistently paid lower dividends to its shareholders for the three years consecutively prior to the fraud year, which are significant at the 0.05 level respectively. However, there is no significant difference found in percentage change in payout ratio for both groups of firms. Even though one of the variables showed insignificant results for dividend, the remaining four variables showed significant results. Overall, there is evidence to suggest the scandal firms were more aggressive in managing the earnings compared to the non-scandal firms. As at the year prior to the fraud year, there is evidence to suggest the scandal firms were more likely to understate their income in the financial statements which in turn resulted in lower dividend payments to its shareholders. Therefore, aggressive earnings management activities and less dividend payment are the possible factors that link to the fraud occurrence among Malaysian publicly listed companies. Hence, we do not reject Hypothesis 4.

Table 9 shows no evidence of significant differences of all the proxies between both groups of sample firms. Even though the average amount of cash compensation received by an executive director in scandal firms (RM395,000) is much lower compared to that of non-scandal firms (RM477,000), unfortunately these result did not show significant differences. Therefore, there is not enough evidence to support the assertion that compensation structure can be one of the possible factors that are associated with fraud occurrence in Malaysian publicly listed companies. Thus, Hypothesis 5 is rejected.

The matched non-scandal firms selected from same industry with similar total assets, book-to-market ratio and total market capitalization. All variables are measured as at the year before the fraud incident experienced by the scandal firms. Board size is the number of directors, Additional directorship measures the average of additional director position held by independent directors in other publicly listed companies, Board (Audit committee, Remuneration committee and Nominating committee) independence defines as percentage of independent directors in the board (audit committee, remuneration committee and nominating committee respectively), Duality equals to 1 if the board chairman and CEO is the same person and 0 if there is a separate functions, CEO tenure defines number of years CEO held the position and Management ownership measures the percentage of common stock owned by the executive directors. T-test used to test means and Wilcoxon signed-rank test used to test medians. In Scandal firms column, significance indicates mean or median is difference from its matched non-scandal firms sample and in Paired difference column indicates mean or median is difference from zero.

The matched non-scandal firms selected from same industry with similar total assets, book-to-market ratio and total market capitalization. DCA-1 is measures in the year before fraud year, Absolute value for DCA-1(3) is measures in the (the third) year before fraud year, Change in Abs DCA is the change between absolute DCA in the year and third year before the fraud year, Current (Deferred) tax paid (expense) is ratio calculated from total tax paid (deferred tax) divided by earnings before tax in the year before fraud year, % Change in total assets (total sales) is the percentage change of total assets (total sales) in the year before fraud year minus total assets in the third year before fraud year divided with total assets (total sales) in the third year before fraud year, Average payout ratio is the average dividends divided by average net income over a three year period before fraud year, Payout ratio-1 (2 and 3) is dividends divided by net income in the year (second year and third year) before the fraud year respectively, and % Change in payout ratio is the percentage change of dividend in the year before fraud year minus dividend in third year before fraud year divided with dividend in the third year before fraud year and multiply with 100. T-test used to test means and Wilcoxon signed-rank test used to test medians. In Scandal firms column, significance indicates mean or median is difference from its matched non-scandal firms sample and in Paired difference column indicates mean or median is difference from zero.

The matched non-scandal firms selected from same industry with similar total assets, book-to-market ratio and total market capitalization. All variables are measured as at the year before the fraud incident experienced by the scandal firms. Total cash compensation is the average total salary, bonus and other cash compensation received by executive directors in a firm in the year before the fraud year, Total cash compensation per total assets (sales) ratio is total cash compensation divided by total assets (sales) in the year before the fraud year. T-test used to test means and Wilcoxon signed-rank test used to test medians. In Scandal firms column, significance indicates mean or median is difference from its matched non-scandal firms sample and in Paired difference column indicates mean or median is difference from zero.

Table 7. Comparison of corporate governance variables between 57 scandal firms and 57 non-scandal firms

Governance variable		Scandal firms		Matched non-scandal firms		Paired difference (Scandal - Match)	
	N	Mean	Median	Mean	Median	Mean	Median
Panel A: Board structure							
Board size	46	7.2	7.0	7.4	7.0	-0.3	0
Board independence (%)	46	42.3	42.9	40.5	40.0	1.8	2.9
Additional directorship	45	0.9**	0.7***	1.6	1.5	-0.7**	-0.8***
Audit committee independence (%)	46	69.3	66.7	70.6	66.7	-1.3	0
Remuneration committee independence (%)	30	63.4	66.7	64.6	66.7	-1.2	0
Nominating committee independence (%)	30	76.4	66.7	82.2	100.0	-5.8	-33.3
Panel B: Leadership structure							
Duality (%)	46	15.2		19.6		-4.3	
CEO tenure (years)	45	5.7	3.0	7.1	6.0	-1.4	-3.0
Panel C : Ownership structure							
Management ownership (%)	46	17.4	13.7	14.5	7.2	2.9	6.5

**** Indicates statistical significance at the 0.01 level,*
*** Indicates statistical significance at the 0.05 level.*

Table 8. Comparison of earnings management variables between 57 scandal firms and 57 non-scandal firms

Earnings management variable		Scandal firms				Matched non-scandal firms		Paired difference (Scandal - Match)		
	N	Mean		Median		Mean	Median	Mean		Median
Panel A: Discretionary current accrual										
Discretionary current accruals (DCA)-1	43	-0.04	**	-0.02	*	0.01	0.00	-0.04	***	-0.02
Absolute value of DCA -1	42	0.08	**	0.07	**	0.05	0.04	0.03	**	0.03
Absolute value of DCA -3	28	0.13	*	0.08	***	0.04	0.04	0.09	*	0.05
Change in AbsDCA	26	-0.93		-0.95		-0.95	-0.96	0.02		0.01
Panel B: Taxation										
Current tax paid	54	0.09		0.03	*	0.08	0.20	0.01		-0.17
Deferred tax expense	53	0.22		0.01		0.23	0.05	-0.02		-0.04
Panel C: Growth and pressure										
% Change in total asset	43	21.6		1.18		32.9	13.56	-11.3		-12.38
% Change in total sales	43	50.8		7.98		37.9	18.95	12.9		-10.97
Panel D: Dividend										
Average payout ratio	34	0.13	***	0.00	***	0.46	0.37	-0.33	***	-0.37
Payout ratio -1	53	0.11	**	0.00	***	0.62	0.23	-0.51	**	-0.23
Payout ratio -2	44	0.16	**	0.00	***	0.44	0.27	-0.28	**	-0.27
Payout ratio -3	37	0.16	**	0.00	***	0.48	0.29	-0.32	**	-0.29
% Change in payout ratio	39	-7.85		0.00		15.92	0.00	- [illegible]		0.00

**** Indicates statistical significance at the 0.01 level*
***Indicates statistical significance at the 0.05 level*
** Indicates statistical significance at the 0.10 level*

Table 9. Comparison of compensation structure variables between 57 scandal firms and 57 non-scandal firms

Compensation structure variable	N	Scandal firms		Matched non-scandal firms		Paired difference (Scandal - Match)	
		Mean	Median	Mean	Median	Mean	Median
Total cash compensation ('000)	46	395	265	477	304	-82	-50
Total cash compensation per total assets ratio	44	2.2	1.1	2.4	1.6	-0.2	-0.42
Total cash compensation per total sales ratio	44	5.5	2.9	3.8	2.9	1.7	0.08

**** Indicates statistical significance at the 0.01 level, **Indicates statistical significance at the 0.05 level*
** Indicates statistical significance at the 0.10 level*

4.4 Factor Analysis and Logistic Regression

In this section, we employ factor analysis to further summarize the large number of variables into a set of smaller groups or factors which are subsumed in the inter-correlated variables. We will then use logistic regression to empirically determine the factors that contribute to the fraud occurrence. The target sample of this study constitutes 57 Malaysian publicly listed companies which have experienced fraud incidents within over the period 1995 to 2008. Our proposed approach for the detection of potential fraud should assist relevant stakeholders such as shareholders, management, investors, policy makers, regulatory authorities and others to use these factors as a useful reference to predict the possibilities of future fraud occurrence among Malaysian companies.

Table 10. VARIMAX rotated component analysis factor matrix

Variables	Factor 1 Aggressiveness	Factor 2 Dividend payout	Factor 3 Independent governance committee	Factor 4 Influential power	Communality
Change in total sales	.827				.700
Change in total assets	.817				.735
Deferred tax	.660		-.410		.605
Absolute DCA-1	-.608	-.402			.721
Payout ratio -1		.979			.960
Average payout ratio		.962			.952
Remuneration committee independence			.845		.754
Nomination committee independence			.795		.734
Audit committee independence			.539		.327
Management ownership				. 828	.727
Additional directorship				-.812	.693
					Total
Eigenvalues	2.635	2.010	1.728	1.533	7.907
Percentage of trace	20.209	19.602	18.045	14.025	71.882

Note: factor loading less than .40 have not been displayed and variables have been sorted by loadings on each factor.

Overall Kaiser-Meyer-Olkin Measure of Accuracy (KMO) 0.526

Bartlett's Test of Sphericity : 0.000

Of the overall 25 variables, Table 10 shows 11 variables were loaded into four factors of which four variables are loaded in Factor 1 and two variables in Factor 2, three variables in Factors 3 and another two variables fall under Factor 4. Factor 1 represents the variables that reflect the aggressiveness of a firm which is experiencing significant changes in its total assets and total sales whereby these changes usually indicate that the company is undergoing a business expansion phase. These conditions will create incentives for the management to use the company's accounting and reporting system to manage the earnings in meeting the expectations. Factor 2 is known as the dividend payout factor and includes two variables i.e. (1) average payout ratio, and (2) payout ratio-1. Dividend payout might be an indicator that the company may be involved in managing its earnings fraudulently. Factor 3 consists of three independent committees. The independent element in a firm's corporate governance is an important aspect to avoid the company's operation being dominated by top executives who are intent in pursuing their personal interests which might become a springboard for fraud. If the independent directors are not effective in executing their duties in representing the independent judgements of the committees and the board, it can be the possible factor that leads to the fraud occurrence. Factor 4 is known as the influential wielding power factor. This is because the variables loaded under this factor are management ownership and additional directorship. When directors owned a large percentage of a firm's shares and hold a greater number of directorship positions than held by the independent directors, it is obvious they have more influence over others and can be applied negatively to encourage top management to indulge in acts of fraud in their organisation.

Having undertaken the principal factor component analysis for information search earlier, we next use logistic regression model for further empirical investigation. In this set-up, we have a binary (or dichotomous) dependent variable. We can therefore state the predicted probability that $y_i=1$ as:

$$p_i = \left(\frac{P(\mathrm{y}_i = 1 | \mathrm{z})}{(1 - P(\mathrm{y}_i = 1 | \mathrm{z}))} \right) = \frac{\exp\left(\alpha_0 + \beta_1 z_i\right)}{1 + \exp\left(\alpha_0 + \beta_1 z_i\right)}$$

where p is probability and z_i represent explanatory variables X1, X2 etc. Following recent studies such as Law (2011), we can then estimate a logit equation where y_i is the response which is a linear function of some predictor of interest and other control variables as:

$$\begin{aligned} y\,(\textit{scandal occurance in organization}) = \alpha_0 &+ \beta_1 \textit{Change in total sales} \\ &+ \beta_2 \textit{Pay out policy} \\ &+ \beta_3 \textit{Remuneration structure} \\ &+ \beta_4 \textit{Management ownership} \end{aligned}$$

Table 11 presents the results of the logistic regression for three different models. Model 1 is derived based on the four factor scores obtained from factor analysis. Model 2 is derived using summated scale method and Model 3 is derived using the variable that has the highest loadings from each of the factor. The results of Model 1 show that there are two variables with significant results at 0.05 and 0.10 level respectively. Factor 3 i.e., independent governance committee is negatively related to fraud. This implies effective independent directors in audit, remuneration and nomination committees can help to avert the fraud occurrence in scandal firms. Factor 4, i.e., influential power is positively related to fraud. This implies influential position holds by a director e.g. through many directorships and managerial shares, will create higher chances for fraud to occur at the firm. Similar results are found in Model 2 but both Factor 3 and 4 are significant at 0.10 level. Factor 2 i.e., dividend payout is found to negatively related to fraud at 0.01 significant level. This implies lower dividend payout firm has the tendency to be involved in fraudulent activities. For Model 3, the findings show that payout ratio-1 and remuneration committee independence are significant at 0.05 and 0.10 level respectively and both has negative relationship with fraud.

Table 11. Results of logistic regression for 57 scandal firms and 57 non-scandal firms *(*** Indicates statistical significance at the 0.01 level, **Indicates statistical significance at the 0.05 level, * Indicates statistical significance at the 0.10 level)*

Dependent variable : Scandal firm (1) and non-scandal firm (0)						
	Model 1		Model 2		Model 3	
Independent variables	Coeff.	t-statistic	Coeff.	t-statistic	Coeff.	t-statistic
Factor 1 : Aggressiveness	0.054	0.329	-0.054	-0.517		
Change in total sales					-0.063	-0.430
Factor 2 :Dividend payout	-0.232	-1.405	-0.302	-2.818***		
Payout ratio -1					-0.321	-2.214**
Factor 3 : Independent governance committee	-0.438	-2.652**	-0.183	-1.683*		
Remuneration committee independence					-0.295	-1.995*
Factor 4 : Influential power	0.309	1.868*	0.184	1.702*		
Management ownership					0.178	1.233
N	28		85		46	
R Square	0.344		0.142		0.188	
F-statistic	3.151		3.359		2.431	

Model 1 is using the four factor scores obtained from the factor analysis, Model 2 is using summated scale method of the factor analysis and Model 3 is using the variable with highest loadings from each factor as its independent variables, respectively.

5. Summary and Conclusions

Company-related fraud is not a rare phenomenon in many countries including Malaysia. Among the effects were losses involving billions of ringgit worth of investors' funds, retrenchment of workers, directors being sued, and companies being declared bankrupt or being delisted. Even though Malaysian fraud cases are not as well-known as the Enron case, there is a need to determine the reasons these fraudulent activities persist in the Malaysian corporate sector. Therefore, the main objective of this study was to examine the possible factors in the corporate environment which may contribute to Malaysian fraud occurrence. To do this, this study examined the differences in corporate governance practices, earnings management activities and compensation structure between scandal firms and non-scandal firms. Additionally, this study manages to derive from an analysis of the variables used in the present study, a suitable categorization of factors that may contribute to fraud occurrence among the publicly listed companies in Malaysia.

From the results, this study finds, except for additional directorships, there is no significant difference in corporate governance practices between scandal firms and non-scandal firms. It was found that these directors hold a less number of board positions compared to those in non-scandal firms. Perhaps, a lack of knowledge, experience and skills among independent directors due to a limited number of directorship posts held by each director can lead to weak corporate governance in the firms concerned. This study also finds scandal firms were already in engaging earning management activities three years prior to the fraud incidents. Moreover, the negative results of DCA values as at the year before the fraud year suggests that scandal firms were managing earnings downward in the financial statements. These findings also showed dividend paid by scandal firms were much lower for the last three years before the fraud year. Thus, the presence of earnings management activities and low dividends payment are among the potential factors that lead to fraudulent incidents in Malaysia. As for the compensation structure of the firms concerned in this study, no evidence of significant differences was found between both groups of firms. Therefore, compensation structure does not contribute to fraud occurrence in Malaysia.

Through factor analysis, this study managed to identify four underlying factors that represent the overall concept of the variables used in this study. The factors are (1) aggressiveness in managing the company, (2) the dividend payment to its shareholders (3) the independent committees in company's governance, and (4) the influence of wielding a powerful and dominant position in a company. These conceptual factors can also be seen as possible causes contributing to fraud incidents in the Malaysian corporate environment. However, the logistic regression results have shown dividend payout, effectiveness of independent governance committees and influential power are the factors that may contribute to fraud occurrence in Malaysian publicly listed companies.

References

1. Ahmed, A.S., Duellman, S. and Abdel-Meguid, A. (2008). "Equity incentives, corporate governance, and earnings management", paper presented at the American Accounting Association 2009 Annual meeting, 1-5 August.
2. Albrecht, C., Albrecht, C.C. and Dolan, S. (2007). "Financial fraud: the how and why: understanding the conditions in which fraud occurs is the key to its detection and prevention", European Business Forum, Summer Issue 29, pp. 34-39.
3. Albrecht, W.S., Albrecht. C. and Albrecht, C.C. (2008). "Current trends in fraud and its detection", Information Security Journal: A Global Perspective, Vol. 17, pp. 2-12.
4. Association of Certified Fraud Examiners (ACFE) (2010), Report to the nation on occupational fraud and abuse. ACFE, Texas.
5. Baker, T., Collins, D. and Reitenga, A. (2003). "Stock option compensation and earnings management incentives", Journal of Accounting, Auditing and Finance, Vol. 18, pp. 557-582.
6. Beasley, M. S. (1996), "An empirical analysis of the relation between board of director composition and financial statement fraud", The Accounting Review, Vol. 71 No.4, pp. 443-465.
7. Beasley, M., Carcello, J. and Hermanson, D. (1999). "Fraudulent financial reporting: 1987–1997. An analysis of U.S. publicly companies. Research commissioned by the Committee of Sponsoring Organizations of the Treadway Commission (COSO)", available at: http://www.coso.org/documents/COSOFRAUDSTUDY2010_001.pdf (accessed 5 January 2011).
8. Bell, T. and Carcello, J. (2000). "A decision aid for assessing the likelihood of fraudulent financial reporting", Auditing: A Journal of Practice & Theory, Vol. 19 No.1, pp. 169-184.
9. Bursa Malaysia (2011). Listing requirements of Bursa Malaysia Securities Berhad, available at: http://www.bursamalaysia.com/website/bm/regulation/rules/listing_requirements/downloads/LR_MBSB.pdf (accessed 3 January 2011).
10. Cheng, Q. and Warfield, T. (2005). "Equity incentives and earnings management", The Accounting Review, Vol. 80, pp. 441-476.
11. Cox, R. and Weirich, T. (2002). "The stock market reaction to fraudulent financial reporting", Managerial Auditing Journal, Vol. 17 No.7, pp. 374-382.
12. Crutchley, C., Jensen, M. and Marshall, B. (2007). "Climate for scandal: corporate environments that

contribute to accounting fraud", The Financial Review, Vol. 42, pp. 53-73.
13. Davidson, R., Goodwin-Stewart, J. and Kent, P. (2005). "Internal governance structures and earnings management", Accounting and Finance, Vol. 45, pp. 241-267.
14. Dechow, P., Sloan, R. and Sweeney, A. (1996). "Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC", Contemporary Accounting Research, Vol. 13 No.1, pp. 1-36.
15. Denis, D. J., Hanouna, P. and Sarin, A. (2006). "Is there a dark side to incentive compensation?", Journal of Corporate Finance, Vol. 12, pp. 467-488.
16. Dorminey, J., Fleming, A., Kranacher, M. and Riley, R. (2010). "Beyond the fraud triangle: Enhancing deterrence of economic crimes", The CPA Journal, July, pp. 16-23.
17. Efendi, J., Srivastava, A. and Swanson, E. (2007). "Why do corporate managers misstate financial statements? The role of option compensation and other factors", Journal of Financial Economics, Vol. 85, pp. 667-708.
18. Epps, R. and Ismail, T. (2009). "Board of directors' governance challenges and earnings management", Journal of Accounting and Organizational Change, Vol. 5 No.3, pp. 390-416.
19. Erickson, M., Hanlon, M. and Maydew, E. (2004). "How much will firms pay for earnings that do not exist? Evidence of taxes paid on allegedly fraudulent earnings", The Accounting Review, Vol. 79 No.2, pp. 387-408.
20. Erickson, M., Hanlon, M. and Maydew, E. (2006). "Is there a link between executive equity incentives and accounting fraud?", Journal of Accounting Research, Vol. 44 No. 1, pp. 113-143.
21. Ettredge, M., Sun, L., Lee, P. and Anandarajan, A. (2008). "Is earnings fraud associated with high deferred tax and/or book minus tax levels?", Auditing: A Journal of Practice & Theory, Vol. 27 No.1, pp. 1-33.
22. Farber, D.B. (2005). "Restoring trust after fraud: Does corporate governance matter?", The Accounting Review, Vol. 80 No. 2, pp. 539-561.
23. Gao, P. and Shrieves, R. (2002). "Earnings management and executive compensation: A case of overdose of option and underdose of salary?" working paper, College of Business Administration, University of Tennessee, Tennessee, 29 July.
24. Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006). Multivariate data analysis, Pearson Prentice Hall, New Jersey.
25. Helland, E. and Sykuta, M. (2005). "Who's monitoring the monitor? Do outside directors protect shareholders' interests?" The Financial Review, Vol. 40, pp. 155-172.
26. Hemraj, M.B. (2004). "Preventing corporate scandals", Journal of Financial Crime, Vol. 11 No.3, pp. 268-276.
27. Hermalin, B.E. and Weisbach, M.S. (1991). "The Effects of Board Composition and Direct Incentives on Firm Performance", Financial Management, Vol. 20, pp. 101-112.
28. Hogan, C., Rezaee, Z., Riley, R. and Velury, U. (2008). "Financial statement fraud: Insights from the academic literature", Auditing: A Journal of Practice & Theory, Vol. 27 No. 2, pp. 231-252.
29. Hsu, H. and Wu, Y. (2010). "Board composition, 'grey directors' and the incidences of corporate failure in the UK", available at: http://www.business.illinois.edu/accountancy/research/vkzcenter/conferences/taiwan/papers/Hsu_Wu.pdf (accessed 5 January 2011).
30. Jayaseelan, R. (2010). "EPF still keen on winding up Transmile which owes RM500mil", The Star Online, 29 September.
31. Jensen, M. C. (1993). "The modern industrial revolution, exit, and the failure of internal control systems", Journal of Finance, Vol. 48 No. 3, pp. 831-880.
32. Jensen, M. C. (2005). "Agency costs of overvalued equity", Financial Management, Vol. 34, pp. 5-19.
33. Jensen, M. and Meckling, W. (1976). "Theory of the firm: Managerial behavior, agency costs and ownership structure", Journal of Financial Economics, Vol. 3 No. 4, pp. 305-360.
34. Kalbers, L. (2009). "Fraudulent financial reporting, corporate governance and ethics: 1987-2007", Review of Accounting and Finance, Vol. 8 No. 2, pp. 187-209.
35. Kyereboah-Coleman, A. and Biekpe, N. (2007). "On the determinants of board size and its composition: Additional evidence from Ghana", Journal of Accounting & Organizational Change, Vol. 3 No. 1, pp. 68-77.
36. Law, Philip. (2011). "Corporate governance and no fraud occurrence in organizations: Hong Kong evidence". Managerial Auditing Journal, Vol. 26, issue 6, pages 501-518.
37. Laux, C. and Laux, V. (2009). "Board committees, CEO compensation, and earnings management", The Accounting Review, Vol. 84 No. 3, pp. 869-891.
38. Lou, Y. and Wang, M. (2009). "Fraud risk factor of the fraud triangle assessing the likelihood of fraudulent financial reporting", Journal of Business & Economics Research, Vol.7 No 2, pp. 61-78.
39. Malaysian Code on Corporate Governance (2007). available at: http://www.sc.com.my/eng/html/cg/cg2007.pdf (accessed 31 January 2011).
40. Md Noor, R., Mastuki, N. and Aziz, Z. (2007), "Earnings management and deferred tax", Malaysian Accounting Review, Vol. 6 No. 1, pp. 1-17.
41. Mohd. Saleh, N., Mohd. Iskandar, T. and Rahmat, M. (2005). "Earnings management and board characteristics: Evidence from Malaysia", Jurnal Pengurusan, Vol. 24, pp. 77-103.

42. Pallant, J. (2001). SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 10), Allen and Unwin, Victoria.
43. Perols, J. and Lougee, B. (2010). "The relation between earnings management and financial statement fraud", Advances in Accounting, incorporating Advances in International Accounting (2010). doi:10.1016/j.adiac.2010.10.004.
44. Persons, O.S. (2006). "Corporate governance and non-financial reporting fraud. Journal of Business & Economic Studies, Vol. 12 No. 1, pp. 27-39.
45. Ramaswamy, V. (2005). "Corporate governance and the forensic accountant", The CPA Journal, March, pp. 68-70.
46. Rezaee, Z. (2005). "Causes, consequences, and deterence of financial statement fraud", Critical Perspectives on Accounting, Vol. 16, pp. 277-298.
47. Schnake, M.E. and Williams, R.J. (2008). "Multiple directorships and corporate misconduct: The moderating influences of board size and outside directors", Journal of Business Strategies, Vol. 25 No. 1, pp. 1-14.
48. Securities Commission, "Disclosure-based Regulation-what directors need to know", available at: http://www.sc.com.my/eng/html/resources/inhouse/dbrbi.pdf (accessed 9 January 2012).
49. Securities Commission, "Shift towards disclosure-based regulations", available at: http://www.sc.com.my/eng/html/resources/annual/1995/shift.pdf (accessed 9 January 2012).
50. Sen, P. K. (2007). "Ownership incentives and management fraud. Journal of Business Finance & Accounting, Vol. 34 No. 7 & 8, pp. 1123-1140.
51. Teoh, S., Welch, I. and Wong, T. (1998). "Earnings management and the long-run market performance of initial publicly offerings", The Journal of Finance, Vol. 53 No. 6, pp. 1935-1974.
52. Uzun, H., Szewczyk, S. and Varma, R. (2004). "Board composition and corporate fraud", Financial Analysts Journal, 60, 33-43.
53. Wright, R. (2007). "Developing effective tools to manage the risk of damage caused by economically motivated crime fraud", Journal of Financial Crime, Vol. 14 No. 1, pp. 17-27.
54. Yammeesri, J. and Herath, S. (2010). "Board characteristics and corporate value: Evidence from Thailand", Corporate Governance, Vol. 10 No. 3, pp. 279-292.
55. Yang, W., Chun, L. and Ramadili, S. (2009). "The effect of board structure and institutional ownership structure on earnings management", International Journal of Economics and Management, Vol. 3 No. 2, pp. 332-353.

HISTORICAL ANTECEDENTS SHAPING CORPORATE REPORTING IN IRAN

Ali Yaftian*, Victoria Wise**, Soheila Mirshekary*

Abstract

This research paper examines the evolution of corporate reporting and governance in Iran over the last century. The approach adopted was to provide an historical perspective to examine the environment within which Iranian corporate reporting has emerged and been shaped. An historical framework allows the study to focus on the evolution and development of corporate reporting practice in Iran. By adopting an historical framework, this study is able to inform future research based on models that adopt an evolutionary approach to the assessment of environmental factors on economic systems. The conclusion reached in this study is that socio-economic and political changes during the century have been opportune as drivers of corporate reporting in Iran. The study makes an incremental contribution to the existing accounting history literature for Asia / Middle East / developing countries.

Keywords: Corporate reporting history, Accounting in Iran

* *Deakin Graduate School of Business, Deakin University, Australia*
E-mail: ali.yaftian@deakin.edu.au
** *Deakin Graduate School of Business, Deakin University, Australia*
E-mail: victoria.wise@deakin.edu.au
*** *Deakin Graduate School of Business, Deakin University, Australia*
E-mail: soheila.mirshekary@deakin.edu.au

1. Introduction

Since the 1970s, increasing attention has been paid to the role and influence of environmental factors on the management of business and corporate reporting practices (see Hofstede & Hofstede, 2005; Radebaugh & Gray, 2002; Baydoun & Willet, 1995; Doupnik & Salter, 1995; Perera, 1989; Gray, 1988; Wallace, 1987; Hofstede, 1980).

Wallace (1987) discussed corporate reporting environmental factors as the elements that directly affect contents of corporate reports. Radebaugh and Gray (2002) supported the idea that environmental factors have a significant influence on business and management practices. Perera (1989) argued that corporate reporting practices evolve to suit the circumstances of a particular society at a particular time. Doupnik and Salter (1995) put more emphasis on technological and macro-economic factors and argued that the stage of development affects the type of business transactions conducted in a country and the type of economy determines which transactions are more prevalent.

Gray (1988) drew a detailed figure of various influential and environmental factors on corporate reporting systems. Gray (1988) discusses that societal values are determined by ecological influences modified by external factors such as international trade and investment, conquest, and the forces of nature. In return, societal values have institutional consequences in the form of the legal system, political system, nature of capital markets, and pattern of corporate ownership and so on. Gray's model (1988) is presented in Figure 1.

The patterns or assumed relationships between environmental factors and corporate reporting have been supported by a number of thinkers. Hooks (2011) argued that the political economy of accounting emphasises the relationship between the political and economic forces of society. Baydoun and Willett (1995) described the relationship as "it seems plausible to suggest the existence of an effect by culture on reporting practices but the mechanisms by which such effect might be transmitted are not immediately obvious". Hofstede and Hofstede (2005) believed the core culture is formed by values. In response to the question of what are the values, they defined them as broad tendencies to prefer certain states of affairs over others. Radebaugh and Gray (2002) described that the origins of culture or societal values can be found in a variety of factors affecting the ecological or physical environment.

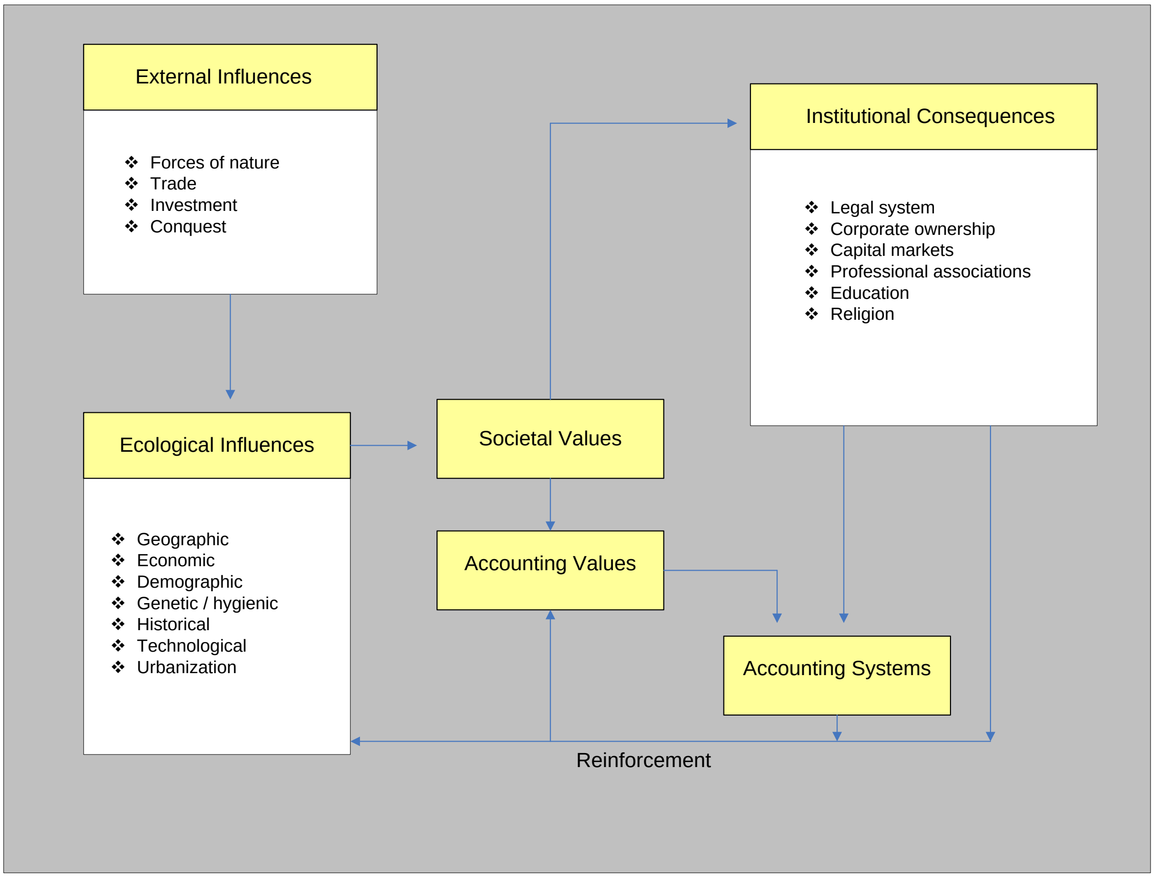
In a narrower discussion on corporate reporting environmental factors, Wallace (1987, p.55) with respect to economic, cultural and social development for each country and their effect on development of corporate practices, argued that:

"Social changes such as changes in social values, literacy, social awakening, life style, social mobility, and cultural heritage are bound to create a

need or an expectation for more information because a literate citizen needs more information than an illiterate one."

On similar conceptual lines, the above analyses suggest that corporate reporting systems/values and societal values/culture are not readily separable. Thus, it can be rationally assumed that environmental factors such as socio-cultural characteristics, economics, education, the accounting profession, reporting standards, and the legal and political systems are factors that collectively and individually have influence on corporate reporting systems. However, the degree of influence and the mechanism by which each factor influences practices might not be immediately obvious. We agree with the Baydoun & Willett, 1995 and Wallace, 1987, who argued that evolution of a country's corporate reporting can be better understood if the reader is aware of the characteristics of such a country.

Figure 1. Accounting Systems and Social Values



Source: Gray, 1988, Abacus, p. 7

Considering that Islamic nations have mostly been left out of the research on accounting development (Meek & Thomas, 2000), this study contributes to the corporate reporting literature by focusing on the evolution and development of corporate reporting in Iran. In this study we examine Iran and we consider whether institutional factors identified in the prior research might have also had an impact on the extant status of the Iranian corporate reporting environment. To facilitate such an understanding and the contribution, this paper undertakes an examination of the environment under which Iranian corporations operate and report. This examination is conducted and rationalized through a historical framework as it is undertaken within the cultural, social, political and economic context of corporate reporting in Iran, and reflects on historical developments as drivers of change. The main focus of this study is the existence and roots of corporate reporting practices in Iran. In such an approach, knowledge of the history of corporate reporting is most informative for anyone who wants to influence the future direction of corporate reporting practice and education in any particular nation (Van Wyhe, 2007).

The remainder of this paper comprises six parts. The next part provides a brief discussion of the history of Iran. In part three the economic condition of Iran is covered. In part four, an examination of the legal and regulatory systems is provided. A discussion about the capital market and stock exchange history is presented in part five. The accounting profession and accounting standards in Iran are examined in part six;

and in part seven we provide a summary and conclusions.

2. History of Iran

Iran with more than 2500 years civilization, as one of the oldest of nations, has a very long and rich history. Iranians are descendants of Indo-Europeans (Aryans) who came from the Indian subcontinent about 2000 B.C. Cyrus the Great established the first Iranian Empire as the Achaemenian dynasty in 550 B.C. This became a great empire that encompassed parts of Eastern Europe, Egypt and India. The economy under this dynasty especially during the rule of Darius the Great, was well-regulated and organized upon satisfying the needs of people from the poorest to the richest (Mashayekhi & Mashayekh, 2008). The Sasanian dynasty was established in 224 B.C. In the reign of Sasanian, Zoroastrianism was promoted as the state religion. After a rapid period of expansion, when it contested supremacy with Rome, the empire was destroyed in 651 A.D. by Muslim Arabs at the Battle of Qadisiya . The 7th century Arabian invasion brought the Islamic religion to the country, with important cultural, linguistic, educational, religious and political implications.

As far as accounting, accountability and governance are concerned, the study of public governance in Iran demonstrates the evolution and development of accounting and taxation concepts throughout its long history as a nation. For instance during the reign of Seljuks in the 9th century, various accounting methods were invented in order to keep records of economic activities. One of these methods was called Siagh accounting which was used by public (government) and private sectors to keep records of their revenues and expenditures (Mashayekhi & Mashayekh, 2008).

This period continued with a number of dynasties of the shahs with absolute power, and with more or less the same governing systems until the nineteenth century. The Industrial Revolution in the late 18th and 19th centuries was a major turning point in social, political and economic history of industrialised countries, however the impact of such a revolution appeared much later in Iran. Within the comparative context of corporate evolution, despite a growing interest in industrial modernisation after the 1870s, the role of industry remained very limited in Iran's economy at the beginning of the 20th century (Issawi, 1980). In 1794, Aga Mohammad Khan defeated the last ruler of the Zand dynasty and established the Qajar dynasty. During the Qajar era, government revenues comprised direct tax, property income tax, customs (gifts/bribes) and leases. The first higher education institute to train Iranian youth in medicine and engineering was Dar ul-Funoon, established in 1851. Later in 1892, for the first time a government bond was introduced to Iran's economy (Mashayekhi & Mashayekh, 2008).

In the early 20th century Iran witnessed another significant social-historical event; the rise of the Constitutional Revolution (Mashruteh Movement) . In 1906, the first Iranian Constitution was drafted by the first parliament as a consequence of the Mashruteh Movement (Kuniholm, 1980). World War I (1914-1918) had a huge impact on Iran's social, economic and political situation. In 1921, Persian Cossack Brigade officer, Reza Khan, took advantage of this situation and seized power in a coup which ended with the establishment of a new monocracy regime in Iran with Reza Khan (Pahlavi dynasty) at the helm in 1925.

Under his ideas and rules efforts at industrialisation commenced (1925-1941). A socio-economic consequence of this period was the introduction of modern administrative techniques, including accounting for public and private organizations, an extensive system of secular primary and secondary schools and the establishment of the first European style university in Tehran. These reforms broke the power of the religious hierarchy by excluding the clerics from judgeships, creating a system of secular courts, establishing a civil code, the General Accounting Act, a new tax law, and a civil service code.

Reza Khan's modernization reforms effectively took power from the parliament, muzzled the press, imposed heavy taxes on the peasants, and took land away from the big landowners. The 'reforms' were all sources of dissatisfaction. The modernisation dreams were far from reality as the Shah showed no commitment to power sharing in the handling of modernization issues. In politics, he allowed neither democracy nor transparency in any aspect of the governing and rules of the country. Table 1 presents the trend of establishment of modern factories with 10 or more employees 1926-1947.

In spite of the progress of the manufacturing sector during this period, the oil industry which had been established by the Anglo Persian Oil Company (then Anglo Iranian Oil Company) in 1901, was still by far the most important industry during this period (Floor, 1984).

During World War II the Allies objected to Reza Shah's rapprochement with the Germans, and in 1941 British and Russian forces invaded and occupied Iran. Forced to abdicate in favor of his son, Mohammad Reza Shah, died in exile in Johannesburg in South Africa in 1944. Mohammad Reza Shah, ruling from 1941 until 1979, was the last shah of Iran, and during his reign he followed the same style of modernisation as his father. This piece of history has been a challenging period for Iranians and their political leaders. The 1940s was a period of contraction leading to full industrial recession by the end of the decade. The recession started with the occupation by the Allies (1941-46) and ended in the early 1950s (Agah, 1958).

Table 1. Number of established factories and number of employees, 1926-1947

Year	Number of Factories Established	Number of Employees
1926-30	8	3,322
1931-35	36	12,394
1936-40	35	20,228
1941-47	18	4,477
Date not given	39	3,143
Total	136	43,564

Source: Adopted from Bharier (1971, p.173)

In 1951 Mohammad Mossadegh, as leader of the National Front and Prime Minister, forced the parliament to nationalize the oil industry and form the National Iranian Oil Company (Ghods, 1989). In 1953, Mossadegh was toppled by a CIA-backed coup led by General Fazlollah Zahedi (Risen, 2000).

After the coup, with the support of the US and UK, a rush of oil revenue along with increases in foreign aid provided opportunities for the Iranian government to invest in economic infrastructure, which mainly involved transport, communications and light industries such as textiles, sugar and cement. One consequence of such growth was an increase in demand and development of modern administrative techniques including accounting and corporate reporting.

The 1960s through to 1978 was a politically calm period enabling a rapid growth of private and public capital formation in the manufacturing sector which in turn created a huge demand for professional accountants and their services. For instance, the Tehran Stock Exchange (TSX) was established in 1967. During this period, besides an increase in the locally educated and trained accountants in universities and colleges (Roudaki, 1996), big international accounting firms (e.g. KPMG, Deloitte and Winney Merry) also played a significant role in responding to the demand by setting-up independent or affiliated operations in Iran.

The dissatisfaction with Mohammad Reza Shah's economic and socio-political policies fuelled a potential political movement against him. In January 1979, Mohammad Reza Shah and his family were forced to flee Iran, following a year of extreme turmoil and public protests, heralding the Iranian revolution. Following his departure, Ayatollah Khomeini abolished the monarchy and established an Islamic Republic in Iran.

In February 1979 Mohammad Reza Shah's regime was formally overthrown by Revolutionary forces, thus ending a 2500 year tradition of monarchy in Iran. Ayatollah Khomeini, as leader of the revolution appointed the moderate, former, opposition politician, Mr. Bazargan, as Prime Minister. Bazargan's moderate policies came under sharp attack by the radical Islamic revolutionaries, who dominated a variety of ultimate power centers (Ghods, 1989). In 1979 Bazargan was forced to resign and a Revolutionary Council took control of government. Later, in September 1980, Iraq invaded Iran, commencing an eight-year war primarily over the disputed Arrvand Roud waterway that forms a boundary between the two countries. In July 1988, Iran and Iraq agreed to accept a United Nations cease-fire to end the war. Ayatollah Khomeini died in 1989 and was succeeded by Iran's President, Ayatollah Khamenei. The presidency was subsequently filled by Ali Akbar Rafsanjani, who sought improved relations and financial aid with Western nations, while somewhat diminishing the influence of religious fundamentalism. Rafsanjani was re-elected President in 1993. Then, in 1985, the US suspended all trade with Iran, accusing the country of supporting terrorist groups and attempting to develop nuclear weapons. Several European Union countries began renewing economic ties with Iran in the late 1990s. The US, however, continued to block more normalized relations, arguing that the country had been implicated in international terrorism and was developing a nuclear weapons' capacity. In 1997, Mohammed Khatami, a moderately liberal Muslim cleric, was elected president and this was widely seen as a reaction against the country's repressive social policies and lack of economic progress (BBC News, 2009). Khatami's presidency provided a more conducive environment for the Iranian accounting profession to increase its cooperation with international accounting firms and accounting bodies than during Rafsanjani's term of office. Khatami finished his second term in office in August 2005 and was replaced by an Islamic hardliner, Mahmud Ahmadinejad. The change has brought about a radical shift in domestic and international policies of the Iranian government. Ahmadinejad policies have resulted in tough sanctions on Iran by western countries and the accounting profession is no exception. For instance as a result of lobby group pressure, KPMG and many other mid-tier accounting firms ended their affiliation or operations with Iran (IAB Editorial, 2013). Hickman (2010) interpreted the situation as 'politics strikes profession' and wrote "Experts, including the leader of the International Federation of Accountants (IFAC) warn the Big Four's departure could stall the development of Iran's profession".

In June 2013 Hassan Rouhani was elected as the new President. His motto is 'moderation and change', however, it is too early to judge his precise political actions and their impact on economics and the accounting profession.

3. The Economy

In this part we examine the structure, progress of Iran's economy during the last century, and its extant position. Doupnik and Salter (1995) argue that the stage of development in a country affects the type of business transactions it conducts, and the type of economy determines which transactions are more prevalent: each of these intrudes on the shape of corporate reporting.

A brief review of the last century shows a continuous attempt to raise the standard of living of the population in Iran. During this period, many and substantial changes have taken place within the economy. These changes and also other environmental factors have influenced the corporate reporting system which is a reflection and product of its environment.

Early 20th century to pre revolution - a shortage of quantitative data makes discussion of the precise situation of the Iranian economy in the early 20th century difficult Bharier (1971).

Studies of the economics of early 20th century Iran indicate that 'factories, as the term is understood and used in Europe, did not exist (Bharier, 1971). The government had a very weak influence on the economy (Katouzian, 1981, Bharier, 1971). Foreign trade followed the growth pattern of the last quarter of the 19th century. The reason for increasing foreign trade during this period has not been viewed as domestic economic development but as the result of growth in European demand for primary products (Katouzian, 1981). During this period an important factor, oil, emerged in Iran which was destined to dominate almost every aspect of the economy in the following decades. The modern banking system was in an early stage of establishment. There was no general government budget or statement of accounts (Bharier, 1971) and obviously no economic accountability from those who were in charge.

The end of World War I created an opportunity for the devastated Iranian economy to recover and, to some extent, reintegrate into the global economy. After the growing extension of central authority, security on roads increased and the general risk of trade reduced (Katouzian, 1981); oil became the main source of revenue for the Iranian government and a key factor of its economy. This situation facilitated the economic progress, industrialization and modernization of the country.

Table 2. Oil revenues and exports 1919-1926

Year	Oil revenues (£ m.)	Volume of oil exports ('000 long tons)	Oil revenues per long ton (£ sterling at the 1919 exchange rate)
1919	0.47	1106	0.42
1920	0.59	1385	0.58
1921	0.59	1743	0.67
1922	0.53	2327	0.43
1923	0.41	2959	0.23
1924	0.83	3714	0.39
1925	1.05	4334	0.43
1926	1.4	4556	0.60

Source: Katouzian (1981, p.93)

After 1925, the financial administration of the American advisor, Dr. Millspaugh, set Iran's internal and external finances on a sound footing, and provided for the first time, clear budget allocations for capital expenditures. The general policy of the government during this period was the establishment of state factories, along with various protective devices for privately owned plants. Many new enterprises, each of them employing ten or more workers, were founded during this period (Katouzian 1981). The 1930s was also the beginning of world economic recovery followed by general rearmament and then World War II. These events ensured the stability, and later growth, of Iranian oil revenues.

During World War II, Iran was occupied by the Allied forces and this superseded the government role and influence in the economy. At the end of this war, when conditions improved, the idea of systematic planning by government emerged. *The First Seven-Year Development Plan* (1949-1956) was prepared with the help of American consultants, and approved by parliament in 1949. The nationalization of the oil industry was a big shock to this plan, as oil revenue stopped for three years. Jalali-Naini (2003) believes that in planning the budget, it was assumed that the economy was faced with missing markets, pervasive market imperfections, and an economically and politically weak private sector. This view of the economy paved the way to a 'centralized' view wherein the state should step in to direct economic conditions.

The general trend in the Second Seven-Year Development Plan (1955-1962) was not a great deal different from the First plan. The Third Development

Plan (1962-1967) commenced with a five-year period and was extended to a five-and-half year period. The basic developmental thinking in Iran since the 1950s has been a planning framework in which the oil industry would supply any surpluses for investment in other sectors (Jalali-Naini, 2003). The Fourth Development Plan (1968-1972) began with three alternative economic growth rate targets. The targets were an annual growth in gross national product (GNP) of 6, 7 or 8 percentiles. As the years preceding the start of the plan had seen higher growth rates, the target was finally set at about nine per cent. Similar to the Third Plan, this plan followed an official policy of import substitution; expenditure on projects, such as dams and transport facilities, was expected to play a large part.

The Fifth Development Plan (1973-1977) was the most ambitious of all the plans (Amuzegar, 1993). The sharp oil price rise in 1973 precipitated some hasty changes to this plan, resulting in the total investment target of $36 billion being increased to nearly $70 billion for the period. According to Amuzegar (1993) the Fifth Plan turned out to be highly unrealistic in its revenue projections, and the feasibility of its goals. It was hoped that the Fifth Plan problems would be addressed within the next plan, but preparation of the Sixth Development Plan did not occur. Instead, the government decided to put aside the five-year planning process altogether, and to proceed with annual developmental budgeting for each economic or social program within ten- and twenty-five year guidelines.

The review provided in this part of the paper, of the economic development before the changing of the political regime in Iran, summarizes the progress from the early project-lists of the first two plans, to the more comprehensive approaches in the later plans. Overall, this era witnessed an increasing level of corporate activity in the Iranian economy. This created and extended an interaction between society and corporations in day-to-day life, and lead to the call for accountability and governance through mechanisms such as corporate reporting.

Post revolution - in February 1979 Mohammad Reza Shah's regime collapsed and soon after the Islamic Republic of Iran formally acknowledged a devastated economy. Amuzegar (1993, p.34) stated the position of the economy as:

More than a year of political turmoil, public disturbances, strikes, sabotage and physical destruction had left the economy in chaos. Economic activity was in deep recession. Oil production and exports were down to half their annual levels, as were government revenues. The banking system faced an imminent collapse due to massive withdrawals and increasing non-functioning loans. Unemployment, inflation and capital flight were on the rise. Foreign trade, domestic investment and public confidence were on the decline.

With such a situation, the revolutionaries from almost all factions against the former regime found themselves in office with no acceptable economic agenda. Eventually, after short term challenges between various political factions, the clerics and followers of Ayatollah Khomeini captured the key positions and became the main power in developing the Constitution. Thus, direction of the country's macro-economic structure moved toward an Islamic economy.

One of the very early consequences of the new political and economic regime was in the banking sector of Iran. The first step was the merging and nationalization of 36 banks, many of which were privately-owned. Within the scope of an Islamic banking system, laws and regulations pertaining to money and banking institutions and monetary policy design and implementation, were amended to reflect the priorities and principles as set out in the Constitution. Then to implement the Islamic rules, the Usury-Free Banking Act was approved in 1983 (Komijani, 2005) setting the structure for Iran's current banking system.

In 1980, Iran's economy was involved in another fundamental change over the ownership of all major manufacturing and service companies. The owners of many private companies had left the country and defaulted bank loans became a major economic problem. More than 500 companies were nationalized and the Iran National Industries Organization was established to manage them. After implementation of the Nationalization Law, shares in private industrial enterprises were abandoned by the private sector (Mirshekary, 1999).

During the early years after the revolution the government took a large controlling position in the economy. This was seen as the way to social justice and a foundation for rapid economic development (Mirshekary, 1999). Changes in international politics in the late 1980s brought some new thoughts regarding the level of government interference in the economy. Thus, in the First Five-Year Social and Economic Development Plan (1989-1993), transferring part of government social and economic activity to the private sector became a serious agenda for the Iranian authorities.

By the enactment of the First Five-Year Social and Economic Development Plan, the government signaled that it intended to entrust state industrial units, except strategic industries, to the private sector. The change of trend from a centralized economy to a more open economy coincided with the fall of the centralized economies of Eastern Europe in 1990. Due to some fundamental problems affecting developing nations such as; absence of an open trade regime, an unstable and unpredictable environment; weak economic security for investment, and the lack of a well-developed institutional and regulatory capacity, the Plan ended with many failures (Mostashari, 2004). However, it is believed that many economic problems after the revolution, largely had roots in political rather than economic problems[22]. In the Second Plan which began in 1994, the focus was on issues such as employment, environmental protection, development of heavy and light industries, self-sufficiency, and providing basic housing and health needs (Abadi, 1995).

In designing the Third Plan (2000-2004), authorities were more acutely aware of the serious consequences of oil price fluctuations on the economy. With this acknowledgment, the Third Plan was formulated with a focus on: liquidation, privatization, merging and restructuring of state owned enterprises; raising the efficiency of the tax system, and eliminating organizational bottlenecks, the establishment of an 'Oil Stabilization Fund' to cushion the economy and government budget against fluctuation of oil revenue; adjustment in the regulation, and introducing flexibility into the banking industry.

According to Komijani (2005) the plan succeeded in meeting some objectives such as appropriate economic growth, growth of capital formation, improvement in balance of payments and reductions in the unemployment rate. But the high rate of liquidity growth and the inflation rate, the large size of the government sector and the unsuccessful privatization program of state-owned enterprises, were weak points of the implementation of the plan. Part of the problem as Komijani (2005) pointed out, stemmed from an unstable situation due to the occupation of Iraq and its internal war, and issues relating to Iran's nuclear energy industry and the concomitant political tensions between Tehran and Washington. These problems particularly the nuclear energy issue still exist and are impediments to social and economic progress.

The Fourth Plan (2005-2009) targeted objects that would challenge the Iranian economy for a long time. The main issues were: a more open economy based on competitiveness, privatization and a lesser role for the government in the economy, more autonomy for the Central Bank in monetary policy design and implementation, more independence for the National Iranian Oil Company based on a royalty scheme, and implementation of a clear legal framework for foreign investment in Iran (Komijani, 2005).

In the first year of the Fourth Plan, 2005, Iran's political climate changed dramatically. A moderate government was replaced in office by a hard-liner team led by Mahmoud Ahmadinejad. The new government demonstrated little interest in the economic plans set by its predecessor. Ahmadinejad started with populist economic and social justice promises such as bringing oil revenue on to the Iranian table, and selling government-owned shares in companies to low-income earners at a reduced price (the 'Justice Stock Scheme').

The Fifth Plan (2010-2015), is the latest plan prepared by the government based on its vision of affairs, and is focused along the lines of justice-based progress. It targets boosting the private sector's role in national economic growth, increasing the cooperative sector's economic share to 25 percent, and reducing the unemployment rate to seven percent by 2015.

4. The Legal and Regulatory System

The legal system is part of an institutional framework within which a corporate reporting system is very likely to interact as the legal system influences the way in which business rules are promulgated. This in turn, influences the nature of the rules themselves (Doupnik & Salter, 1995; Iqbal et al., 1997). In this section of the paper we review the legal system and commercial code of Iran in two parts. In the first part, we provide a discussion of past and current constitutional laws and the structure of the current political power. In the second part, the focus is on the commercial code.

5. The Constitutional Laws

The idea of having modern constitutional laws came to Iran through the increased influence of Europeans in the late 19th and early 20th centuries. In 1906, as a result of the Constitutional Revolution, this idea became an historical achievement for the Iranian people. The first constitution laws, influenced by the 1791 French and the 1831 Belgian constitutions, laid out the skeleton of a modern parliamentary system for Iran (Afary, 2005). The Iranian law vested the parliament with many of the rights that had previously been given to European kings or the Japanese Emperor (Afary, 2005). For Iranian people the constitution was a means to make political power accountable through a democratic system.

In fact, despite all historical struggles and challenges, the constitution fell under continuous distortion and inattention in particular during the Pahlavi dynasty (Katouzian, 1981; Afary, 2005). The Islamic Revolution has now replaced the first constitution. The current constitution was adopted in December 1979, with significant revisions expanding presidential powers and eliminating the prime minister position. This constitution has a unique, complex and unusual political structure as it is a system that combines elements of the old and modern Islamic theocracy with democracy. The system on the one hand includes a network of unelected institutions controlled by a Supreme Leader, and on the other hand a president and parliament elected by the people.

[22] See for instance Arvind Hickman's article in The Accountant, "Iran exodus: Politics strikes profession" at: http://www.theaccountant-online.com/news/iran-exodus-politics-strikes-profession and Geoff Dyer's article in the Financial times, 26 April 2013, "Three accounting firms pull out of Iran"

6. The Commercial Code

Following World War I, after the advent of constitutional government and the attendant efforts at modernization and reform of the legal system, the first Iranian Commercial Code was introduced in 1925. This code was heavily influenced by some of its European counterparts particularly the French and Belgian Companies Acts. In 1932, the Code was amended for the first time; setting some new provisions in regard to the organization and operation of commercial companies, including, to some extent, the issues of business transactions, and corporate reporting. The second amendment in 1969, focused on the regulatory framework for joint stock companies (Pour-Naini, 1993). The amendments were in response to the needs of the new emerging phenomena such as the establishment of large scale joint stock companies, and introduction of a stock exchange into the economy. This amendment regulated the legal form for various types of companies, securities regulations, the capital market, negotiable instruments, and bankruptcy (Amuzegar, 1977).

There have been many vigorous alterations in the Iranian business environment as a result of social, economic and political changes such as the rapid growth of private foreign and local investments in the decades surrounding the revolution. It seems the current Code does not fully address current financial reporting environment demands. For instance, there is a lack of specific legislation concerning corporate mergers and foreign investment in the Tehran Stock Exchange (TSE). The Code is limited to specifying the minimum of corporate reporting provisions, such as requiring a company's board of directors to prepare a balance sheet and income statement at the end of each fiscal year (Articles 232-242 of the Code) and requiring that these reports be accompanied by a directors' report about the company's activities and affairs. In regard to quality of information, the company must only maintain consistency, and use the same structure and evaluation methods as in the preceding fiscal year.

The introduction of accounting standards since the 1990s which are enforceable by law means there is now a set of regulations dealing with economic measurement and corporate reporting. With only two very minor exceptions about human resource related disclosures, neither the Commercial Code nor the Accounting Standards, or any other rules, mandate any sort of disclosure about other business issues such as social and environmental matters.

7. The Capital and Stock Markets

The idea of having a stock exchange and capital market in Iran dates back to the 1930s. The early studies of establishment of a stock exchange were conducted by Bank Meli Iran (National Bank), assisted by experts from the Brussels Stock Exchange. The outbreak of World War II and other political and economic problems at the time prevented any further progress in the establishment of a stock exchange in Iran. The Iranian parliament did not ratify the Stock Exchange Act until 1966, and the TSE officially started operations in 1968.

Initially the TSE operation was limited to trading a few companies' shares, some government bonds, and certain state-backed certificates. Mirshekary (1999) believes this lack of interest in the capital market can be attributed to socio-cultural features and the existing problems of transactions in joint stock operations. During the 1970s this trend changed due to institutional changes within corporate ownership structures such as the transfer of shares of public companies and large private firms to their employees and the private sector.

During the 1978-1979 revolution, trade dropped dramatically and in 1979 just a few new listings were recorded on the TSE. After the revolution TSE operations were affected with many companies either confiscated or nationalized reducing the number of listed firms to only 55 (Mirshekary, 1999), and bond trading ended in 1983. After about a decade, the TSE was again playing a more active role in the capital market, and despite some extreme volatility, its role and activity in the capital market has continued to expand (Mashayekhi & Mashayekh, 2008). In the last two decades the market has been expanded by new types of activities such as trading corporate bonds issued by listed companies and the establishment of a Small and Medium-Sized Enterprises Market. The TSE with a listing of 316[23] companies under 37 industry classifications is now a unique capital market in terms of diversity in the Middle East region.

8. The Accounting Profession and Accounting Standards in Iran

Short History - modern accounting is a relatively new profession in Iran. In regard to the history of the accounting profession, as noted by Salami (1993) the early stage of the emergence of modern accounting and auditing in Iran was in the 1930s. In 1936, for the first time the terms 'balance sheet', 'debit' and 'credit' were used by an Iranian government official in a directive note related to accounting and auditing. The application of modern accounting techniques during this period was common only among active foreign firms in Iran such as the (former) Oil Company, the Imperial Bank of Persia and some other foreign firms. Bank Meli Iran was the first Iranian firm to use modern accounting techniques (Salami, 1993). Throughout this early period, the training of accountants was in the hands of British and American professional bodies and just a few institutions.

In 1944, the first independent professional accounting association was founded by a group of

[23] As at 30 July 2013 when TSE website was visited.

Iranian graduates in accounting from UK colleges (Salami, 1993; Roudaki, 1996). However, for various reasons such as the non-availability of a sizable body of qualified accountants, and the lack of support from government, this body never became an active and formal professional society in Iran.

The use of expert accounting and auditing services was considered in the Income Tax Law in 1949 and reintroduced in the revised Income Tax Law 1955. Article 33 of the Income Tax Law required the submission of income statements and balance sheets of companies to the Tax Office after being examined by a member of the Institute of Expert Accountants set up under this bill. However, the legislated requirement remained only on paper without any significant effort by the official bodies to recognize and introduce the expert accountants until 1963. Shortly thereafter (1967) the Institute of Expert Accountants was disbanded in the new tax law, the Direct Tax Act (DTA), as it was perceived by the legislators to be failing to meet its expected functions (Mokhtar, 1992). In addition DTA 1967 recognised the role of auditors and referred to these professionals as the Official Accountants. The practical role of these accountants, as a private arm of the Finance Ministry, was to examine corporate reports from the tax perspective (Roudaki, 1996). In 1970 the Finance Ministry decreed the membership of 16 accountants as the first members of the newly established government accounting body, the Society of Official Accountants.

The major social and economic changes in the 1960s and early 1970s became the vehicle for fast growth of the accounting profession in Iran. Mokhtar (1992) believes two specific factors contributed to these changes. The first factor was the establishment and expansion of the TSE, and the other factor was the increase in the number of accounting graduates from local and international universities. According to TSE regulations, listed companies were required to present corporate reports audited by certified auditing firms. The purpose of this regulation was to improve the quality of corporate reports (Mirshekary, 1999). This, in turn required increasing the level of professionalism and knowledge in accounting practice and training. In 1972, the Iranian Institute of Certified Accountants (IICA) was established as a professional body by a group of accountants who were educated in accounting in the UK[24]. The members of this institute functioned as self-employed accountants, or accountants of private and government firms. From this time, some big international audit firms established subsidiary firms in Iran using member of Society or IICA members as their domestic partners.

After the Revolution **-** after the Revolution in 1979, the Iranian accounting profession faced some dramatic changes in the corporate reporting environment (Mokhtar, 1992). All major private banks, insurance and manufacturing companies were confiscated or came under the direct supervision of the government. The Society of Official Accountants was terminated and professional influence became limited. To manage the confiscated firms, government bodies established their own audit firms such as the National Industries and Plan Organization Audit Firm (1980), Mostazafan Foundation Audit Firm (1981) and Shahed Audit Firm (1983) (Salami, 1993).

The establishment of these relatively big audit firms became a major factor in bringing together many well trained accountants from the previous regime that had lost their positions in liquidated international subsidiary firms or inactive domestic firms (Mirshekary, 1999). Fundamental problems confronting of corporate reporting such as the lack of national accounting and auditing standards, and having major professional activities in the hands of government were yet to be addressed.

Audit Organization **-** in 1983, after a long debate between professionals and government, the merging of the four audit firms was ratified by the parliament (Roudaki, 1996). The firms merged into the Audit Organization and included all three audit firms established by the government bodies after the Revolution and the Audit Company (Sherkat-e Sahami-e Hessabressi, another government owned audit firm established in 1971). In 1987, the Audit Organization’s by-laws were approved and the organization formally established as a legal entity, with financial independence and affiliated to the Ministry of Economic Affairs and Finance. In 2003, in order to comply with Article 4 of the Third Economic, Social and Cultural Development Plan the Audit Organization’s by-laws were revised and its legal status changed to that of a State Owned Limited Company.

According to its by-laws (2003), the main functions of the Audit Organization are in the areas of practice, setting accounting and auditing standards, research, training, and publications in the field of accounting. On the practice side, according to Article 7 of the by-laws, it is involved in auditing of those corporations in which the government owns 50 percent or more of the equity, and other government foundations. Perhaps its most significant role is that it is the official body in charge of setting accounting and auditing standards, the code of professional ethics, and providing guidelines on the professional standards.

The legislated recognition and responsibilities of the Audit Organization as the authoritative body for setting accounting and auditing standards and as a center for training, research and publication, paved the way for greater growth and development of the accounting profession particularly during the two decades of 1990s and 2000s. The growth and development came in the form of setting national accounting and auditing standards, establishing the

[24] All information about IICA is cited from the institute website (accessed 9 July 2013) http://iranianica.com/site/1/default.aspx

Iranian Association of Certified Public Accountants (IACPA), and, promoting a more active role for private professional firms and international accounting firms in professional activities.

Accounting Standards **-** in 1994 the process of setting national accounting standards began with the release of some accounting guidelines. An extended set of the guidelines was issued by the Audit Organization in 1999. These guidelines were an adapted version of 22 standards issued by the International Accounting Standards Board (IASB). The purpose of issuing these guidelines was to seek views and comments on the application of IASB standards in Iran. Overall, the standards were welcomed by the accounting profession and business communities in Iran. After the trial period, the first set of 22 guidelines came into force as official Iranian National Accounting Standards (INASs) on 20th March 2001. Currently, there are 32 binding accounting standards. The Audit Organization acknowledges on its website and each individual standard that INASs are set in accordance with the standards issued by the IASB with a few exceptions. The exceptions are discussed later in this section. The INASs are not a replication of International Accounting Standards (IASs) or of the more recent International Financial reporting Standards (IFRSs) rather they are adapted to suit the Iranian financial reporting context. For instance, IAS 1 is adapted in the form of two INASs: INAS1 Presentation of Financial Statements and INAS14 Presentation of Current Assets and Current Liabilities. Of the current 32 standards there are two standards, INAS24 Financial Reporting of Development- Stage Enterprises and INAS29 Accounting for Real Estate that have been developed independently of the IASB framework. INAS24 clarifies that there is no equivalent to this standard in the IASs. INAS29 is accompanied by a similar statement and also a statement that it is inconsistent with the appendix of IAS18, Revenue. In order to keep up with continuous revision and change in the IASs the Accounting Standards Committee in the Iranian Audit Organization also introduces new projects for incorporating IASs/IFRSs revisions into INASs. The comparison between the details of INASs and IASs/IFRSs is not the scope of this paper. However, such an investigation is important and should be the subject of a future study designed to identify and consider differences between these two sets of standards.

Auditing Standards **-** similar to the introduction of accounting standards, initially 30 International Standards on Auditing (ISA) were adapted and issued as guidelines by the Audit Organization in 1997. After a two-year trial period, all standards were approved as formal Iranian National Auditing Standards (INAuSs) with no major change to the earlier drafts. Currently, the suite includes 41 auditing standards which all are consistent with ISAs issued by the International Auditing and Assurance Standards Board (IAASB).

Code of Ethics **-** in regard to the introduction of a professional code of ethics**,** the Audit Organization followed a similar approach as it did for accounting and auditing standards. That is, it adapted the code of the International Ethics Standards Board for Accountants (IESBA) as a base for the Iranian Professional National Code of Ethics (IPNCE). The IPNCE consists of a preface and three parts: Part A covers issues related to professional accounts in business; Part B, addresses the issues related to the professional accountants in public practice; and, Part C focuses on general application of the IPNCE. The IESBA code was altered to accommodate the Iranian corporate reporting and cultural environment.

Corporate Governance **-** the first edition of a corporate governance code was published by the TSE in 2004. The 22 clauses in this code contain common definitions, and specifications relating to the board of directors, structure and duties, shareholder responsibilities, and the necessity for audit committees.

The IACPA **–** IACPA was established as a non-government accounting professional body with financial independence by parliamentary approval in early 1994. The establishment of the IACPA can be seen as a major factor in underpinning sustainable development of the accounting profession in Iran. It continues to have a significant and authoritative role in accounting performance in Iran. The membership conditions are stringent including that: members must have Iranian nationality; a bachelor degree in accounting or similar field; six years auditing work experience; and they must complete the IACPA Tests which include accounting, auditing, commercial law, finance and taxation. Only IACPA firms are allowed to audit the reports of TSE companies, unlisted public companies and their subsidiaries, foreign companies registered in Iran, and government owned companies.

Currently both IICA and IACPA are members of the International Federation of Accountants.

Summary and Conclusions

Institutional factors have been found in prior research (Radebaugh & Gray, 2002; Doupnik & Slater, 1995: Perera, 1989; Wallace, 1987) to influence a country's corporate financial reporting environment (see 'Introduction' pp. 3-5). This paper has provided details of some major events that have collectively or individually, had a direct or indirect impact on the development and evolution of corporate financial reporting in Iran during the last century. In this regard the political and economic history, legislation and regulation, and development of the accounting profession have all been considered through an historical lens in order to gain insight into the origins, growth and development of the corporate financial reporting environment in Iran.

The purpose of this paper has been to reflect on the development of the corporate reporting environment in Iran, and in that process, to articulate the relevant major hurdles and opportunities in the past century. This analysis has been undertaken within the cultural, social, political and economic context in which the Iranian accounting profession operates. Thus an historical perspective is an appropriate lens for undertaking such a reflection.

It can be seen that the Iranian corporate reporting environment has been influenced by many significant events across the 20th century. Among the more important events are the influences of the Mashruteh Movement, two World Wars, symbolic modernization reforms, the emergence and nationalization of the oil industry, and the 1979 Islamic Revolution.

Despite many political, economic and cultural differences relative to some influential Western countries, Iran's international professional accounting connections together with its adaptation of international accounting and auditing standards and code of ethics have aligned Iran with the international harmonisation movement in the matter of corporate reporting.

Research has shown that the economic and political changes, in particular, during the last century have created many obstacles but have also provided great opportunities for development and enhancement of the corporate reporting environment and of the accounting profession in Iran.

The main implication of this study is that, knowledge of past trends of corporate reporting and its environment provides policy makers with a better understanding of likely future directions and how these trends can influence the development of the regulatory and financial reporting framework and corporate governance. More specifically, considering the major changes in Iran's corporate reporting environment (e.g. adoption of IFRS, political, social and economic upheaval) in recent decades, it is crucial for policy makers to identify the systems' successes and failures from an historical point of view in order to best meet the challenges of the future.

References

1. Abadi, E, (1995), "Second Five-Year Plan, meeting Iran's economic needs", Iran Export and Import Journal, February, iss.33, pp54-62.
2. Afary, J (2005), "Civil liberties and making of Iran's First Constitution", Comparative Studies of South Asia, Africa and the Middle East Journal, vol.25, no.2, pp341-359.
3. Amuzegar, J (1993), Iran's economy under The Islamic Republic, Tauris & Co Ltd, London.
4. Baydoun, N & Willett, R (1995), "Cultural relevance of Western accounting systems to developing countries", ABACUS, vol.31 no.1, pp22-30.
5. BBC, (2006), "Profile: Mohammad Khatami" BBC News, 17 June 2009, available at http://news.bbc.co.uk/2/hi/3027382.stm (accessed November 2009).
6. Bharier, J (1971), Economic development in Iran 1900-1970, Oxford University Press, London.
7. Doupnik, TS & Salter, SB (1995), "External environment, culture and accounting practice: A preliminary test of a general model of international accounting development", The International Journal of Accounting, vol.30, iss.3, pp189-207.
8. Dyer, J, (2013), "Three accounting firms pull out of Iran", Financial Times, available at http://theiranproject.com/blog/2013/04/27/three-accounting-firms-pull-out-of-iran/ (Accessed July 2013).
9. Fang, S (2007), "Tentative steps: Ahmadinejad's economic reform" Harvard International Review, Fall 2007, available at, http://www.entrepreneur.com/ tradejournals/article/172835081.html.
10. Ghods, MR (1989), Iran in the twentieth: A political history, Lynne Rienner Publishers, USA.
11. Gray, SJ 1988, 'Towards a theory of cultural influence on the development of accounting systems internationally, Abacus, vol.24, iss.1, pp1-15.
12. Hakimian, H (1999), "Institutional change and macroeconomic performance in Iran two decades after the Revolution (1979-1999)", Working paper no. 9909, Economic Research Forum for the Arab Countries, Iran & Turkey (ERF), Cairo, Egypt, April 1999.
13. Hickman, A, (2010), Iran exodus: Politics strikes profession, The Accountant, available at http://www.theaccountant-online.com/news/iran-exodus-politics-strikes-profession accessed July 2013
14. Hofstede, G & Hofstede, GJ (2005), Cultures and organisations – Software of the mind, 2nd edn, McGraw Hill, London.
15. Hooks, J (2011), "Farmers, political, and history of standard values – An accounting convenience or political arithmetic?", Accounting Historian Journal, vol.38, No. 2, pp. 47-74.
16. IAB Editorial (2013), UNAI lobbies global accounting Firm exist from Iran, International Accounting Bulletin, 27 March 2013, available at http://www.internationalaccountingbulletin.com/search/?q%5B%5D=UANI+Lobbies+global+accounting+firm+exit+from+Iran accessed July 2013
17. Iqbal, MZ, Melcher, TU & Elmallah, AA (1997), International accounting: A global perspective, South-Western Publishing, Cincinnati, USA.
18. Issawi, C (ed.) (1971), The economic history of Iran 1800-1914, The University of Chicago, USA.
19. Jalali-Naini, AR (2003), "Economic growth in Iran: 1950-2000", Institute for Research in Planning Development (IRPD)", Working Paper, January 2003
20. Katouzian, H (1981), The political economy of modern Iran – Despotism and pseudo-modernism, 1926-1979, The Macmillan Press Ltd, London.
21. Komijani, A (2005), "Macroeconomic policies and performance in Iran", Asian Economic Papers, vol.5, iss.1, pp177-186.
22. Kuniholm, BR (1980), The origins of the cold war in the Near East, Princeton University Press, New Jersey.
23. Mashayekhi, B & Mashayekh, S (2008), "Development of accounting in Iran", International Journal of Accounting, vol.43, iss.1, pp66-86.
24. Meek, G. K., & Thomas, W. B (2000), A review of market based international accounting research.

Journal of International Accounting Research, vol.3, iss.1, pp. 21−41.
25. Mirshekary, S (1999), An empirical investigation of the quality of disclosure in corporate financial reports in developing countries: The case of Iran, unpublished Ph.D. dissertation, the University of Wollongong, Australia.
26. Mokhtar, N (1992), Auditing [Hessabressi], Ketab Sara, Tehran, Iran [in Persian].
27. Mostashari, A (2004), 'Privatization of state-owned enterprises in Iran: panacea or prescription for disaster', available at http://www.payvand.com/news Jan 2007
28. Parsa Benab, S n.d., (2010) 'The origin and development of imperialist contention in Iran; 1884-1921' A case study under development and dependency, http://www.iranchamber.com/history/articles/origin_development_imperialist_contention_iran1.php accessed November 2010,
29. Perera, H (1989), "Towards a framework to analyse the impact of culture on accounting", International Journal of Accounting, vol.24, issu.1, pp42-56.
30. Pour-Naini, SM (1993), "Commercial companies in Iran: Rising, development and regulations" [in Persian], Hessabdar, vol.9, iss.101-102, pp84-106.
31. Radebaugh, LH & Gray, SJ (2002), International accounting and multinational enterprises, 5th edn, John Willy, Brisbane.
32. Resaee, Z & Devani, G (ed), (2012), A global history of accounting, financial reporting and public policy, Eurasia/The Middle East and Africa, Vol. 12, pp17-49.
33. Risen, J (2000), 'New York Times Special Report: The C.I.A in Iran', The New York Times ON THE WEB, 16 June, 2000, available at http://www.nytimes.com/library/world/mideast/041600iran-cia-index.html accessed July 2013,
34. Roudaki, J (1996), Undergraduate accounting programmes in developing countries: The case of Iran, unpublished Ph.D. dissertation, the University of Wollongong, Australia.
35. Salami, G (1993), "Obstacles of accounting development in Iran" [in Persian], Hessabdar, vol.9, iss.101-102, pp144-155.
36. Tehran Times (2010), 'Iran's fifth development plan sees 12% inflation rate', Tehran Times Economic Desk, 7 October, http://www.tehrantimes.com/Index_view.asp?code=203292 accessed October 2010
37. Van Wyhe, G (2007), "A history of U.S. higher education in accounting, Part I: Situation accounting within the academy"' Issues in Accounting Education, vol.22, No. 2, pp.165-181.
38. Wallace, RSO (1987), "Corporate financial reporting in Nigeria", Accounting and Business Research, vol.18, iss.72, pp352-362.

SHAREHOLDER SHORT-TERMISM IN THE UK: THE KAY REVIEW AND THE POTENTIAL ROLE OF CORPORATE LAW

*Andreas Kokkinis**

Abstract

This paper examines the notion of short-termism and assesses the potential impact of short-termist shareholder pressures on corporate governance in light of available empirical evidence on the effects of institutional shareholder ownership on corporate performance. Its main aim is to evaluate the adequacy of the recommendations included in the influential Kay Report and to assess the legal efficacy of the regulatory tools advocated by Kay. It is argued that although most of the Report's recommendations are likely to alleviate the consequences of short-termism, the Report does not go far enough to ensure a definite change of culture and practice in equity markets. Therefore, further reforms are necessary in the area. In particular, it is expedient to robustly reform the structure of executive remuneration, facilitate a dialogue between companies and long-term investors, and reform shareholder voting rights to deter short-termist behavior and reward long-term investors.

Keywords: Kay Report, Institutional Investors, Shareholder Activism, Short-Termism, Equity Markets, Corporate Governance Reform

* *School of Law, the University of Warwick, Coventry, CV4 7AL, UK*
Tel (office): 0044 2476573442
Tel (mobile): 0044 7551987357
Email: A.Kokkinis.1@warwick.ac.uk

1. Introduction

The Kay Review's Final Report, published in 2012, is based on a powerful idea. Instead of permitting market structures that create perverse incentives and then attempting to regulate conduct using specific rules, it would be more effective to implement structural reforms that put in place appropriate incentives.

This paper examines the notion of short-termism in the investment chain and assesses the potential impact of short-termist shareholder pressures on corporate performance. To do so, it explores the main ways by which the short-term preferences of certain investors affect decision making by corporate directors. The main purpose of the paper is to critically evaluate the adequacy of Kay's main policy recommendations in light of broader empirical evidence on the effect of strong institutional shareholding on corporate performance.

I propose to structure the paper as follows. Section II provides an overview of the findings and recommendations of the Kay Review. Section III examines the interplay between shareholder passivity and short-termism and explains why the causes of passivity also contribute to the problem of short-termism. Section IV offers empirical evidence on the consequences of short-termist shareholder pressure from the banking industry. Section V critically examines the potential efficacy of the policy recommendations of the Kay Review. In light of these findings, Section VI explores a series of corporate law and corporate governance reforms that could potentially reduce the scope for shareholder short-termism and its impact on UK companies.

2. A concise overview of the Kay Review's Final Report

Professor John Kay was commissioned in 2011 by the Department of Business, Innovation and Skills (BIS) to investigate UK equity markets in order to assess the impact of their function on long-term decision making by UK companies, subsequent to a BIS consultation (BIS, 2010). The final report was published in July 2012 (Kay, 2012a) and was preceded by an Interim Report earlier in 2012 (Kay, 2012b). The report has been received positively by the BIS Select Committee which urged the Government to take action to implement its main recommendations, and cautioned against exclusive reliance on voluntary self-regulation by market players as the latter may be an ineffective tool to achieve the radical change of practice and culture that is required (BIS, 2013: 134-135). Indeed, the Government committed to review progress on the implementation of the report by summer 2014 and accepted in principle the normative findings of the Review, and the potential need for legislative and regulatory changes in the area in due course (BIS Committee, 2012).

Crucially, the Kay Review seeks to ascertain whether hyperactive trading by some institutional investors and the overall effect of equity markets have negatively influenced UK companies. Evidence shows that investment by UK companies has declined over the past 10 years (Kay, 2012a: 1.16). In addition, research and development (R&D) expenditure by UK companies as a percentage of the country's GDP has consistently been significantly lower than the relevant expenditure of American, German and French companies (Kay, 2012a: 1.18). A substantial part of the Review is devoted to a critical examination of the dominant paradigm of financial markets, that is, the efficient capital market hypothesis and in particular its strong version. The Review observes that this is based on a theoretical abstraction rather than on empirical evidence and that recent experience from the dot.com bubble, the securitised debt instruments during the recent crisis, and the European sovereign debt crisis demonstrates that markets may misprice securities for a long period of time.

Turning now to the recommendations of the Review, Professor Kay focuses on restoring trust in the equity investment chain. It is recommended that the Stewardship Code is expanded to incorporate a more demanding concept of stewardship (Kay, 2012a: 6.3) The Review doubts the value of imposing further disclosure obligations (Kay, 2012a: 6.16) and calls for deeper and stronger relationships between the parties to the equity investment chain (Kay, 2012a: 6.14). To achieve these ends, the Review proposes a series of Good Practice Statements that should be adopted by company directors, asset managers and asset holders; and this has been encouraged by the Government (Kay, 2012a: 6.22). A particular aim of the Review is to encourage engagement in companies by asset managers. To facilitate co-ordination between them, the Review proposes the creation of an investors' forum (Kay, 2012a: 7.3 - 7.7).

The Good Practice Statement for asset managers proposed by the Review focuses on recognising that asset managers are in a position of trust and have a duty to provide relevant information to clients. In addition, asset managers are recommended to focus on long-term value creation, absolute returns and their readiness to engage with investee companies (Kay, 2012a: 7.21). The equivalent statement for asset holders requires them inter alia to provide relevant information to their beneficiaries and to set the mandates for asset managers in a way that focuses on absolute long-term objectives rather than on relative short-term performance (Kay, 2012a: 7.31). Finally, the Good Practice Statement for corporate directors encourages them to acknowledge that long-term value creation is best served by focusing on investing rather than by treating companies as 'portfolios of financial assets.' It calls for directors to facilitate a dialogue with shareholders, to provide forward-looking strategic information and be paid in a way that creates appropriate incentives (Kay, 2012a: 8.4).

In parallel, it proposes that companies should consult their main long-term shareholders in advance of major board appointments; such as the appointment of a new chairman or key independent directors (Kay, 2012a: 8.36). Another major policy recommendation of the Review is that UK and EU regulators should use fiduciary standards to assess the behaviour of all players in the equity investment chain and that these standards, revolving around the core notion of loyalty, should take primacy over contractual terms (Kay, 2012a: 9.12 – 9.15). In this context, the Review invites the Law Commission to clarify the legal concept of fiduciary duty as applied to investment (Kay, 2012a: 9.21 – 9.22). With regard to corporate reporting, the Review supports the abolition of mandatory quarterly financial reporting and emphasises the need for succinct and informative corporate reports (Kay, 2012a: 10.19 – 10.22). In addition, the Review is cautious of the value of metrics and models used to assess performance in the equity chain and calls on the Government to launch an independent review of their merits, and on the relevant regulators to abstain from prescribing any particular model of risk assessment, but rather to encourage companies to use their own substantial judgement (Kay, 2012a: 10.30).

The final main area of reform identified by the Review is remuneration design for both corporate directors and for asset managers. The Review recommends that companies should pay all variable remuneration in shares which should be held at least until the executive director retires (Kay, 2012a: 11.09 – 11.12). However, the exact scope of this recommendation is not clarified. Similarly, it is proposed that the executives of asset managers are rewarded with an interest in the fund that they have to maintain until they are no longer responsible for managing that fund (Kay, 2012a: 11.13 – 11.16).

3. Shareholder passivity and short-termism: a conceptual framework

This section argues that one of the main reasons for the short-term attitude of most shareholders is that they face substantial economic incentives to remain passive. The link between obstacles to shareholder engagement and shareholder short-termism is an indirect one. Generally, shareholders have two main ways to react when they are unhappy with the performance of a company: to engage with the company using their voting rights (voice option), and to sell their shares (exit option).

If engagement is too expensive, shareholders will rationally prefer to exit companies whenever they are not satisfied with the company's performance. This creates a disincentive to long-term engagement with companies for the following reason. The main benefit that long-term investment can bring is that shareholders can have a positive impact on the performance of the investee company by actively engaging, monitoring managerial performance and promoting better strategies. If such engagement is not feasible, there is nothing to be gained by holding a substantial percentage of shares for a long period of time. It therefore makes sense to diversify the investment portfolio as much as possible and to trade frequently. At the same time, there are common causes to both phenomena. The lack of an adequate understanding of the inherent value of companies both discourages shareholder involvement and encourages a short-term trading attitude; this is due to the prevailing investment strategy which is not one of identifying good investment opportunities, but rather one of speculation on the short-term fluctuation of share prices. It is necessary, therefore, to closely examine the extent of and reasons for shareholder passivity in order to ascertain the persistence of short-termism as a problem of UK equity markets and the adequacy of Kay's recommendations to address it.

The main reason why shareholder activism is an exceptional phenomenon is the lack of economic incentives for shareholders to participate actively in corporate decision-making. In widely held companies, no shareholder owns a controlling block of shares. This means that, in normal circumstances, no individual shareholder acting alone can determine the outcome of a shareholder vote (Black, 1991: 821). Activist shareholders therefore have no option but to form a coalition with other shareholders in order to increase the possibility of winning a vote against the board. Forming and maintain such coalitions is of course costly and requires adequate resources being available. At the same time, the potential benefit from activism is relatively small. Indeed, the benefit to be gained is proportional to the percentage of shares owned by a particular investor. However, as the benefit is equally spread among all the shareholders, each shareholder is tempted to remain passive and wait for someone else to engage. And it may still be the case that the activist shareholders' preferred strategy was not in fact superior to the one proposed by the board.

The preceding analysis indicates that institutional shareholders are better-placed to be active than individual shareholders. This is for two main reasons. First, institutional shareholders tend to own more shares than other types of shareholders, and usually have a higher level of business expertise, enabling them to develop informed opinions at relatively low cost. Secondly, since a limited number of institutional shareholders hold substantial blocks of shares in all or most UK listed companies, it should not be difficult for leading institutions to form a coalition when necessary.

However, institutional shareholder activism never became a dominant characteristic of UK corporate governance. Institutions have been relatively successful in promoting shareholder rights and certain corporate governance norms at an industry-wide level. Pressure by associations of institutional investors such as the Association of British Insurers and National Association of Pension Funds has prevented UK companies from disapplying pre-emption rights and from issuing multiple-voting shares. In addition, the whole corporate governance movement which resulted in the highly influential Combined Code (now the UK Corporate Governance Code) has been strongly influenced by institutional investors. Conversely, at the micro level of individual companies, institutions have been less active. In the vast majority of cases they prefer to sell their shares rather than to attempt to change a company's strategy. Of course, the rarity of open confrontation with corporate managers is to an extent explained by the tradition of informal communication with boards of directors. Still, anecdotal evidence and interviews indicate that UK institutional shareholders do not form coalitions often and normally vote in favour of the board, unless there is a corporate crisis or scandal (Black, 1993). In parallel, a series of empirical studies have indeed failed to find any evidence that UK institutional investors actually engage in monitoring their investee companies. For instance, Goergen et al conclude that institutional shareholders do not monitor investee companies either by direct intervention or behind the scenes (Goergen, Renneboog & Zhang, 2008; Mayer and Renneboogg, 2001). Overall, the level of institutional engagement has traditionally been unjustifiably low and remains so in present times (Myners, 2001).

The reluctance of institutional shareholders to engage with investee companies is due to the combined effect of three factors, namely: (i) agency costs arising out of a long chain of intermediation between the ultimate investor and the investee company; (ii) conflicts of interest faced by institutions that have close business links to companies; and (iii) a lack of expertise on the part of the staff employed by institutional investors. A detailed discussion of these issues falls outside the scope of this paper.

The increasing fragmentation of share ownership in UK public companies in recent years further weakens shareholders' incentives to take a long term interest in companies and hence exacerbates short-termism. As compared with the early 1990s, there has been a dramatic erosion of the position of domestic institutional investors. Both the volume and percentage of shares held by pension funds and insurance companies has fallen sharply, as can be clearly seen in the next table. In 1993, British institutional investors (including banks) owned approximately 61% of the shares in UK listed companies. In 2010, they owned only 25% of the shares. At the same time, the percentage of shares owned by foreign investors has more than doubled from 16% to 41.2%. The effect of the increased internationalisation of share ownership is that the potential for shareholders to co-ordinate is now more limited. There has also been a dramatic increase in the percentage of shares owned by other financial institutions (including hedge funds), from merely 1% in 1993 to 16% in 2010. These investors tend to take a short-term investors approach and hence their presence is associated with an exacerbation of short-termism.

Table 1. Percentage of shares owned by different types of investors
(The data is taken by the Office of National Statistics)

	1993	1998	2008	2010
Foreign	16%	30.7%	41.5%	41.2%
Pension funds	32%	21.7%	12.8%	5.1%
Insurance companies	20%	21.6%	13.4%	8.6%
Unit trusts	6%	2%	1.8%	6.7%
Investment trusts	2%	1.3%	1.9%	2.1%
Banks	1%	0.6%	3.5%	2.5%
Other financial institutions	1%	2.7%	10%	16%
Non-financial companies	1%	1.4%	3%	2.3%
Individuals	18%	16.7%	10.2%	11.5%
Church/ charities	2%	1.4%	0.8%	0.9%
Public sector	1%	0.1%	1.1%	3.1%

4. How serious is the problem of shareholder short-termism? Evidence from the banking sector

The reason I present evidence from the banking sector is due to the availability of bank-specific empirical studies this being prompted by the recent crisis, and the relevance of such examples to the issue of short-termism. Erkens et al examined the impact of institutional ownership on the stock returns of 296 financial firms from 30 countries during the 2007-2008 period (Erkens, Hung & Matos, 2012). They found that firms with higher institutional ownership experienced worse stock returns during the crisis. To further explore this finding, the authors tested whether higher institutional ownership led to more risk-taking and concluded that firms with a higher institutional ownership took on more risk before the crisis, which evidently caused them to perform worse during the crisis. This study is highly relevant for the case in point, since the percentage of a bank's shares that are held by institutional shareholders is a good proxy for overall shareholder intervention. The findings of the study imply that institutional shareholder activism is on balance destabilising for banks as the negative consequence of increased risk-taking seems to outbalance the positive aspects (lower agency costs).

The most notable case of such shareholder behaviour was the revolt of Knight Vinke Asset Management LLC (an institutional asset manager headquartered in New York) against the management of HSBC. In 2008 Knight Vinke publicly opposed HSBC's decision to increase its share capital by 20% to cope with the financial crisis. They argued that the capital increase would harm the financial interests of exisitng shareholders. As an alternative strategy, they proposed that HSBC allows HSBC Finance Corporation (HFC), one of its subsidiaries in the US, to seek Chapter 11 protection (Knight Vinke, 2008). Household International was a US financial company acquired in 2003 by HSBC and renamed HFC. It was heavily exposed to the US sub-prime mortgage market. Its failure would be detrimental to its bondholders and would probably lead to the withdrawal of HSBC's authorisation to engage in banking in the US. Furthermore, it would undoubtedly severely affect its global reputation. HSBC's board successfully resisted the pressure, and proceeded with the capital increase. Similarly, in 2007, Knight Vinke had opposed the strategy of HSBC to seek continual geographic diversification (Knight Vinke, 2007). Such diversification, although not likely to lead to profit maximisation, would materially decrease the likelihood of the failure of a bank (Coffee, 1986: 52 - 72).

Activist shareholder pressure has also been experienced by Barclays under similar circumstances i.e. as opposition to a decision that aimed to strengthen the financial position of the bank but was not profit-maximising for its shareholders (at least in the short term). Indeed, in 2008, Barclays decided to increase its equity capital by £7.3 billion to cope with the financial crisis. It rejected an offer from the UK government for assistance, and instead sought to raise the capital from private investors. Several shareholders protested that this course of action was more costly to Barclay's current shareholders than accepting government aid. As a result, the whole board put itself up for re-election in the next annual meeting in 2009. The board argued successfully that accepting government aid and hence public intervention would not be in the long-term interests of Barclays.

Conversely, the shareholders of UK banks have consistently welcomed any strategies that increase the leverage and hence the riskiness of banks, often to the detriment of the bank's long-term sustainability. For instance, the shareholders of RBS overwhelmingly supported the catastrophic acquisition of ABN Amro and the shareholders of Northern Rock approved the exponential debt-financed growth of the bank (Kay, 2012a: 1.29 – 1.30). Also, there is evidence that the shareholders of RBS continuously pressed for (unsustainable) levels of return and encouraged an extremely leveraged business model, which turned out to be fatal for the bank (Parliamentary Commission on Banking Standards, 2013: 174).

Of course, evidence from the banking industry should be treated with some caution when used to assess the overall problems caused by short-termism in UK companies. Banks are different from other companies with respect to their riskiness, capital structure and interconnectedness. Still, the above evidence suggests that short-termist pressures by shareholders can be a substantial problem for UK public companies as they are prone to lead to excessive risk-taking which is bad for the long-term performance of companies, and to a misconceived managerial focus on financial restructuring rather than on substantial value creation.

5. The inadequacy of voluntary self-regulation and fiduciary duties to effectively tackle shareholder short-termism

The preceding analysis suggests that the causes of shareholder short-termism are deeply rooted in the main characteristics of widely-held companies and demonstrates that short-termism can be a serious problem with potentially deleterious consequences to corporate performance and financial stability. In this section, I argue that the Kay Review, despite its insightful exploration of the phenomenon and its laudable approach of creating appropriate incentives to tackle short-termism, does not go far enough to achieve its goals.

The main problem with the Review is its heavy reliance on self-regulatory statements of good practice that allow flexibility but are inevitably broadly phrased and indeterminate. To this regard, the Review follows the long-established UK practice of preferring soft-law rules over mandatory regulation, which has been championed by the corporate governance movement since the 1990s (Cadbury Committee, 1992), and has been followed by the Stewardship Code (FRC, 2012) and the Walker Review on banks (Walker, 2009). However, the potential of self-regulation to be effective depends on the availability of market pressure to ensure compliance, as has been the case with the UK Corporate Governance Code (FRC, 2012). In the context of equity markets, such pressures would be unlikely to arise. The same economic reasons that encourage short-termism will inevitably encourage corporate managers, asset managers and asset holders to avoid substantial compliance with the best practice principles, and no party will monitor if other parties comply since they all face strong incentives to behave differently. The Good Practice Statements proposed by the Review would be truly effective only if combined with legal reforms that would change the incentive structure of the key players by making involvement more attractive and curtailing the scope for short-termist pressures on companies. Similar concerns have been expressed with regard to the potential effect of the UK Stewardship Code (Cheffins, 2010).

In parallel, the Review relies heavily on the concept of fiduciary duties to regulate the behaviour of all players in the equity chain, and highlights the need to impose an onerous duty of loyalty that exceeds the standards currently demanded by the regulators. Using the fiduciary duty of loyalty to regulate the relationships between parties to the equity investment chain is problematic on a series of grounds. Firstly, given the relevance of EU harmonisation in the area and hence the recommendation that EU authorities use fiduciary standards, there is the problem of difference in legal tradition between the UK and continental Europe. The concept of fiduciary duties, which emanates from equity, is distinct to English law and therefore is not suitable for adoption as a regulatory technique at an EU-wide level. Secondly, fiduciary duties are an ex post mechanism of accountability which relies on judicial enforcement. It follows that regulatory authorities are not the appropriate fora to develop fiduciary duties in the context of investment.

Third, the duty of loyalty, as exemplified in the context of company directors, is a duty to honestly promote the interests of another party, which precludes selfish behaviour, but does not prescribe any particular standard of care and skill (Companies Act 2006: 172(1); *Re Smith and Fawcett Ltd*, 1942; *Regentcrest plc v Cohen*, 2001*; Extrasure Travel Insurances Ltd*, 2003).

Mere incompetence or carelessness does not constitute a breach of fiduciary duties. This substantially limits the potential of the duty to regulate behaviour in the context of the investment industry, as asset managers can easily defend an action by asset holders unless there was compelling evidence of malpractice or dishonesty. A final problem is that it will often be a party further down in the equity chain who suffers from inappropriate behaviour, rather than the party to whom the duty of loyalty is owed. The main party whose behaviour the Review seeks to regulate by imposing a duty of loyalty are asset managers. However, inappropriate behaviour by asset managers is likely to harm the ultimate beneficiaries of the investment rather than the asset holders (e.g. to harm the employees rather than the pension fund). Since the duty of asset managers would be owed only to the asset holder and not directly to beneficiaries it would only be the former who could sue. This would make the private enforcement of the duty ineffective, as is the case in the context of director's duties (Reisberg, 2009).

6. Reforming Company Law and Corporate Governance to alleviate short-termism and its impact on UK companies

A. Introducing shareholder committees

A proposal discussed by Kay in his interim report, but abandoned in the final report in favour of an investors forum, was the introduction of shareholder committees, as a means to facilitate communication and collective action between the major institutional shareholders in each company (Stewardship Code: 3.16 – 3.17). The benefits of establishing such committees are potentially large in view of the need to foster effective monitoring and an ongoing dialogue between shareholders and directors. In addition, the introduction of shareholder committees where the largest institutional shareholders would be represented would, by itself, strengthen the position of long-term shareholders vis-à-vis short-term ones, since the former will have a steady representation in such committees. Such committees would also provide a forum for the discussion of the main corporate governance issues faced by each company and facilitate communication with the board of directors, as they would offer a visible point of contact and a cost-effective way to approach the main shareholders of each company.

Shareholder committees would also facilitate institutional involvement in the selection of directors as such committees would be able to oppose a nominated director that they consider to be inappropriate before the General Meeting. At present, major shareholders have to form a costly ad hoc coalition to be able to nominate directors. A shareholder committee would thus serve as a permanent institutionalised forum where such issues can be discussed and the actions of major shareholders can be co-ordinated. Furthermore, the increased role played by those shareholders who would participate in the committee would give an incentive to concentrate an adequate percentage of shares to ensure representation.

With regard to the practicalities of shareholder committees, they can be formed organically by those large shareholders interested in participating in them. This self-regulatory approach will provide adequate flexibility and dispense with the need for any formal procedure for the election of shareholder representatives.

B. Imposing an one year holding requirement to vote in general meetings

Another possible reform with regard to shareholder engagement would be the imposition of a requirement to hold shares for a period of one year before shareholders are able to vote in general meeting (The Takeover Panel, 2010). Subsequent to the takeover of Cadbury by Kraft Food Group Inc. it was proposed by several commentators that shareholders who buy shares after a takeover offer is made public, are disenfranchised with respect to any decision to approve defences against the takeover. This reform proposal intended to curb the role of short-term arbitrageurs, such as hedge funds, who buy shares once a takeover offer is imminent and have no long-term interest in the company. However, the Takeover Panel rejected the proposal on the ground that it would undermine the principle of equal treatment of shareholders and be very difficult to implement.

Imposing a general one-year period requirement for shareholders to be able to vote could be implemented by an appropriate amendment of the Listing Rules which would require a relevant provision to be inserted in a public company's articles of association prior to being listed on the London Stock Exchange. The main benefit of such a reform would be the removal of incentives to purchase shares in order to vote on a particular occasion. In other words, it would ensure that only relatively long-term shareholders would be able to influence the corporate governance of major UK companies. A corollary benefit would be that awarding voting rights once shares have been held for a year would create an incentive for investors to hold shares for longer periods of time. This would by itself mitigate shareholder short-termism and encourage a constructive engagement of shareholders with companies.

The main difficulty with such a reform would be the probable opposition of institutional shareholders to what would be perceived as a curtailment of their rights. This could potentially increase UK companies' cost of capital. It follows that it would be necessary to obtain the support of a critical mass of institutional investors before going forward with such a reform. If this proves to be impossible, an alternative would be to introduce in the Corporate Governance Code a requirement for companies to consider issuing loyalty shares. Loyalty shares are shares that carry a special right, such as an option to purchase more shares at a favourable price, which can be exercised only if they are held by the same person for a period of time (Bolton & Samama, 2012).

Granted, imposing an annual holding requirement for shareholders to gain voting rights would undermine the principle of equality of treatment of shareholders, which is strongly embedded in UK corporate governance practice. However, rewarding long-term shareholders is necessary if we want to encourage commitment to companies and involvement and discourage excessive trading and short-termist pressures on companies. Indeed, the idea of distinguishing between desirable and undesirable types of activism and hence of shareholders was clearly accepted by Kay's interim report, but was not expressed as clearly in the final report (Kay, 2012: 3.13 – 3.15).

C. Setting an appropriate timeframe for directors' elections

Until 2010, the UK Corporate Governance Code (known then as the Combined Code on Corporate Governance) recommended that directors of listed companies stand for re-election by the shareholders at intervals of no more than three years (Provision A.7.1); unless they are non-executives who have served for nine years, in which case they were expected to stand for re-election annually (Provision A.7.2). However, currently the Code recommends that all directors of FTSE 350 companies stand for re-election annually (Provision B.7.1). The main rationale behind this reform was the enhancement of directors' accountability to the shareholders and the closer alignment of interests between the two groups. This recommendation is now followed by most major UK companies.

The problem with annual election is that it is likely to exacerbate the short-term approach followed by many boards to the detriment of the pursuit of long-term strategies. Introducing annual election adds further pressure on directors to focus on short-term profitability, as they will naturally want to ensure that they have some pleasant news to share with the shareholders at each annual general meeting. This may lead to a structural bias against long-term profit maximisation and therefore undermine the enlightened shareholder value approach envisaged by section 172 of the Companies Act 2006 (Keay, 2007). Annual election inevitably creates an incentive to focus on recent results and disrupts long-term planning and strategy formulation by boards. In addition, a year is a very short time period within which to assess long term strategies.

Annual election of directors is therefore problematic, as – to the extent that it influences directorial behaviour – it does so in a way inconsistent with the long term success of companies. I thus propose that directors should be recommended to stand for re-election every three years, as was the case until 2010.

D. Changing the structure of executive remuneration

It needs to be borne in mind that executive remuneration is a powerful incentive to ally the interests of corporate managers with the interests of shareholders. As such, it is one of the main viaducts by which short-termist pressures by shareholders influence decision-making by companies. There are two potential ways by which the incentives set by executive remuneration can lead to short-termism. First, the criteria used to assess performance and hence determine whether variable remuneration is to be awarded to a director may focus excessively on short-term profit maximisation. Second, the form of payment can be itself a cause of short-termism. For instance, paying executives in stock options or shares creates a very strong incentive to increase the share price at the time the options or shares vest.

The Kay Review responded to the latter of these problems by requiring all variable remuneration to be paid in shares and that all the shares are retained by the executives at least until retirement from the company. To avoid inefficient incentives for executives to retire earlier, if they perceive that for some reason the value of a company's shares is going to decrease significantly in the near future, there should also be some restrictions in executives' capacity to sell their shares once they retire (Bebchuk & Fried, 2005). A limit of 20% of the shares they own per year would allow a retired executive to sell the whole of their shares 5 years after retirement and ensure that no perverse incentives to retire prematurely would influence executive directors and senior managers.

However, the Review remains silent with regard to the criteria used to assess corporate performance. Typically senior managers and executive directors have the opportunity to gain a bonus several times their salary and to be awarded shares under a so-called long-term incentive scheme on the achievement of certain performance conditions. These are usually focused on the comparative performance of the company with regard to a peer group of comparable companies, the main performance metrics being total shareholder return and earnings per share. The exclusive use of profitability metrics to assess corporate performance and hence to decide the level of variable remuneration managers receive exacerbates short-termism as managers face a strong financial incentive to follow policies that increase profits within the timeframe that corporate performance is assessed i.e. 1 to 3 years.

A possible reform in this area would be for the UK Corporate Governance Code to require companies to include some metrics that are not related to profitability. Non-financial criteria could include strengthening the reputation of the company, sound risk management, customer satisfaction, adherence to the company's values, and the absence of regulatory breaches. For instance, large UK banks are already required to include non-financial performance criteria in the assessment method of the performance of their executives (PRA and FCA Handbook: SYSC 19A.3.24). So, in order for a corporate executive to earn his variable pay he would have to balance financial with non-financial goals, and profitability with sound risk management. This could contribute to a broader change of culture in large UK companies in favour of long-term sustainability as opposed to a single-minded focus on short-term profitability.

7. Conclusions

This paper offered a critical analysis of the Kay Review and a broader discussion of the phenomenon of shareholder short-termism. It was argued that shareholder passivity and shareholder short-termism are two interlinked phenomena, as meaningful involvement with companies is the main potential benefit of long-term investment, and therefore the main obstacles to shareholder involvement are at the same time factors that encourage very frequent trading and a short-termist approach.

Evidence confirms that the problem of short-termism is a serious one, especially in the context of the financial sector. In view of the deep-rooted causes of short-termism, it was argued that the recommendations made by the Kay Review are unlikely to prove adequate to foster a change of practice and culture of the relevant market players. Therefore, the possibility of reforming company law and corporate governance rules to tackle short-termism and create appropriate incentives for shareholders and corporate managers ought to be reconsidered. To this end, a series of reform options were explored, namely: introducing shareholder committees; changing the timeframe of directorial elections; imposing a one year holding period to vote in general meetings; and reforming executive remuneration design. Such reforms would be likely to reduce both the likelihood of short-termist shareholder pressures arising, and the susceptibility of corporate managers to succumb to such pressures.

References

1. Bebchuk, L.A. and Fried, J.M. (2005) Pay without Performance: Overview of the issues Journal of Corporate Law 30: 647, 670
2. Black, B.S. (1991-1992) Agents Watching Agents: The Promise of Institutional Investor Voice University of California at Los Angeles Law Review 39: 811, 821-822.
3. Black, B.S. and Coffee, J.C. (1993-1994) Hail Britannia?: Institutional Investor Behavior under Limited Regulation Michigin Law Review 92: 2053-2055.
4. Bolton, P. and Samama, F. (2012) L-Shares: Rewarding Long-Term Investors ECGI Finance Working Paper No. 342/2013 (accessed 1 August 2013) http://ssrn.com/abstract=2188661
5. Cadbury Committee (1992) Report of the committee on the Financial Aspects of Corporate Governance (accessed 08/03/2014) http://www.jbs.cam.ac.uk/cadbury/report/index.html
6. Cheffins, B.R. (2010) The Stewardship's Code Achilles Hill Modern Law Review 73: 1004
7. Coffee, J. (1986) Shareholders versus Managers: The Strain in the Corporate Web Michigin Law Review 85: 52-72
8. Companies Act 2006 Department for Business, Innovation and Skills (2010) A Long-Term Focus for Corporate Britain- A Call for Evidence. URL (accessed 1 Feb 2014) http://webarchive.nationalarchives.gov.uk/+/http://www.bis.gov.uk/Consultations/a-long-term-focus-for-corporate-britain
9. Department for Business, Innovation and Skills Committee (2013) The Kay Review of UK Equity Markets and Long-Term Decision Making (HC 2013-14, 603) 134-145.
10. Department for Business, Innovation and Skills Committee (2014) The Kay Review of UK Equity Markets and Long-Term Decision Making: Government Response to the Committee's Third Report of Session 2013-14 (HC 2013-14, 762) 2-5.
11. Erkens, D.H., Hung, M., Matos, P (2012) Corporate Governance in the 2007-2008 Financial Crisis: Evidence from Financial Institutions Worldwide Journal of Corporate Finance 18: 389.
12. Extrasure Travel Insurances Ltd v Scattergood (2003) 1 BCLC 598.
13. Financial Conduct Authority (2014) Financial Conduct Authority Handbook (accessed 08/03/2014) http://www.fca.org.uk/news/handbook/handbook-release-146
14. Financial Reporting Council (2012) The UK Stewardship Code (accessed 08/03/2014) https://www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Stewardship-Code.aspx
15. Financial Reporting Council (2012) UK Corporate Governance Code (accessed 08/03/2014) https://www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Corporate-Governance-Code.aspx
16. Franks, J., Mayer, C., Renneboog, L. (2001) Who Disciplines Management of Poorly Performing Companies? Journal of Financial Intermediation 10: 209.
17. Goergen, M.,Renneboog, L., Zhang, C. (2008) Do UK Institutional Shareholders Monitor their Investee Firms? Journal of Corporate Law Studies 8: 39.
18. Kay, J. (2012a) The Kay Review of UK Equity Markets and Long-Term Decision Making: Final Report URL (accessed 1 Feb 2014) https://www.gov.uk/government/news/kay-review-publishes-report-on-uk-financial-sector
19. Kay, J. (2012b) The Kay Review of UK Equity Markets and Long-Term Decision Making: Interim Report URL (accessed 1 Feb 2014) http://www.bis.gov.uk/assets/biscore/business-law/docs/k/12-631-kay-review-of-equity-markets-interim-report
20. Keay, A. (2006) Enlightened shareholder value, the reform of the duties of company directors and the corporate objective Lloyd's Maritime and Commercial Law Quarterly 335
21. Keay, A. (2007) Tackling the Issue of the Corporate Objective: An Analysis of the United Kingdom's 'Enlightened Shareholder Value Approach Sydney Law Review 29: 577
22. Knight Vinke. (2007) HSBC Holdings Plc; Still Dancing? (accessed 1 Aug 2013) http://www.knightvinke.com/includes/documents/2009/a/article_19_20071100_report.pdf
23. Knight Vinke. (2008) Briefing Note for shareholders on HFC and its impact on HSBC valuation, capital requirements and image (accessed 1 Aug 2013) http://www.knightvinke.com/includes/documents/2009/a/article_14_20080229_briefing.pdf
24. Myners, P. (2001) Institutional Investment in the United Kingdom: A Review (accessed 1 Aug 2013) 10-14. http://archive.treasury.gov.uk/docs/2001/myners_report0602.html

25. Parliamentary Commission on Banking Standards (2013-2014) Changing banking for good (HL 27-II, HC 175-II) 174.
26. Prudential Regulatory Authority (2014) Prudential Regulatory Authority Handbook (accessed 08/03/2014) http://fshandbook.info/FS/html/PRA
27. Re Smith and Fawcett Ltd (1942) Ch304.
28. Regentcrest plc v Cohen (2001) 2 BCLC 80.
29. Reisberg, A. (2009) Shadows of the Past and Back to the Future: Part 11 of the UK Companies Act 2006 (in) action European Company and Financial Law Review 2/3: 219
30. The Takeover Panel (2012) Review of certain aspects of the regulation of takeover bids Public Consultation Paper 2010/2: 3.7-3.12 (accessed 1 February) http://www.thetakeoverpanel.org.uk/statements/panel-statements/ps2010
31. Walker, D. (2009) A review of corporate governance in UK banks and other financial industry entities; Final Recommendations (accessed 08/03/2014) http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/walker_review_information.ht

COUNTERFEIT LUXURY FASHION BRANDS: CONSUMER PURCHASE BEHAVIOUR

M.C. Cant, J.A. Wiid**, Mrs L.L. Manley****

Abstract

The act of counterfeiting products has grown at an extraordinary rate within the last two decades and is largely viewed around the world as a social, political and economic issue. Previous research mostly focused on the supply aspects of the counterfeit industry, with little research focusing on consumer demand for such merchandise and even less attention is given to South African consumers' demand and behaviour thereof The purpose of this article was therefore to describe South African consumers' purchase behaviour towards counterfeit luxury fashion branded products. The findings revealed that South African consumers have a relatively low demand and purchase behaviour towards counterfeit luxury fashion branded products and that the trading place is mostly in an informal setting.

Keywords: Luxury Brands, Fashion, Non-Deceptive Counterfeits, Purchase Behaviour, South Africa

* Professor in Marketing Management, Department of Marketing and Retail Management, University of South Africa. Pretoria
Tel: +27-12 429 4456
Email: cantmc@unisa.ac.za
** Professor in Marketing Management, Department of Marketing and Retail Management, University of South Africa. Pretoria
Tel: +27-12 429 3939
Email: jwiid@unisa.ac.za
*** Lecturer in the Department of Marketing and Retail Management, University of South Africa. Pretoria
Tel: +27-12 429 2643
Email: manlell@unisa.ac.za

1. Introduction

Counterfeiting has been a reason for major concern over the years and is a trade that continues to thrive in the 21st century. It is also a trade that can be seen to cause many social, political and economic problems (Swami, Chamorro-Premuzic & Furnham, 2009:820). According to the International Anti-counterfeiting Coalition (IACC, n.d.), counterfeiting has grown over 10,000% in the last two decades, which thereby accounts for roughly 5-7% of total world trade. The growth of the counterfeit industry can be attributed to many things, including the major increase in global trade and the continuous development of new markets in the search for higher sales and profits (Phau, Teah & Lee, 2009:3). However, it is noted that counterfeit trade is a problem that is mostly propagated due to consumer demand (Turunen & Laaksenen, 2011:468; IACC, n.d.; Bian & Moutinho, 2011:192).

Multiple studies have investigated the supply aspect of counterfeit trade, but where the literature falls short is research with regard to consumer demand towards counterfeit products (Heike, 2010:160; Penz & Ströttinger, 2005:568), but more so on the demand that consumers of emerging economies have towards counterfeit products. This article therefore aims to describe the South African consumers' behaviour towards the purchase of counterfeit luxury fashion branded products.

The following section outlines the aim and objective of the article and provides a brief background into the global counterfeit problem. Thereafter counterfeit issues arising in Africa and more specifically South Africa are discussed. Finally the research methodology is discussed followed by the results, limitations and conclusion of the study.

2. Aim and Objective of the Research

The purpose of this article was to investigate the purchase behaviour of South African consumers towards counterfeit luxury fashion branded products. In order to ascertain the aim of the research, the following objective was formulated;

- To describe South African consumers' purchase behaviour towards counterfeit luxury fashion brands.

3. Litrature Review

3.1 The counterfeit market

Brands are arguably one of the most valued assets a company can own, as they are the result of years of developmental efforts and can be seen as being the value of a firm (Green & Smith, 2002:89). Successful brands can generally charge a premium for their branded products as they have gained the trust of the consumer in that their products may be perceived as offering better quality, style, features and service (Bian & Moutinho, 2009:368). Branded products are furthermore important to consumers as they create a sense of achievement and promote individual identity (O'Cass & Frost, 2002:67). According to Penz and Ströttinger (2005:568) counterfeit products would not exist in the market was it not for well established brands and the fact that they can normally charge a premium for it. In essence the more a firm seems to invest in generating and improving its image to create a successful brand, the more prone the brand will be to counterfeit activities (Commuri, 2009:86; Triandewi & Tjiptono, 2013:23).

The act of counterfeiting is believed to be as old as markets themselves (Haie-Fayle & Hübner, 2007), and is a trade that was at first relatively unnoticed (Heike, 2010:159), however, as time moved on, the industry has grown exponentially to be a serious problem globally, occurring both in developed and developing countries (Ergin, 2010:181). Counterfeiting, or the counterfeit trade, can be described as the "…production and sale of fake products, which seem identical to the original product" (Penz & Ströttinger, 2005:568). Counterfeiting is not limited to any specific type of product, but is found across all product categories (Bian & Veloutsou, 2007:212; Ang, Cheng, Lim & Tambyah, 2001:221). According to Penz and Ströttinger (2005:568), counterfeiters generally prey on companies that have a high brand image and those products which have a simple method of production. Luxury fashion branded products which are generally easy to manufacture is one market that have been hit hard by counterfeit traders, as it is an industry that has experienced phenomenal growth (Phau, Teah & Lee, 2009:3; Kim & Karpova, 2010:79; Phau, Sequeira & Dix, 2009:262), as these products have instant global recognition (Juggessur & Cohen, 2009:383), they are easy to sell, the manufacturing costs are fairly low, and they are products that the consumers are looking for to enhance their status and their desire to be in tune with latest fashions (Phau & Teah, 2009:15).

Counterfeiting from the perspective of a consumer can appear in two different forms, namely deceptive (blur) and non-deceptive counterfeiting (Bian & Moutinho, 2011:193; Hanzaee & Taghipourian, 2012:1147). Deceptive (blur) counterfeits are when consumers unknowingly purchase a fake or copy of an authentic product, in this instance the consumer cannot be held accountable for his/her purchase action as they were of the opinion that it was the authentic product (Penz & Ströttinger, 200:568; Bian & Moutinho, 2011:193; Heike, 2010:161), whereas non-deceptive counterfeit products are instances in which the consumer knowingly purchases a counterfeit product (Heike, 2010:161). Non-deceptive counterfeiting is therefore the focus of the research as according to Bian and Moutinho (2011:193), it is only under the non-deceptive purchase condition that consumer's perceptions of counterfeit products will imitate their demand. Hanzaee and Taghipourian (2012:1147) further state that the purchase of luxury brands is particularly rampant when it comes to non-deceptive purchase behaviour. Therefore, this article focuses on consumers' demand towards non-deceptive luxury fashion branded products.

3.2 Sources of counterfeit products: Issues arising in Africa

Counterfeit products can be traced all around the world, but what has become very apparent is that counterfeiting is particularly widespread in Asia (Ang, Cheng, Lim & Tambyah, 2001:221). According to Bian and Veloutsou (2007:213) and Phau and Teah (2009:15), China is infamously known to be one of the major producers of counterfeit products and is the country where the majority of counterfeits can be traced. Bian and Veloutsou (2007:213) indicate that China exports counterfeits globally to Europe, Russia, the Middle East and the United States of America thus indicating that their target markets are vast.

Africa however according to Haman (2010), was always looked at as merely a destination for counterfeit products and therefore anti-counterfeiting strategies were rather prioritised to Europe, America and Asia. Consequently very little of the resource allocation was directed to Africa to combat the counterfeit dilemma. Africa, however, can no longer merely be viewed as a destination for counterfeit merchandise (Haman, 2010), as according to Meissner (2010) a new trend in the eyes of illicit traders has arisen, whereby Africa is being utilised as a "transit route". Through utilising Africa, counterfeits are rerouted to disguise the producer's country of origin (Meissner, 2010; Haman, 2010:344). This process has been made easier due to the increased trade between Africa and China, the lack of efficient border controls and the fact that African governments generally do not share information with regard to fake goods, and lastly many African consumers do not regard the trafficking of counterfeit merchandise to be a serious crime (Meissner, 2010).

A further core factor to Africa's counterfeit problem, according to Haman (2010:345), is that of socio-economic factors, whereby poverty and unemployment guarantee that there are enough individuals that need to make a living by any means necessary, which consequently means that individuals could be subject to trading directly or indirectly with counterfeit goods in order to support themselves and their families.

3.3 Counterfeit Trade: A South African Perspective

Like all other global markets, South Africa is no exception to counterfeit trade. Le Cordeur (2012) indicates that counterfeiting of merchandise in South Africa is however a relatively new problem. The reason pertaining to South Africa's late arrival to the counterfeit arena is most likely due to the countries past political isolation. Post political isolation however, South African borders have become more penetrable and trade relationships have been established whereby well-known brands have become more available in the country, thereby making South African consumers more brand aware of global offerings (Le Cordeur, 2012).

According to the South African Institute for Intellectual Property Law (SAIIPL, n.d.), South Africa has recently been targeted by counterfeiters as a "dumping ground" and "transit route" whereby heightened interest towards the country is due to the fact that the country is not land locked like other African countries and the country has many ports which can be used to off load illicit merchandise (Haman, 2010:345). Reasons for the growth of this trade, according to Ramara and Lamont (2012), is that counterfeiting activities in South Africa is regarded as a victimless offense, and one that is viewed as a chance to get a desired branded product at a far lower price to that of the authentic product.

According to Magwaza (2012) South Africa has seen a steady increase in the number of hawkers selling counterfeit clothing products resulting in jobs as well as revenue for clothing manufacturers being lost. Ramara and Lamont (2012) indicate that in 2010 a projected 14,400 South Africans lost their jobs in the textile industry as a result of counterfeit clothing being imported. Magwaza (2012) indicates that, in the 2011 financial year, 20,000 seizures were made by the South African revenue service amounting to a value of R1 billion, with 750,000 pieces of clothing being seized to the value of R483 million. This high value of goods seized is a strong indication that there is a demand for counterfeit goods in the country. Therefore, a deeper investigation into consumers' demand for luxury fashion branded products was regarded as appropriate and therefore this study commenced.

3.4 Consumer behaviour towards counterfeit luxury fashion brands

Many consumers worldwide and maybe more so in emerging economies, do not mind purchasing counterfeit products especially those consumers who want to be fashionable but do not have the means to afford it. A look-a-like product allows these consumers to experience the popularity associated with the product and its status as a well-established brand (Triandewi & Tjiptono, 2013:23).

Consumer behaviour can be defined, according to Hawkins and Mothersbaugh (2010:6), as "… the study of individuals, groups, or organisations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society." In today's rapidly changing, dynamic and competitive market environment it is imperative that an organisation gain an understanding of the customers they are catering for in order to survive and succeed. Marketers need to know anything and everything about their customers, for example what they think, want and how they spend their money (Schiffman, Kanuk & Wisenblit, 2010:23; Du Plessis & Rousseau, 2007:6). By understanding their customers' behaviour, organisations can gain a competitive advantage as they can predict future needs and wants of consumers and thus create tailored products or services to meet future needs, which consumers have yet to apprehend (Parumasur & Roberts-Lombard, 2012:7).

Consequently in order for luxury fashion branded organisations to survive and/or remain successful, a comprehensive understanding of an individual's behaviour towards the purchase of counterfeit products is needed to formulate more effective marketing strategies (Bian & Moutinho, 2011:193).

4. Methodlogy

In order to ascertain the primary objective of the study, a comprehensive methodology needed to be set forth. First secondary data was reviewed through the perusal of academic articles, textbooks and the internet.

Due to consumer sensitivity to the admittance of past and intentional counterfeit purchase behaviour the empirical aspect of the research was administered to respondents via two web-based self-administered questionnaires. The preliminary questionnaire comprised of ten questions whereby, five questions were filter close-ended questions and five questions were open-ended to determine past purchase behaviour with counterfeit brands. Once past purchase behaviour had been identified and specific brands stated, these brands were then incorporated into the main research instrument which described consumer purchase behaviour and demand towards counterfeit luxury fashion branded products.

The main research instrument then comprised of nine close-ended questions. Past purchase behaviour was measured by asking respondents five multiple-choice single response questions relating to specific brands. Intention to purchase counterfeit luxury fashion branded products was asked by means of a five-point Likert type scale, whereby responses ranged from “Strongly no” to “Strongly yes”.

The respondents asked to complete the questionnaires were university going students registered for either undergraduate or postgraduate degrees. Two samples were established through a probability stratified sampling approach; the first sample was set in place in order to ascertain the past purchased counterfeit luxury fashion brands, whereby the second sample then administered the main research instrument with the incorporated past purchased brands in order to describe consumer purchase behaviour and demand. This sampling approach was deemed most appropriate as the researcher had access to a list of registered students.The samples were derived from the provinces of Gauteng, the Western Cape and KwaZulu-Natal as these are areas that have been identified as provinces within South Africa that have the highest rate of counterfeit occurrence and are economic hubs within the country (SAFACT, n.d.; Naidu, 2005). Data collection took place from June-August 2012, whereby 175 responses were obtained for the preliminary survey and a total of 303 for the main research instrument. The research findings are discussed in the next section.

5. Reseach Findings

5.1Research Findings

Table 1 below represents the demographic make-up of the respondents who answered the main research instrument.

Table 1. Demographic composition of respondents (Rounded off to the nearest percentage)

Demographic characteristic	Respondents (n)	Percentage
Age		
18-24	86	28%
25-29	77	25%
30-34	53	18%
35-39	33	11%
40 < x	53	18%
Gender		
Male	160	53%
Female	143	47%
Race		
Black	88	29%
White	147	49%
Coloured	38	13%
Indian	28	9%
Province		
Gauteng	115	38%
KwaZulu-Natal	54	18%
Western Cape	133	44%
Socio-economic class		
Low	41	13%
Middle	233	77%
Upper	29	10%

It is evident from table 1 above that the majority of respondents fell in the age group of 18–24 years (28%, 86 respondents) while the minority of respondents were 35-39 years (33, 11%). The results emanating for gender indicated that roughly 53 percent (160) of respondents were male and 47 percent (143) were female. This division can broadly be seen to be in line with set strata and relatively in line with the national average figures for gender. The results obtained for race indicate that the majority of respondents were white (49%, 147 respondents) while a mere 9 percent 28 respondents) of respondents were Indian. In terms of provincial make-up respondents came mostly from the Western Cape (44%, 133 respondents) whereby the minority of respondents came from KwaZulu-Natal (18%, 54 respondents). In terms of socio-economic class the majority of consumers fell in the middle class (77%, 233 respondents) while only 10 percent (29 respondents) considered themselves to be in an upper class.

5.2 Past purchase behaviour of South African consumers towards counterfeit luxury fashion branded products: Preliminary survey

The preliminary survey was used to determine the most popularly purchased counterfeit luxury fashion brands that South African consumers had purchased in the past. The following were identified to be the most purchased counterfeit brands: Gucci and Rolex (Watches), Ray Ban (Sunglasses); Nike (Apparel/Clothing), Louis Vuitton and Prada (Leather and leather accessories) and Nike (Shoes). These brands were captured in the main research instrument that was sent to a second sample in order to describe the South African consumers purchase behaviour towards counterfeit luxury fashion brands.

5.3 Past purchase behaviour

The main research instrument determined whether respondents had ever purchased the counterfeit luxury fashion branded products as per the identified brands derived from the preliminary survey. The responses received were as follows:

Table 2. Past purchase of identified counterfeit luxury fashion brands (n = 303)

Brand	Yes		No		Total	
	n	%	n	%	n	%
Watch: Gucci and Rolex	23	8	280	92	303	100
Sunglasses: Ray Ban	54	18	249	82	303	100
Apparel/Clothing: Nike	75	25	228	75	303	100
Leather and leather accessories: Louis Vuitton and Prada	34	11	269	89	303	100
Shoes: Nike	48	16	255	84	303	100

From table 2 above it can be seen that only a few individuals indicated a past purchase behaviour towards counterfeit merchandise in the fashion brands and product categories identified. In the watches category only 8 percent (n = 23) indicated that they had a past counterfeit purchase behaviour with regard to Gucci or Rolex watches, while 18 percent (n = 54) indicated a past counterfeit purchase behaviour towards Ray Ban sunglasses. 25 percent (n = 75) of respondents indicated a past purchase behaviour towards counterfeit Nike apparel/clothing, while 11 percent (n = 34) indicated a past purchase behaviour of Louis Vuitton and Prada counterfeit leather and leather accessories. Lastly, Nike received a 16 percent (n = 48) past purchase behaviour for counterfeit shoes. From these figures it is clear that not many South African consumers had previously purchased the specific brands in the stated product categories.

5.4 Purchase intention towards counterfeit luxury fashion branded products

All respondents were requested to indicate their intentional purchase behaviour towards counterfeit brands. The following results obtained are viewed in figure 1 below:

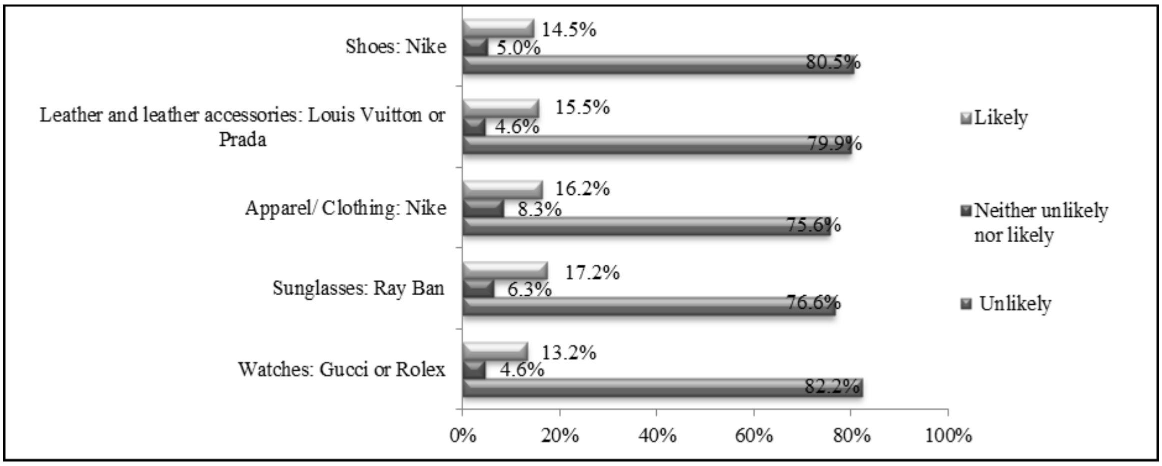


Figure 1. Purchase intention towards counterfeit luxury fashion branded products (n = 303)

From figure 1 above it can be seen that respondents had a low intention towards the purchase of counterfeit watches (Gucci or Rolex) with 82.2 percent indicating that they were unlikely to purchase the counterfeit product. Strong unlikeliness followed for the remaining product categories: Ray Ban sunglasses (76.6%), Nike apparel/clothing (75.6%), Louis Vuitton or Prada leather and leather accessories (79.9%) and Nike shoes (80.5%). These figures therefore indicate a low intention towards the purchase of the specified counterfeit luxury fashion brands from South African consumers.

5.5 Annual amount spent on counterfeit luxury fashion branded products

The yearly amount spent on counterfeit luxury fashion branded products is indicated in figure 2 below.

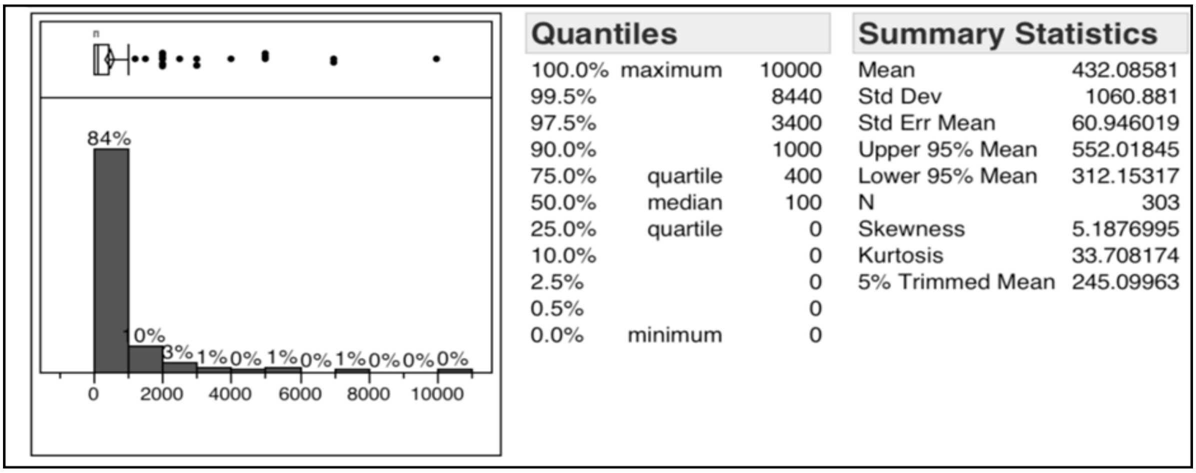


Figure 2. Annual rand spent on counterfeit luxury fashion branded products (n = 303)

It is clear from figure 2 above that the average yearly amount spent on counterfeit luxury fashion branded products among the 303 respondents amounted to R432,09. From the standard deviation, however (R1 060,88), it can be seen that there is a large difference in the spending patterns of lower and top-end spenders. Hence, there is a skewed distribution towards the lower end figures of R0–R1 000, where 90 percent of respondents purchased within this expenditure range. However, from the entire sample 75 percent indicated that their expenditure was between R0 and R400. In order to counteract this skewed distribution and to establish average rand spent the median score of R100 was considered to be most accurate. In order to gain a deeper understanding into the consumer spending patterns; cross tabulations were conducted with the samples demographic variables. Table 3 below indicates the average amount spent per age group with regards to purchasing counterfeit luxury fashion branded products:

Table 3. Average counterfeit spent per age group

		Age group				
		18-24	25-29	30-34	35-39	40+
Spend counterfeit	Mean	R502,34	R393,25	R620,96	R134,24	R332,08
	StdDev	R1 227,90	R935,21	R1 355,20	R264,04	R847,80

From table 3 above it is clear that the highest rand spent per annum came from respondents aged 30-34 years, whereby the amount spent per annum was averaged to be R620.96. The lowest amount spent on counterfeits came from the 35-39 year old age group (R134.24). Amount spent per gender per annum is indicated in table 4 below:

Table 4. Average amount spent per gender

		Gender	
		Male	Female
Spend counterfeit	Mean	R510,26	R344,62
	StdDev	R1 284,60	R728,86

Table 4 above illustrates the annual amount spent per gender, whereby it can be seen that males scored higher in terms of amount spent on counterfeit products with an annual average expenditure of R510.26 in comparison to female consumers' average expenditure of R344.62. Table 5 below represents the results obtained for consumers annual rand spent on counterfeits in relation to racial grouping:

Table 5. Average amount spent per racial group

Race group					
		Black	White	Coloured	Indian
Spend counterfeit	Mean	R622,51	R307,97	R344,74	R598,93
	StdDev	R1 313,00	R723,09	R504,41	R1 896,70

From table 5 it is evident that Black South African consumers had the highest annual counterfeit expenditure (R622.51) with White South African consumers spending the least on counterfeit goods annually (R307.97). Table 6 below brings to light consumer expenditure per province:

Table 6. Average amount spent per province

Province				
		Gauteng	KwaZulu-Natal	Western Cape
Spend counterfeit	Mean	R576,54	R199,81	R404,74
	StdDev	R1 398,30	R315,42	R896,59

The results obtained in table 6 above indicate that the highest amount consumers spent on counterfeit products came from consumers residing in the Gauteng area (R576.54) with the least average amount spent per annum coming from KwaZulu-Natal (R199.81). This finding is in line with the information provided by SAFACT (n.d.), whereby they indicate that due to Gauteng being a dominant province in the South African economy it is thus a very lucrative market to counterfeit trade, followed by the Western Cape and KwaZulu-Natal.

5.6 Places of counterfeit product purchase

Respondents indicated where they had previously purchased counterfeit merchandise from. The results obtained can be viewed in figure 3 below.

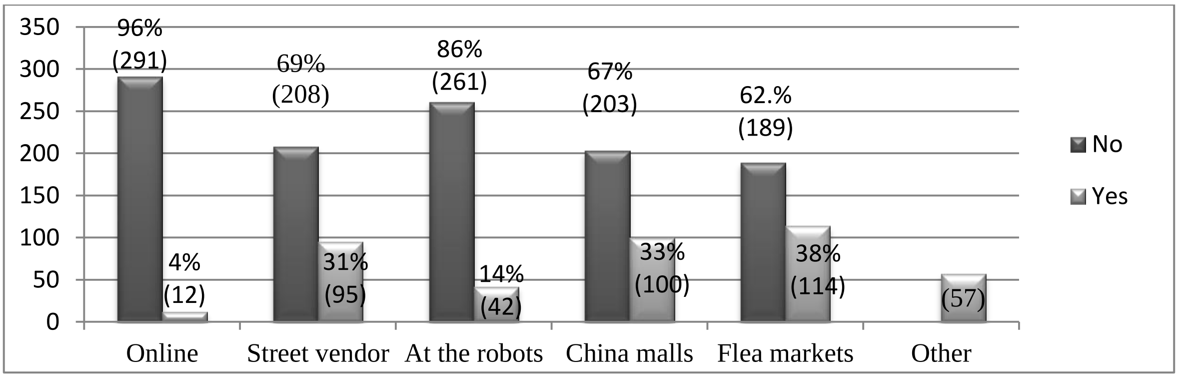


Figure 3. Location of counterfeit purchase

From figure 3 above, it is observed that consumers surveyed could purchase counterfeit products from various places (note that individuals could provide multiple responses). From the graphic representation (figure 3) it can be deduced that the majority of counterfeit trade purchases were made at flea markets (38%, 114 responses), followed by China malls (33%, 100 responses) and street vendors (31%, 95 responses). The identification of counterfeit location should therefore be a starting point to eradicate the counterfeit trade within South African borders.

6. Limitations

One of the core limitations of the study is that respondents might not have been completely honest in their answers due to the action of counterfeit purchase being an actionable offense, despite guaranteed anonymity of the research. Other limitations of the study include:

- The sample was made up of respondents residing in the South African provinces of Gauteng, the Western Cape and KwaZulu-Natal as these are the areas where most counterfeits are said to be propagated (Naidu, 2005; SAFACT, n.d.), future research might wish to extend the sample size to gain a more holistic view of the South African demand for counterfeit luxury fashion branded products.

• The sample size was taken from individuals that were studying formal degrees (undergraduate and postgraduate students) therefore other less educated or more educated consumers might have differentpast purchase behaviour and intentions to purchase.

• The specific brands identified in the preliminary survey may have skewed results to some degree, since there may have been brands which few respondents did not favour.

7. Conclusion and Recommendations

The rapid growth of the counterfeit goods market poses a huge threat to many individuals and organisations all around the world (Ha & Lennon, 2006:297). Many factors have been seen to contribute to the growth of the industry, however, quintessentially the industry would not be there if it were not for the demand by consumers (Bian & Moutinho, 2009:368; Phau, Teah & Lee, 2009:3; Turunen & Laaksenen, 2011:468; IACC, n.d.). Therefore, consumers' demand and behaviour towards the purchase of counterfeit luxury fashion branded products in South Africa was investigated.

One of the core findings emanating from the research is that South African consumers have a relatively low purchase behaviour and demand towards counterfeit luxury fashion branded products, however, like in most countries a demand does exist. From the research findings it is seen that South African consumers spend an average of R100 on counterfeit luxury fashion branded products per annum. Upon closer perusal, however, it is seen that the most expenditure per annum per age group was found to be 30-34 year old respondents; results for most expenditure per annum per gender indicated that male consumers evidently spend more on counterfeit brands than female respondents; most expenditure per racial grouping was found to be Black individuals; and that most expenditure per annum per province was from respondents residing in Gauteng. The fact that Gauteng scored the most in terms of amount spent on counterfeit products per annum did not come as a surprise, as Gauteng is the biggest economic hub within the South African economy which therefore makes it a prime target market for illicit traders.

Findings further indicated that the highest scoring location for counterfeit purchase was flea markets, China malls and street vendors. From these findings it is recommended that authorities look to these locations to try to minimise counterfeit luxury fashion branded product dissemination within South African borders, this could be done by conducting regular store investigations within these locations. Furthermore, to limit street vendor counterfeit dissemination it is recommended that the South African government provide trading space to street vendors with stricter penalties on individuals that trade on the street, this will allow authorities to control counterfeit activity and even minimise or even eliminate it, this will also minimise the danger that street vendors face when selling merchandise in the streets and will further reduce the risk of motorists having accidents as a result of street vendors at traffic lights. From the organisations that provide authentic merchandise to South Africa, it is recommended that they launch anti-counterfeit campaigns so that consumers are made further aware of the detrimental effects counterfeit activities cause. It is lastly recommended that government authorities share information to neighbouring African countries with regard to counterfeit activities in order to create awareness and also for government authorities to collaborate further with other African countries to try to limit the spread.

In order to understand the South African consumers' demand further, it is recommended that future research be done to compare authentic to counterfeit purchase behaviour and to furthermore delve deeper into what causes South African consumers to purchase counterfeit luxury fashion branded products (factors); an identification of such factors could prove beneficial to the field.

References

1. Ang S.W., Cheng, P.S., Lim, E.A.C. and Tambyah, SK. (2001), "Spot the difference: consumer responses towards counterfeits", Journal of Consumer Marketing, Vo1. 8 No. 3, pp. 219-235.
2. Bian, X. and Moutinho, L. (2011), "The role of brand image product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects", European Journal of Marketing, Vol. 45 No. 1/2, pp. 191–216.
3. Bian, X. and Veloutsou, C. (2007), "Consumers' attitudes regarding non-deceptive counterfeit brands in the UK and China", Journal of Brand Management, Vol.14 No. 3, pp. 211-222.
4. Bian, X. and Moutinho, L. (2009), "An Investigation of determinants of counterfeit purchase consideration", Journal of business research, Vol. 62 No. 1, pp. 368-378.
5. Commur, S. (2009), "The impact of counterfeiting on genuine-item consumers' brand relationships", Journal of marketing, Vol. 73 No. 1, pp. 86-98.
6. Du Plessis, P.J. and Rousseau, G.G. (2007), Buyer behaviour: Understanding consumer psychology and marketing, 4th ed, Cape Town, South Africa, Oxford Southern Africa.
7. Ergin, E.A. (2010), "The rise in the sales of counterfeit brands: The case of the Turkish consumers". African journal of business management, Vol. 4 No. 10, pp. 2181–2186.
8. Green, R.T. and Smith, T. (2002), "Countering brand counterfeiters". Journal of international marketing, Vol. 10 No. 4, pp. 89-106.
9. Ha, S. and Lennon, S.J. (2006), "Purchase intent for fashion counterfeit products: Ethical ideologies, ethical judgments, and perceived risks", International textile & apparel association, Vol. 4 No. 4, pp. 297-315.
10. Haie-Fayle, L. and Hübner, W. (2007), Counterfeiting and piracy: Fakes, facts and figures. [Online] Available

from: http://www.oecdobserver.org/news/fullstory.php/ aid/2278/ [Accessed: 2011-09-28].
11. Haman, M. (2010), "Africa rising to the anti-counterfeit challenge", Journal of intellectual property law & practice, Vol. 5 No. 5, pp. 344–349.
12. Hanzaee K.H. and Taghipourian, M.J. (2012), "Attitudes toward counterfeit products and generation differentia", Research journal of applied sciences, engineering and technology, Vol. 4 No. 9, pp. 1147-1154.
13. Hawkins, D.I, and Mothersbaugh, D.L. (2010), Consumer behaviour: Building marketing strategy, 11th ed, New York, McGraw-Hill Irwin.
14. Heike, S. (2010), "Effects of counterfeits on the image of luxury brands: An empirical study from the consumer perspective", Journal of brand management, Vol. 18 No. 2, pp. 159–173.
15. International Anti-Counterfeit Coalition (IACC) (n.d.), The truth about counterfeiting. [Internet: http://www.iacc.org/about-counterfeiting/the-truth-about-counterfeiting.php; accessed on 2011-04-05].
16. Juggessur, J. and Cohen, G. (2009), Is fashion promoting counterfeit brands? Brand management, Vol. 16 No. 5/6, pp. 383-394.
17. Le Cordeur. (2012). The 'FAKE' epidemic. [Internet: http://www.leader.co.za/article.aspx?s=6&f=1&a=3321; accessed: 2013-10-03].
18. Kim, H. and Karpova, E. (2010), "Consumer attitudes towards fashion counterfeits: Application of the theory of planned behaviour". Clothing & Textiles Research Journal, Vol. 28 No. 2, pp. 79–94.
19. Magwaza, N. (2012), Clothing sector fights surge in counterfeit products entering SA. [Internet: http://www.iol.co.za/business/news/clothing-sector-fights-surge-in-counterfeit-products-entering-sa-1.1401407; accessed: 2013-10-03].
20. McDaniel, C. and Gates, R. (2010), Marketing research essentials, 7th ed, United States of America, John Wiley & Sons.
21. Meissner, R. (2010), The trade in counterfeit goods: What is it, why is it a problem and what is its impact on Africa. [Internet: http://www.polity.org.za/ article/the-trade-in-counterfeit-goods-what-is-it-why-is-it-a-problem-and-what-is-its-impact-on-africa-2010-08-04; accessed: 2011-06-04].
22. Naidu, E. (2005), Inspectors seize tons of 'counterfeit' food. [Internet: http://www.iol.co.za/news/south-africa/inspectors-seize-tons-of-counterfeit-food-1.238898; accessed: 2013-10-03].
23. O'Cass, A. and Fros, H. (2002), "Status brands: Examining the effects of non-product-related brand associations on status and conspicuous consumption", Journal of product and brand management, Vol. 11 No. 2, pp. 67-88.
24. Parumasur, S and Roberts-Lombard, M. (eds). (2012), Consumer behaviour. 2nd ed, Cape Town, South Africa, Juta.
25. Penz, E. and Ströttinger, B. (2005), "Forget the "Real" thing-take the copy! An explanatory model for the volitional purchase of counterfeit products", Advances in consumer research, Vol. 32 No.1, pp. 568-575.
26. Phau, I; Sequeira, M and Dix, S. (2009), "Consumers' willingness to knowingly purchase counterfeit products", Direct marketing: An international journal, Vol. 3 No. 4, pp. 262-281.
27. Phau, I; Teah, M and Lee, A. (2009), "Targeting buyers of counterfeits of luxury brands: A study on attitudes of Singaporean consumers", Journal of targeting, measurement and analysis for marketing, Vol 17. No.1, pp. 13-15.
28. Phau, I. and Teah, M. (2009), "Devil wears (counterfeit) Prada: a study of antecedents and outcomes of attitudes towards counterfeits of luxury brands", Journal of consumer marketing, Vol. 26 No.1, pp. 15-27.
29. Ramara, P. and Lamont, M. (2012), Counterfeiting – the perceived victimless crime. [Internet: http://www.spoor.com/home/index.php?ipkMenuID=&ipkArticleID=404; accessed: 2013-10-03].
30. SAFACT (n.d.) Piracy in South Africa. [Internet: http://www.safact.co.za/piracy_facts.htm; accessed: 2013-09-25].
31. SAIIPL (n.d.) Anti-counterfeiting. [Internet: http://www.saiipl.org.za/introip/76-anticoun; accessed: 2013-10-03].
32. Schiffman, L.G., Kanuk L.L. and Wisenblit J. (2010), Consumer behaviour, 10th ed, Upper Saddle River, New Jersey, Pearson Education.
33. Swami, V., Chamorro-Premuzic, T. and Furnham A. (2009), "Faking it: Personality and individual difference predictors of willingness to buy counterfeit goods", The journal of socio-economics, Vol. 38 No1, pp. 820-825.
34. Triandewi, E. and Tjiptono, F. (2013), "Consumer intention to buy original brands versus counterfeits", International journal of marketing studies, Vol. 5 No. 2, pp. 23-32.
35. Turunen, L.L.M. and Laaksonen P. (2011), "Diffusing the boundaries between luxury and counterfeits", Journal of product and brand management, Vol. 20 No. 6, pp. 468-474

STANDARDS ON TRANSPARENCY OF PUBLICLY LISTED CORPORATIONS: INFORMATION OWED TO THE PUBLIC?

Dimitrij Euler*

Abstract

The paper is about domestic laws' response to the greater need of publicly listed corporation to be accountable to the public in accordance with international law. The paper is dedicated to the transparency of multinational corporations listed and incorporated in Germany, the United Kingdom, the United States and Switzerland. Under these applicable laws, transparency of publicly listed corporations has significantly changed in the last decade. Some countries oblige corporations to disclose non-financial and financial information immediately; others merely require periodic reporting of financial information. In particular, the connection between Impact Investor, an investor that invests based on social or environmental criteria in addition to the financial performance, and the investment target, publicly listed corporations contributed to some change.
The applicable law provides a minimum standard of transparency. This minimum standard defines how the reasonable investor invests in the publicly listed corporation. Depending on this standard, the responsibility owed by the publicly listed corporation extends from the shareholder, several stakeholders to the public. Reasons for these differences lie in the greater accountability of publicly listed corporations from shareholders, to stakeholders or even the public. The OECD's different standard on Corporate Governance, the Ruggie principles and other recommendations of non-governmental organisations (NGO) keep shaping the accountability under the applicable law. These standards provide guidance to corporations to voluntarily implement greater responsibilities beyond the minimum standard in the form of Corporate Governance. However, once publicly listed corporations implement these standards, the applicable law seem to not adequately impose duties on publicly listed corporations to disclose the information under its self-imposed standard to stakeholders or even the public.
The paper researches the problem of transparency of publicly listed corporations in European Union, in particular Germany and the United Kingdom, as well as the United States and Switzerland wither regard to impact investors. Its hypotheses is that the applicable law lacks clear wording that transfers voluntary standards into binding law.
The paper will not focus on obligations of corporation established under contracts with groups of shareholders. It will also not focus on stock market programmes to audit corporations based on environmental and social criteria. The paper excludes inter partes obligations because they give the contracting party merely a right to rely on the disclosure. The paper will also not look at methods for evaluation of non-financial information with regard to publicly listed corporations.

Keywords: Transparency, Publicly Listed Corporation, Financial Information

** PhD candidate at the University of Basle;*
Visiting Fellow at the British Institute of Comparative and International Law (BIICL), December 2013 and January 2014;
Visiting Scholar at the Lauterpacht Centre for International Law at University of Cambridge, 2012/2013.
Email: dimitrij@euler.ch

1. Impact Investors and transparency of public listed corporations

Corporations disclose information to provide knowledge of their conduct based on the corporation's purpose defined in the Corporate Charter. The funding shareholders ultimately determine the purpose of this corporation. Firstly, they determine the applicable law by choosing the place of incorporation. Secondly, they determine the field of operation by establishing the Corporate Charter. In this sense, they establish their rights within the limits of the applicable law and applicable laws if the corporation operates transnational. The disclosure of information serves the accountability of the corporation. Publicly listed corporation have a higher obligation of transparency because they benefit of the stock markets in which the public has an access to trade the shares. This higher duty of transparency is imposed by the market abuse statutes under the applicable law. Moreover, corporations may have a higher obligation of transparency depending on the applicable law to their stakeholders, namely the employees, customers, or public. Such duty may be imposed for various reasons, *e.g.* based on the underlying argument that corporations serve the benefits of all stakeholders or the public and not just the shareholders.

In the late twenties, investment market emerged in which investors invested based on social or environmental performance and not just financial performance. The investor's aim was to create a social or environmental impact. In this regard, corporations shifted their purpose while changing voluntarily the Corporate Charter, implementing Corporate Governance and implementing other regulations under the applicable laws in order to attract additional capital. The higher standard may encompass stakeholders or public even if the corporation is not required under the applicable law. The World Economics Forum (WEF) Report of 2013 highlighted the requirements: the investment approach, the impact of the investment, and the activity to measure the impact in accordance with the investment approach (WEF, 2013).

Firstly, investment impact is an investment approach and not an asset class. It depends on the investment strategy of the investor if he or she qualifies as an Impact Investor. Every asset may have an impact of some sort. The mere fact that the impact is favourable for the environment or socially does not suffice for the Impact Investor. The Impact Investor needs to implement a strategy on which the non-financial impact is based. Secondly, the investments need to have an impact in accordance with the investor's intention to create a social or environmental good. If the impact of the investment lies outside the investor's strategy, the investor is not allowed to include it in his portfolio. A strict application of the approach leads to an immediate sale if the investor reveals that an original impact investment in his portfolio lacks the elements under this strategy. Lastly, the outcomes of impact investing are actively measured and the outcome includes both, on the one hand, the financial return and, on the other hand, the social and environmental impact. Information is required to measure if the approach of the investor and the impact of the investment fit. In an ideal world, the investment strategy of the investor covers the environmental and social responsibilities implemented in the Corporate Governance of the investment target, *e.g.* a publicly listed corporation. In other words, the transparency fits with the measurement mechanism of the Impact Investor if the investment target, publicly listed corporation, is accountable to the Impact Investor.

Investors' strategies may differ even if they invest in the same publicly listed corporation together as an investment target. Therefore, the publicly listed corporation's transparency may not respond to all investor appropriate. The publicly listed corporation's acceptance of funds imposes no general duty per se on the publicly listed corporation to disclose information in accordance with the investors' strategy. In other words, no additional duties arise for a publicly listed corporation beyond the duties established under the Corporate Charter, its Corporate Governance under the applicable laws. In other words, a change lies in discretion of the publicly listed corporation.

A large investor has at least two avenues to exert influence: firstly, company engagement and, secondly, dialogue with standard setting bodies, i.e. regulators and stock markets (Gjessing and Syse, 2007: 427-37, 432-7). The latter dialogue will not be considered in this paper. The bargaining power of large investors may convince publicly listed corporations to change. Large investors may persuade the publicly listed corporation to change its Corporate Charter, Corporate Governance and additionally impose obligations so that disclosure obligations of the publicly listed corporation and the large investor fit together. The investment target or publicly listed corporation may be willing to implement Corporate Social Responsibility (CSR) compatible to the investor's impact strategy in consideration for below market rate capital.

Indeed, large investors have appetite for impact investment. The WEF report states that pension funds, insurance and Sovereign Wealth Funds (SWF) accrue in relation to one another at 48%, 39% and 9% respectively (WEF, 2013: 2). Although SWF are in fact number three in this list, they are a major investors considering that only a few SWFs worldwide exist. In March 2013, the top three SWF managed USD $1.91 billion in assets whereas the government pension fund of Norway alone managed USD $715.9 billion (SWF Institute, 2013). To compare it to the largest Pension Fund of the US, CalPERS, owned assets totalling USD $260.9 billion in August 2013 (CalPERS). To give the figure a value, the Cyprus bailout cost creditor states USD $10 billion in March 2013 (*The Economist*, 2013).

SWFs and Pension Funds invest the capital of the public under supervision of the respective government. The fact that the public owns a large amount of assets through SWFs and Pension Funds requires of the large investor and the investment target a greater transparency and accountability to the public (Truman, 2007; Guay, Doh and Sinclair, 2004: 125-39, 358). The working group of SWFs in the framework of the International Monetary Fund (IMF) regularly meets to identify the generally accepted practices and principles of SWFs. The working group assesses the impact of SWF in the global market and recalled that SWFs should clearly define and publicly disclose its underlying policy (International Working Group of Sovereign Wealth Funds, 2008: Principle 2). On the assumption that a SWF invests according to financial and economical consideration, decisions subject to other than economic considerations should be clearly set out and disclosed publicly (International Working Group of Sovereign Wealth Funds, 2008:

Principle 19.1). SWFs are allowed to follow an investment strategy that creates social, ethical, environmental or religious impact and on the other hand, excludes certain markets and type of investments. The role of SWF as impact investors is criticised (Clark and Monk, 2010; Gilson and Milhaupt: 1345, 1368). Hereby, the SWF's disclosure of its investment strategy and policy helps the public to understand how the SWF operates and invests the capital of the public (International Working Group of Sovereign Wealth Funds, 2008: Principle 2). Similarly, the Organisation for Economic Co-operation and Development (OECD) has mentioned that SWF highlighted the bargaining power of SWFs in the context of financial crisis (OECD, 2008). Hereby, the OECD highlights that transparency and accountability forms part of its best practice (OECD, 2008: 6).

The Government Pension Fund of Norway, the number one in the world in March 2013, invests its capital in world markets in accordance with its ethical principles. This excludes weapons manufacturer or investment target that violates human rights (Ministry of Defence, 2010: Section 2).

2. Conflicts between the interests of shareholder's, stakeholders and public

Funding shareholders, Hedge Funds and Impact Investor may have different views on the corporates accountability and legitimacy. Similarly, conflicts may occur among different stakeholders with regard to accountability and transparency. The attempt of publicly listed corporations to implement rights and obligations by use of Corporate Governance that complies with strategies of several investors entails a risk of conflicting interest. Corporate Governance may anticipate some of the conflicts.

By implementing CSR guidelines into corporations' Corporate Governance, the public may hold a corporation accountable for its conduct. The public may require of its corporation to require decisions of the management that are legitimate in accordance with its CSR. The OECD standards, Ruggie's Principles, Global Reporting Initiative (GRI)s and similar soft law standards may provide guidance in this regard. These principles help a publicly listed corporation to deal with conflict among investors, among stakeholders due to voluntary self-imposed higher standards.

To create a higher standard beyond the minimum standard, corporations implement Corporate Governance. It defines the accountability of the corporation towards its addressee and implements the rights, obligations and procedures that help the corporation to be accountable under its Corporate Charter. In both cases, Corporate Governance determines the information to be disclosed in order to held the corporation be accountable. In particular, Corporate Social Responsibility (CSR) imposes a socially responsible conduct of the corporation above the minimal standard established under the applicable law.

Four groups of CSR theory exist that reflect the responsibilities of business in the public in the following areas: economics, politics, social integration, and ethics. Shareholder value theory or economic responsibility is linked to the first group to some extent. Stakeholder theory is a normative perspective of the enterprise based on ethical perspectives. Finally, the roots of the corporate citizenship approach are in political studies (Crane, 2009: 49).

Traditionally, investors have required an increase in the shareholder value of the enterprise. This may include compliance with other rules, like care for the environment or tackling corruption (Friedman, 1970). The consideration of reputational damage or legal risk may form part of the theory of shareholder value.

Another theory refers to the stakeholders. Various groups have proposed principles of stakeholder management. These principles propose a normative approach for managers. An enterprise is accountable to all the stakeholders and not just the shareholders. Stakeholders are groups with a claim on the enterprise. Stakeholders contribute to the success or failure of an enterprise. However, the success or failure of the enterprise has a direct impact on a stakeholder, thus creating a responsibility for the actors, but the interest may be conflicting for the stakeholders. An enterprise following stakeholder value is more difficult to manage and may be less efficient (Crane, 2009: 66-7).

Regarding the last two approaches concerning global citizenship, the corporation is understood as a citizen of the public with duties towards the public. In the minimalist view, global citizens are residents of a common jurisdiction that recognize obligations and rights. In the communitarian view, citizens exist in a certain social context and share the rules, traditions and culture of communities. The universal approach bases the duty of citizens on a general recognition of human dignity (Crane, 2009: 71-3). Especially in countries in which the government fails to recognise the rights of the citizens, the enterprise steps into the position of the government to a certain extent as a provider of social rights, an enabler of civil rights and an enterprise channel for political rights. This proposal is descriptive (Crane, 2009: 73). The concept of global citizen overcomes the narrow functionalist vision of business and sets up the enterprise as a citizen the public.

Publicly listed corporation implement their approaches in the form of Corporate Social Responsibility in their Corporate Governance if they intend to go beyond a required shareholder or stakeholder value approach. CSR implemented by

Corporate Governance extends the content and adds additional targets beyond the minimum standard.

Even if a publicly listed corporation is accountable to the public, does it impose a duty to inform the public about its conduct? One argument may be that transparency may not be owed to everyone. It excludes all persons to which the corporation is not accountable. Another argument may be that the accountability may only impose legal obligations to the extent of the purpose of a corporation under the applicable law. For example, even if the corporation follows a global citizen approach, only information with regard to a shareholder value needs to be disclosed. These conflicts need to be resolved under the applicable laws, namely, the applicable law at the place of incorporation, at the place of operation, administration, stock markets, court, arbitral tribunal, contracting partner or other relevant places.

3. Voluntary standards as response to stakeholders and the public

International organisations and other associations provide guidance to corporations that are willing to voluntary apply a higher standard of transparency. The OECD proposed its Principles of Corporate Governance in 2004. The basis of the framework is to “promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities” (OECDb: Principle I). It points to the overall impact that Corporate Governance serves, that is, an “… overall economic performance, market integrity and the incentives it creates for market participants and the promotion of transparent and efficient markets” (OECDb: Principle I A). Furthermore, the framework should be in accordance with the applicable law and it should serve the public interest (OECDb: Principle I A-D). Recalling the theory above, the rules mirror a theory of stakeholder value (OECDb: Principle II, Principle IV).

The 2004 Principles of Corporate Governance highlight transparency, together with efficiency, as essential principles. They expect corporations to disclose information in a timely way. This includes information concerning the financial status of the enterprise, but also policies, foreseeable risk factors and stakeholders’ issues (OECDb: Principle V). Its commentary outlines that transparency is a central feature for the monitoring of the enterprise and for the shareholders to execute their rights. With regard to large and active equity markets, the commentary points out that “disclosure can also be a powerful tool for influencing the behaviour of companies and investors” and “[b]y contrast, weak disclosure and non-transparent practices can contribute to unethical behaviour and to a loss of market integrity at great cost, not just to the company and its shareholders but also to the economy as a whole… Insufficient or unclear information may hamper the ability of the markets to function, increase the cost of capital and result in a poor allocation of resources” (OECDb: Principle V). For a better understanding, the principle points to the application of the OECD Guidelines for Multinational Enterprises (OECDb: Principle V).

The OECD Guidelines for Multinational Enterprises list stakeholder interest as well as “economic, environmental and social progress with a view to achieving sustainable development” and for the corporation to “[r]espect the internationally recognised human rights of those affected by their activities” (OECDa: Principle II; OECD: Principle IV, Principle VI). The activities of multinational enterprises should be in line with sustainable development (OECDa: Principle II). Moreover, in these guidelines, the Declaration on International Investment and Multinational Enterprises recalls the important role of these players in the world of foreign direct investment and their ability to contribute positively to economic, social and environmental progress (Declaration on International Investment and Multinational Enterprises, 2011 cited in OECDa). Recalling the theory, these guidelines follow a global citizen approach for multinational enterprises. These guidelines require timely disclosure of information in relation to the multinational enterprise. While the guidelines restate the list mentioned in the Principles of Corporate Governance, they point to the application of a high standard with regard to disclosure of financial and non-financial information (Declaration on International Investment and Multinational Enterprises, 2011: Principle III cited in OECDa).

Recalling the question, if self-imposed accountability to the public imposes a duty to inform the stakeholders or the public about its conduct? Both standards, the 2004 Principles of Corporate Governance and OECD Guidelines for Multinational Enterprises, establish a higher standard of transparency. The standards do not explicitly shift the discretion to determine the information to be disclosed away from the corporation. Since the standard addresses the corporations themselves, it imposes no duty on stock markets or other controlling entities to control the publication of information.

The Guiding Principles on Business and Human Rights provide guidance and establish the broadest approach. Under the umbrella of the UN, the Council for Human Rights endorsed “Guiding Principles on Business and Human Rights: Implementing the United Nations ‘Protect, Respect and Remedy’ Framework” as proposed by the Special Representative Professor Ruggie (Business and Human Rights Resource Centre, 2011). These principles require companies to better engage in responsible business in respect of human rights, and require a degree of transparency. The requirements of host states are set out in principle 1: “States must protect against human rights abuse within their territory and/or jurisdiction by third parties, including business enterprises. This requires taking appropriate steps to prevent, investigate, punish and redress such abuse through effective policies, legislation, regulations and adjudication" (Human Rights Council and Ruggie: Principle 1). Furthermore, the commentary provides that "[…] States also have the duty to protect and promote the rule of law, including by taking measures to ensure equality before the law, fairness in its application, and by providing for adequate accountability, legal certainty, and procedural and legal transparency". The states have to conduct arbitral proceedings in a manner that does not violate third persons. It is the primary duty of states to engage in a manner, as a party to a treaty and as a disputing party, whereby they allow access to the proceedings.

Businesses have an obligation to assess their effects while doing business, "[i]n order to identify, prevent, mitigate and account for how they address their adverse human rights impacts, business enterprises should carry out human rights due diligence" (Human Rights Council and Ruggie: Principle 17). The results have to be disclosed and the public should participate in this process (Human Rights Council and Ruggie: Principle 18, Principle 19). "In order to account for how they address their human rights impacts, business enterprises should be prepared to communicate this externally, particularly when concerns are raised by or on behalf of affected stakeholders. Business enterprises whose operations or operating contexts pose risks of severe human rights impacts should report formally on how they address them. In all instances, communications should: (a) Be of a form and frequency that reflect an enterprise's human rights impacts and that are accessible to its intended audiences; (b) Provide information that is sufficient to evaluate the adequacy of an enterprise's response to the particular human rights impact involved; (c) In turn, not pose risks to affected stakeholders, personnel or to legitimate requirements of commercial confidentiality" (Human Rights Council and Ruggie: Principle 21). The requirements of the Ruggie Principles are far-reaching and entail information having an impact on the environment, including civil participation.

Recalling the question above and recalling the global citizen approach, the Ruggie principles establish a duty of a corporation to include the public. Additionally, the principles keep underlying the importance of transparency. Following the principles of transparency and the requirement of including the public, it is difficult to argue how corporations may have both, be accountable to the public and still have discretion to determine the information to be disclosed to the public.

4. Corporate Social Responsibility and Corporate Governance under domestic law

The applicable law transfers a self-imposed obligation into a legally binding obligation. How publicly listed corporations treat transparency is under most applicable law regulated in the market abuse regulations. This paper suggests here to use the mechanism of inside information in the light of publicly listed corporations CSR and in favour of an impact investor and hereby compares the applicable laws of UK, Germany, US and Switzerland. If publicly listed corporations are legally obliged to disclose information in accordance with their voluntary CSR approaches, such as Stakeholder Value or Global Citizen, depends on the applicable law. The information under the scope of inside information is for the investor of concern with regard to his or her investment decision. Impact Investors that invest due to policies other than financial performance have other needs with regard to the information. SWFs and pension funds need information beyond the shareholder value that justifies their investment to the public.

Under European Union (EU) law, publicly traded corporations have to disclose information if the information qualifies as inside information. Inside information needs to be disclosed immediately (Ling Lee, 2004: 661, 670-89). The market abuse regulation defines "inside information":

"information of a precise nature which has not been made public, relating, directly or indirectly, to one or more issuers of financial instruments or to one or more financial instruments and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments" (Commission Directive 2003/124/EC).

The Committee of European Securities Regulators (CESR) and regulation 2004/124/EC clarify:

"information shall be deemed to be of a precise nature if it indicates a set of circumstances which exists or may reasonably be expected to come into existence or an event which has occurred or may reasonably be expected to do so and if it is specific enough to enable a conclusion to be drawn as to the possible effect of that set of circumstances or event on the prices of financial instruments or related derivative financial instruments." (Commission Directive 2003/124/EC).

Thereto, the CESR provides a list of events that directly affect the issuer and mentions inter-legal disputes and liabilities. It also mentions that the information shall be published as soon as possible. The objective standard interpretation is that a reasonable person means someone holding a position as a market trader. There is no general rule to decide disclosure, and the decision has to be taken on a case-by-case basis (Commission Directive 2003/124/EC, Article 1(2)). Thus, information that causes a sale of shares owned by an impact investor may have a significant effect on the shares. Without the significant effect, an impact investor may not rely on the disclosure of the information.

Similarly, the United Kingdom (UK) sets out requirements:

"In determining the likely price significance of the information an issuer should assess whether the information in question would be likely to be used by a reasonable investor as part of the basis of his investment decisions and would therefore be likely to have a significant effect on the price of the issuer's financial instruments (the reasonable investor test)." (Financial Services Authority, 2013: 2.2.4(1))

Additionally, "[i]n determining whether information would be likely to have a significant effect on the price of financial instruments, an issuer should be mindful that there is no figure (percentage change or otherwise) that can be set for any issuer when determining what constitutes a significant effect on the price of the financial instruments as this will vary from issuer to issuer" (Financial Services Authority, 2013: 2.2.4.2). The test to be applied is this of a reasonable investor and that "… a reasonable investor will make investment decisions relating to the relevant financial instrument to maximise his economic self interest" (Financial Services Authority, 2013: 2.2.5.2). Inside information has to meet the aforementioned criteria of the European Union (Financial Services Authority, 2013: 2.2.3-2.2.4).

In addition, the German approach follows the EU: Publicly listed corporations have a duty to disclose information in public. The *Wertpapierhandelsgesetz, WpHG* (Statute for Securities Exchange) establishes the conditions to disclose insider information (Statute for Securities Exchange (Germany) 1998 (BGBl. I S. 2708) as amended 2013 (BGBl. I S. 174): §1). The corporation has to inform the public immediately about inside information (Ringleb, Kremer, Lutter and von Werder, 2010: 1204-05). An issuer has to provide information about the corporation regardless of whether or not it is traded on the German stock market (German Securites Exchange Act (*WpHG*): §§12&5). Inside information refers to the issuer or their securities and has the potential, in cases of disclosure to considerably influence the stock market price. The standard of interpretation is a reasonable person that trades on the stock market. Information includes events that are reasonably likely to occur in the future (German Securites Exchange Act (*WpHG*): §13). If information has to be published, it needs to be evaluated case by case (Assmann, H-D and Schneider, U. 2012: 13 Rn 23 et seq, BaFin, 2013: 30-35). The non-binding Corporate Governance stipulation simply restates that "[t]he Management Board must disclose insider information directly relating to the company without delay unless it is exempted from the disclosure requirement in an individual case" (Government Commission, 2012: Art 6(1)). The requirement that inside information needs to have a considerable influence on the stock market price is less impact investment friendly.

Under United States (US) federal law, the Securities Exchange Act provides a list of information that needs to be disclosed under the heading of financial information (US Securites Exchange Act: S-K §229.300). A definition as such is not found in the statute. However, the Securities Exchange Act provides the following obligation:

"Every issuer of a security registered [under this law] shall file with the Commission, in accordance with such rules and regulations as the Commission may prescribe as necessary or appropriate for the proper protection of investors and to insure fair dealing in the security" (US Securities Exchange Act: §78m(a)).

The commission in charge requires various financial and non-financial information (US Securities Exchange Act: §229.303&§229.503). The information has to be disclosed as early as possible (Ling Lee, 2004: 661, 673). Publicly listed corporations should disclose all information that has a material effect on the value of the enterprise (Painter, 1961: 91, 114; Ling Lee, 2004: 662; Hancock: 233, 236; Lewis: 1045-46). The test applied is, a reasonable investor based on the facts in the light of policy (Ling Lee, 2004: 665). The policy of a US state may play a role in determining the materiality of the information (Ling Lee, 2004: 662). The majority of states set their policy based on shareholder value (Millon, 2012: 71-4).

Under Swiss law, publicly listed corporations have a duty to disclose information in public under the statute of the stock market (Swiss Stock Exchange Act: sec 1). The statute establishes that the issuer has a duty to inform its client (Swiss Stock Exchange Act: sec 11(1)(a)), in particular, periodically with data concerning the monetary success of the publicly listed corporation (Swiss Code of Obligations: sec 663b et seqq). No rule exists concerning immediate publication of inside information in this statute (Daeniker and Waller). However, a broader duty of publication is imposed by the stock market rules, a self-regulated regime (Swiss Securities Exchange Act: sec 4). The stock market establishes an obligation to disclose potentially price-sensitive facts in the sphere of activity of the publicly listed corporation (SIX and SWX: Article 53). However, not every piece of information may be disclosed; information about an event has to be disclosed if the disclosure has a significant impact on the price of the security. The standard of interpretation is an average stock market trader (SIX and SWX: Article 3). The information qualifies as significant if, in case of disclosure, it has a considerably greater impact on the price compared with the usual price fluctuation. The evaluation has to be done on a case-by-case basis (SIX and SWX:

Article 4). Time of disclosure is as soon as possible (SIX and SWX: Article 5). The purpose of informing the public aims to ensure that the public has true, clear and complete information about significant events arising out of corporation's course of business (SWX, 2008: Art 1).

To conclude, the disclosure requirements in the EU, in particular Germany and England, the disclosure obligation is linked to the entailed financial value of the information from the perspective of a reasonable investor. There may not be sufficient room to establish an increased transparency based on a self-imposed higher standard of Corporate Governance. Similar, Swiss law lacks this link.

To conclude, the disclosure obligations under US law are very far reaching but ultimately narrowed based on the shareholder value that prevails in most of the states. There might be sufficient room in the materiality test to increase the binding transparency obligation based on a self-imposed higher standard of Corporate Governance.

5. Exceptions from disclosure under domestic law

Even if information qualifies as inside information, some applicable laws provide exemptions from immediate disclosure. The argument may be that a publicly listed corporation is not required to disclose information immediately if confidentiality is guaranteed because if no one trades any damage occurs to the shareholders. All the investors have equal information and therefore the information has no positive or negative impact on any investor's investment.

Under EU law, the issuer may delay disclosure of inside information on his own responsibility. "… such as not to prejudice his legitimate interests provided that such omission would not be likely to mislead the public and provided that the issuer is able to ensure the confidentiality of that information. …" (Council Directive 2003/6/EC: Article 6(2)). Holding the information secret is allowed as long as none of the information holders' trade, the issuer guarantees the secrecy and omission is not likely to mislead the public. Legitimate interest is needed to justify the delay, *e.g.* on-going negotiations (Council Directive 2003/124/EC: art 3(1)). Similarly, under the laws of the UK, the disclosure of inside information may be delayed. Issuers may, on their own responsibility, delay the proceedings of disclosure, firstly, if such omission would not be likely to mislead the public, secondly, if any person receiving the information owes the issuer a duty of confidentiality, regardless of whether such duty is based on law, regulations, articles of association or contract, and, thirdly, if the issuer is able to ensure the confidentiality of that information (Financial Services Authority, 2013: 2.5.1). Similarly, German law allows the withholding of insider information. An issuer may withhold the disclosure information as long as a legitimate interest in secrecy exists, omission of information will not mislead the market, and confidentiality is guaranteed. (German Securities Exchange Act: §15a(3)).

Under the EU law, the laws of Germany and England in particular, it is not that clear if this exception of confidentiality be applied on corporations that self-impose a higher standard of Corporate Social Responsibility and therein transparency. Under a global citizen approach, it is difficult to argue why the information that qualifies as inside information may not mislead the public or how legitimate interest in confidentiality exists if the corporation declares to be transparent in accordance with the OECD Guidelines for Multinational Enterprises.

Similarly, the Swiss rules applied in the stock market contain limitation to continuous disclosure requirements. The disclosure may be delayed based on a plan or decision of the issuer and in case of legitimate interest in confidentiality. The issuer must ensure that the relevant information remains confidential (SIX and SWX: Article 54).

The US law, inside information may not be delayed due to guaranteed confidentiality. The approach taken under EU law and Swiss law is foreign to the US.

On the one hand, to give corporations a freedom to determine their own rules beyond a minimum standard under the applicable laws creates an incentive to corporations to implement Corporate Social Responsibility, a higher standard, without losing control. To allow a corporation not to disclose information if it may guarantee confidentiality is favourable if no one bears damage. Under a shareholder value, no one bears damage under other approaches it depends. An impact investor may have a reputational damage if its investment target declared its willingness to comply with OECD Guidelines or Ruggie principles but failed to do so. Impact Investors largely provide below market rates to the investment target because the investment target acts in accordance with the principle of the investor. If an event occurs that shifts the investment target, the publicly listed corporation, from the investment strategy of the Impact Investor outside the investment strategy, the event needs to be disclosed immediately. The fact that the investment target lacks the criteria an investor expects needs to be disclosed and may hardly be justified by guaranteed confidentiality; otherwise the publicly listed corporation enjoys unjustified below market rates. Similarly, stakeholders may have a right to get informed immediately if the corporation lacks a self-imposed criterion. Some employees are willing to work to less-favourable financial working condition for corporations that doing well. The publicly listed corporation employee's experts below market rates. The fact that the employer lacks the criteria an employee expects needs to be disclosed immediately; otherwise the publicly listed corporations profits unjustified below market rates. Other scenarios are possible considering below market concession contracts, leasing contracts, rent contracts, grants for establishing a project, support of non-governmental organisation … etc. Following this examples, no room exists for an event that caused direct or indirect damage to stakeholders or the public if the publicly listed corporation follows a stakeholder or global citizen approach. However, if no damage occurs, there may be reasons to justify the confidentiality of the information.

On the other hand, under the shareholder value approach, all information is relevant that affects the shareholder, it is relevant to the stakeholders under the stakeholder approach, and the information is relevant to the public under the global citizen approach. The fact that the corporation follows a voluntary approach may impose a duty to provide the information that it acts legitimate in accordance with its own principles. There may be room for confidentiality of information for information that lies beyond the approach taken by the corporation.

To conclude, if publicly listed corporations self-impose a higher standard of Corporate Governance, it depends from the drafting of their standard if they have to disclose all the information or information may be kept confidential if no damage occurs to its shareholders, stakeholders or the public. However, if the publicly listed corporation implements a standard of Corporate Governance, it is very favourable that these publicly listed corporations disclose all the information immediately in accordance with the standard and the corporation may not rely on exception provided by the stock market regulators.

Conclusion

That self-imposed accountability to the public imposes a duty to inform the stakeholders or the public about its conduct is unlikely under these laws. In order to respond to the needs of Impact Investors, the system of governing market abuses needs to be improved under all applicable law. Under EU, German, UK, US and Swiss law, it is not clear if an Impact Investor may require immediate disclosure of information that is essential for measuring the impact even if the publicly listed corporation was originally willing to comply with this strategy. In these circumstances, the test of a reasonable person needs to be shifted into the light to the publicly listed corporation's willingness to comply voluntarily with a higher standard of Corporate Governance.

Moreover, inside information needs to be redefined. Inside information needs to reflect the rules in Corporate Governance and CSR. Information that falls outside the minimum standard provided by the applicable law but inside voluntary self-imposed standard needs to be disclosed. In this regard, the requirement of price sensitive information may not sustain in an environment of impact investment.

Furthermore, circumstances exist in which inside information may be withhold based on guaranteed confidentiality under a shareholder approach. Under any other approach of a publicly listed corporation, such confidentiality may be tolerable so long as confidentiality prevents damage to all persons for which the publicly listed corporation is accountable.

In any case, the implementation of the OECD Guidelines for Multinational Enterprise or the Ruggie principles should trump the regime of market abuse while favouring greater accountability and transparency.

References

1. Assmann, H-D and Schneider, U. 2012. Wertpapierhandelsgesetz : Kommentar (6., neu bearb. und erw. Aufl. edn, Schmidt 2012)
2. BaFin, 2009. Emittentenleitfaden der Bundesanstalt für Finanzdienstleistungsaufsicht. <Available at http://www.bafin.de/SharedDocs/Downloads/DE/Leitfaden/WA/dl_emittentenleitfaden_2013.pdf?__blob=publicationFile&v=5> (Accessed 15 January 2014).
3. Business & Human Rights Resource Centre. 2011. 'UN "Protect, Respect and Remedy" Framework > Guiding Principles' [online]. Available at: <http://www.business-humanrights.org/SpecialRepPortal/Home/Protect-Respect-Remedy-Framework/GuidingPrinciples> (Accessed 15 January 2014).
4. CalPERS. 'Website of the Californian Pension Fund' [online]. Available at: <http://www.calpers.ca.gov/> (Accessed 7 November 2013).
5. Clark, G. L. and Monk, A. 2010. 'Norwegian Government Investment Fund: Ethics over Efficiency' 13 Rotman International Journal of Pension Management.
6. Crane, A. 2009. The Oxford handbook of corporate social responsibility. Oxford University Press.
7. Daeniker, D. and Waller, S. 'Kapitalmarktbezogene Informationspflichten und Haftung' [online]. Available at: <http://www.homburger.ch/fileadmin/publications/3_Daeniker_Waller.pdf> (Accessed 8 April 2013).
8. European Commission. Directive 2003/124/EC of 22 December 2003 implementing Directive 2003/6/EC of the European Parliament and of the Council as regards the definition and public disclosure of inside information and the definition of market manipulation, Article 1.
9. Financial Services Authority. 2013. Disclosure Rules and Transparency Rules, FSA Handbook, Release 1.35, March 2013.
10. Friedman, M. 1970. 'The Social Responsibility of Business is to Increase its Profits'. 13 September 1970. The New York Times Magazine Available at: <http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html> (Accessed 15 January 2014).
11. German Securites Exchange Act (WpHG), Statute of the Stock Exchange, Germany, Wertpapierhandelsgesetz in der Fassung der Bekanntmachung vom 9. September 1998 (BGBl. I S. 2708), das zuletzt durch Artikel 10 Absatz 1 des Gesetzes vom 13. Februar 2013 (BGBl. I S. 174) geändert worden ist.

12. Gilson, R. J. and Milhaupt, C. J. 2008. 'Sovereign Wealth Funds and Corporate Governance: A Minimalist Response to the New Mercantilism' (2007-2008) Stanford Law Review, 60.
13. Gjessing, O. P. K. and Syse, H. 2007. 'Norwegian Petroleum Wealth and Universal Ownership' Corporate Governance, 15.
14. Guay, T., Doh, J. P. and Sinclair, G. 2004. 'Non-governmental Organizations, Shareholder Activism, and Socially Responsible Investments: Ethical, Strategic, and Governance Implications' Journal of Business Ethics, 52.
15. Hancock, E. E. 2005. 'Red Dawn, Blue Thunder, Purple Rain: Corporate Risk of Liability for Global Climate Change and the SEC Disclosure Dilemma' (2004-2005), Georgetown International Environmental Law Review, 17.
16. Human Rights Council and Ruggie, J. 'Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises'.
17. International Working Group of Sovereign Wealth Funds. 2008. Sovereign Wealth Funds, Generally Accepted Principles and Practices, "Santiago Principles".
18. Lewis, R. J. 1994. '"Shh! Maybe in My Backyard!" An Equity and Efficiency-Based Critique of SEC Environmental Disclosure Rules and Extraterritorial Environmental Matters' (1993-1994) Minnesota Law Review, 78.
19. Ling Lee, Y. C., (2004). 'The Elusive Concept of "Materiality" under U.S. Federal Securities Laws' Willamette Law Review, 40.
20. Millon, D. 2012. 'Enlighted shareholder value, social responsibility and the redefinition of corporate purpose without law' in P. M. Vasudev and S. Watson (eds), Corporate governance after the financial crisis, Edward Elgar.
21. Ministry of Finance. 2010. Guidelines for the observation and exclusion of companies from the Government Pension Fund Global's investment universe, Section 2.
22. OECD. 2011. Declaration on International Investment and Multinational Enterprises, Adhering Governments, 25 May 2011.
23. OECDa. Guidelines for Multinational Enterprises.
24. OECDb. Principles of Corporate Governance.
25. OECD. 2008. 'Sovereign Wealth Funds and Recipient Country Policies, Investment Committee Report, 4 April 2008' [online]. Available at: <www.oecd.org/daf/inv/investment-policy/40408735.pdf> (Accessed 15 January 2014).
26. Painter, R. 1961. 'Disclosure of Environmental Legal Proceedings Under the Securities Laws: A Potential Step Backward', Journal of Environmental Law & Litigation, 11.
27. SIX and SWX, Listing Rules, Exchange Regulation SWX. <available at: http://www.six-exchange-regulation.com/admission_manual/03_01-LR/en/index.html> (Accessed 15 January 2014).
28. US Securties Exchange Act. Securites Exchange Act of 1934 and Energy Policy and Concersvation Act of 1975 Regulations, Title 17: Commodity and Securities Exchanges,Subpart 229.1—General - Standard Instructions for Filing Forms under Securities Act of 1933.
29. SWF Institute. 2013. 'Largest Sovereign Wealth Fund Ranking, March 2013' [online]. Available at: <http://www.swfinstitute.org/fund-rankings/> (Accessed 15 January 2014).
30. Swiss Code of Obligations. Loi fédérale complétant le Code civil suisse (Livre cinquième: Droit des obligations) du 30 mars 1911 (Etat le 1er janvier 2013) (RS 220).
31. Swiss Securities Exchange Act. Loi fédérale sur les bourses et le commerce des valeurs mobilières (Loi sur les bourses, LBVM) du 24 mars 1995 (Etat le 1er janvier 2013) (RS 954.1)
32. SWX. 2008. Directive on Ad hoc Publicity (Directive Ad hoc Publicity, DAH), basis 53 LR, dated 29 October 2008, Article 1.
33. The Economist. 2013. 'Unfair, short-sighted and self-defeating' The Economist [online]. Available at: <http://www.economist.com/blogs/schumpeter/2013/03/cyprus-bail-out> (Accessed 15 January 2014).
34. Truman, E. M. 2007. 'Sovereign Wealth Funds: The Need for Greater Transparency and Accountability', Policy Brief, Number PB07-6, August 2007' Available at: <www.fashionjun.iie.com/publications/pb/pb07-6.pdf> (Accessed 15 January 2014)
35. WEF. 2013. From the Margins to the Mainstream - Assessment of the Impact Investment Sector and Opportunities to Engage Mainstream Investors.

STOCK MARKET DEVELOPMENT AND ECONOMIC GROWTH IN DEVELOPING COUNTRIES: EVIDENCE FROM SAUDI ARABIA

Meshaal J. Alshammary*

Abstract

This study investigates the long-term and short-term relationships between stock market development and economic growth in the Kingdom of Saudi Arabia (KSA) for the period from January 1993 to December 2009. It employs a wide range of vector autoregression (VAR) models to evaluate the importance and impact of stock market development on economic growth.
We used real GDP growth rates as a proxy for economic growth and the stock market index (SMI) as a proxy for the stock market development.
The vector-error cointegration model (VECM) indicates a significant long-term causal relationship between economic growth and the stock market development. Granger causality tests show weak bidirectional causal relationship between stock market development and economic growth supporting the feedback view in the short run.
The study implications are as follows. Firstly, investment in real economic activities leads to economic growth. Secondly, the stock market might hinder economic growth due to its volatile and international risk sharing nature, low free-floating share ratio, number of listed companies and the domination of Saudi Individual Stock Trades (SIST) characteristics.
Thirdly, policymakers should seek to minimise stock market volatility and fluctuations, increase both the free-floating share ratio and number of listed companies and shift investment domination toward corporate investors by considering its effect on economic growth when formulating economic policies.

Keywords: Saudi Arabia, Stock Market Development, Economic Growth, VAR Model, Cointrgration, Unit Root, Granger Causality

* *College of Business, Victoria University, P.O.Box: 14428, Melbourne, VIC, 8001, Australia*
Email: meshaal.alshammary@live.vu.edu.au

1. Introduction

Economic development and growth issues continue to capture the interests of academics and policy makers around the globe. In recent times, the shift in emphasis has been from the classical concepts of maximising production outputs and wealth distribution towards economic sustainability, as a reaction to globalisation. This has resulted in major economic reforms, especially among developing countries as they expand their markets. Economic sustainability is heavily tied to investment, which in turn relies on the capital market. Hence, development of a stable domestic capital market underpins sustainability. Within the financial market, development of the stock markets is an important part of any economic reform. Securities trading is the dominant financial market function that mobilises saving, allocates capital, exerts corporate control and eases financial risks (Levine & Zervos 1996, 1998).

As a developing economy and a member of the Group of Twenty (G-20), Saudi Arabia is not an exception in this international trend. In the last three Five-Year Saudi National Development Plans (2000-2014), major legal, economic and financial reforms were implemented to promote sustainable economic growth. Such reforms were made to diversify the oil-based economy towards greater sustainability in line with international economic practices (Ramady 2010).

Although industrialisation is relatively recent in Saudi Arabia, it has witnessed a steady development with distinguished accomplishments that are attributed to the manufacturing sector and the support it receives from the government owing to its important role in achieving strategic and economic goals of the country. The government's support has covered several spheres, including implementation of required infrastructure, construction of Jubail and *Yanbu* industrial cities, construction of industrial cities in various regions of Saudi Arabia, establishment of the Saudi Industrial Development Fund (SIDF), and continued provision of other industrial support and incentives. The private sector's response to and cooperation with the governmental plans and efforts have had an effect on the actualisation of industrial development.

In addition to the Saudi intention to move the country's income from non-renewable resources, the conservative Islamic investment environment in Saudi prohibit usury-interest on loans, which means a bigger emphasis on raising capital through capital markets, such as initial public offerings (IPOs) and *sukuks* (Islamic bonds) than bank loans (Al-Bqami 2000).

To date, these reforms have not been replicated in securities exchange practices; further, there are no adequate stock market development and economic growth relationship studies to provide guidance for decision makers in the anticipated transformation. This research attempts to fill this empirical gap.

The aim of the research is to determine the relationship between stock market development and economic growth in Saudi Arabia. Such a study on the stock market developments is timely because Saudi Arabia is moving aggressively toward strengthening the private sector role in the economy via privatisation, establishment of the Capital Market Authority (CMA) in 2003, and the creation of the new seven economic cities.

It should be noted that there has been very little work carried out to determine how stock market development contributes to growth, specifically for Saudi economy. An examination of the contribution to economic growth is a potentially important aspect. in the meanwhile, in selecting an individual country (i.e. Saudi Arabia), the results of this study will be appropriate for policy makers in emerging economies in general and Saudi Arabia in particular. Additionally, the provision of empirical evidence on this significant issue in the case of a single country will add to the literature on the role of stock market development in economic growth and open an interesting research topic.

2. Stock Market Developments and Economic Growth

The study of the relationship between stock development and economic growth can be traced back to Schumpeter (1912) and Goldsmith (1969), both of whom investigated the effect of stock market development on economic growth (Demirhan, Aydemir & Inkaya 2011; Levine & Zervos 1998). Schumpeter's (1912) important early study proposed a causal link whereby stock markets promote economic growth by funding entrepreneurs and channelling capital to them with higher return investments (Ake & Ognaligui 2010; Demirhan, Aydemir & Inkaya 2011; Dritsaki & Dritsaki-Bargiota 2005; Levine & Zervos 1998). Schumpeter's (1912) view was that economic change could not simply be predicated on previous economic conditions alone, although prevailing economic conditions were a result of this. Similarly, Goldsmith (1969) emphasised the effect of the financial structure and development on economic growth.

According to modern growth theory, the financial sector may affect long-run growth through its impact on capital accumulation and the rate of technological progress. Financial sector development has a crucial impact on economic growth and poverty reduction, especially in developing countries; without it, economic development may be constrained, even if other necessary conditions are met (DFID 2004).

The causal relationship between the stock market development and economic growth was investigated by Jung (1986), who made comparisons between 19 developing and 37 less- developed economies and among the less-developed economies as a group. Jung (1986) found that the less developed countries have a 'supply-leading' causality - that is, there is a causal relationship from stock market development to economic growth - and developing economies had a 'demand-following' causality - that is, there is a causal relationship from economic growth to stock market development.

The literature review shows that the debate continues in both theoretical and empirical studies regarding the importance and causality directions of the relationship between stock market development and economic growth.

There is evidence of a direct relationship between stock market development and economic growth. Large stock markets can lower the cost of mobilising saving and thereby facilitate investment in productive technologies (Greenwood & Smith 1997). Bencivenga, Smith and Starr (1996) and Levine (1991) find that stock market liquidity is important for growth. Efficient stock markets may increase investment through enhancing the flow of information on firms, which also improves corporate governance (Holmstrom & Tirole 1993; Kyle 1984). International risk sharing through internationally integrated stock markets improves resource allocation and increases the economic growth rate (Obstfeld 1994).

There is also country-specific evidence of a strong relationship between stock market development and economic growth (Ghali 1999). Hondroyiannis, Lolos and Papapetrou (2005) used monthly data sets over the 1986-1999 period to empirically assess how the development of the banking system and the stock market relates to economic performance in

Greece. They used vector autoregression (VAR) models and showed that there was bidirectional causality between stock market development and economic growth in the long run. Error-correction models show that stock market promote economic growth in the long run: for example, Ghali's (1999) study on Tunisia, Khan Qayyum and Sheikh's (2005) study on Pakistan and Agrawalla and Tuteja's (2007) study on India.

However, large and well-developed stock markets are insignificant sources of corporate finance (Mayer 1988). Stock market liquidity will not enhance incentives for acquiring information about firms or exerting corporate governance (Stiglitz 1985, 1993). Risk sharing through internationally integrated stock markets can actually reduce saving rates and slow economic growth (Devereux & Smith 1994). Stock market development can harm economic growth by easing counter-productive.

corporate takeovers (Morck, Shleifer & Vishny 1990a, 1990b; Shleifer & Summers 1988).

Demirhan, Aydemir and Inkaya (2011) resolved previous inconsistencies in empirical data on Turkey by providing evidence of bidirectional causality between stock market development and economic growth. There are similar inconsistencies in empirical data on Saudi Arabia: on one hand Darrat (1999) investigated empirically the relationship between financial deepening and economic growth for three developing Middle-Eastern countries (Saudi Arabia, Turkey and the UAE). His empirical results suggested that the economic stimulus of more sophisticated and efficient financial markets in Saudi Arabia become noticeable only gradually as the economies grow and mature in the long-run, and financial deepening may influence only some, but not all, sectors of the economy. On the other hand Naceur and Ghazouani's (2007) analysis of data from 1991 to 2003 found that developing financial structures is not as important to the economies in 11 Middle Eastern and North African (MENA) countries, including Saudi Arabia, due to their underdeveloped financial systems and unstable growth rates. Thus, there appears to be no existing research on the proposed topic of this study.

The empirical literature in the case of Saudi Arabia with the exception of Masih et. al. (2009) is limited to MENA and GCC regions (see table 1). These cross-country specific studies led to diverse results (Darrat 1999, Xu 2000, Al-Tamimi et al., 2002, Al-Yousif 2002, Omran and Bolbol 2003, Boulila & Trabelsi, 2004, Chuah & Thai 2004, Al-Awad & Harb, 2005, Naceur & Ghazouani 2007, Masih et. al. 2009, Goaied et. al. 2011, Kar et. al. 2011). These empirics used annual data that both old and short with low frequencies as low as 20 observations. These noticeable remarks motivated this study on Saudi Arabia to be country-specific, using long time period, and more frequent and updated data.

Some empirics indicated a significant long run relationship in the stock market-economic growth nexus. Al-Tamimi et. al. (2002) examined the relationship between financial development and economic growth by using VAR method for Arab countries including Saudi Arabia over the period 1964-1998. The results indicate that capital market development and real GDP growth are strongly linked in the long-run. However, Granger causality tests and the impulse response functions indicate that the linkage is weak in the short-run. In addition, Xu (2000) used a multivariate vector-autoregressive (VAR) method to examine the effects of financial market development on domestic investment and output in 41 countries over the period 1960-1993. The findings support the supply leading view. However, a negative long term relationship between financial development and economic growth is found in the case of Saudi Arabia using data from 1962-1992.

In addition, couple of empirics supports the independent view: Boulila and Trabelsi (2004) used a sample of sixteen MENA countries for the period 1960-2002. They applied the bivariate vector autoregressive (bVAR) model on these variables: Real GDP per capita. Ratio of M3 to GDP, ratio of credit allocated to the private sector, ratio of financial savings to GDP. Ratio of M3 to GDP, ratio of credit allocated to the private sector, ratio of financial savings to GDP. They found no link between capital market development and economic growth in the case of Saudi Arabia over the period 1960-1999. Similar results of no significant relationship between stock market development and growth is found in the study of Naceur and Ghazouani (2007) that applied a dynamic panel model with GMM estimators on the data of 11 MENA countries, hence data on Saudi Arabia for the period 1991-2003.

Moreover, empirics that support the supply leading view do exist. Omran and Bolbol (2003) construct a growth equation that captures the interaction between FDI and various indicators of stock market development in the context of Arab countries. They used averaged five years cross-sectional data for the period 1975-1999. The estimation model is based on the growth accounting framework of the Cobb-Douglas production function where y is the growth rate of GDP per capita in the Arab world, and x represents capital market development indicators of the banking sector and the stock market. z is a vector of control variables that are usually used in the estimation (initial per capita income, human capital, investment/GDP, inflation rate, government consumption/GDP, openness of trade/GDP, and exchange rate), and is the error term. They found that FDI has a positive impact on economic growth, which depends on local conditions and absorptive capacities, where stock market development is one of the important capacities.

Likewise, empirics within the MENA region of Al-Awad and Harb (2005) who used a sample of ten MENA countries for the period 1969-2000 and by using panel cointegration approach concluded that the long-run capital market development and economic growth may be related to some level. In addition, the evidence of unidirectional causality that runs from capital market development to economic growth can be seen in Saudi Arabia in the short-run. However, Kar et. al. (2011) researched a sample of fifteen MENA countries over the period 1980-2007. They used GMM method and found a unidirectional relationship runs from economic growth to capital market development when using the ratio of private sector credit to income as a proxy for capital market development. Different results were found using a similar GMM method, Goaied et. al. (2011) investigated 16 MENA countries using annual data over the period 1962-2006. They found a negative and signification relationship in the long run when using bank based variables.

A recent country-specific study on Saudi Arabia concluded a supply leading view done by Masih et. al. (2009). They examined the relationship between capital market development and economic growth by applying VAR method and using annual data from 1985-2004 (20 observations). Note, they only used banking based measurement as proxies for the capital market development variable.

Furthermore, bidirectional relationship was found in the early study of Darrat (1999) who investigated the relationship between financial deepening and economic growth for three developing Middle-Eastern countries (Saudi Arabia, Turkey and the UAE). He applied Granger-Causality tests and VAR method over the period of 1964-1993 for Saudi Arabia. The study found long run bidirectional relationship between financial deepening and economic growth in the case of Saudi Arabia. Likewise, Al-Yousif (2002) examined the nature and direction of the relationship between financial development and economic growth employing a Granger-causality test within a VECM method. He used both time-series and panel data from 30 developing countries including Saudi Arabia for the period 1970-1999.

The study found bidirectional causality between capital market development and economic growth. Similar results found by Chuah and Thai (2004), they used real non-hydrocarbon GDP in order to capture the real impact of bank based development variables on economic growth for six GCC countries including Saudi Arabia. Chuah and Thai (2004) used annual data over the period 1962-1999 for Saudi Arabia. They applied a bivariate time series model and concluded that capital market development provides critical services to increase the efficiency of intermediation, leading to a more efficient allocation of resources, a more rapid accumulation of physical and human capital, and faster technological innovation.

3. The Saudi Stock Market: Tadawul

3.1 History

The history of the Saudi stock market can be traced back to 1935 when the Arab Automobile company's shares were made available to the public (SAMA Annual Report 1997). Since 1935, the Saudi stock market can be classified, for study purpose, into three development stages depending on its structure, operations, and regulation. The first stage, the initial stage, covers the period of time from 1935 to 1982. This stage started when the Arab Automobile company's shares were made available to the public for the first time in Saudi Arabia in 1935 and ended 1982 when the Ministerial Committee, which consists of the Ministry of Finance and National Economy, SAMA and the Ministry of Commerce, was formed to regulate and govern the Saudi stock market (SAMA Annual Report 1997). The second stage, the established stage, began when the Ministerial Committee started to formulate the Saudi Stock market in 1983 and ended in 2002 when the Capital Market Law (CML) was issued by Royal Decree No (M/30) on 31 July 2003. The present modernised stage started when the Capital Market Authority (CMA) began to enforce the CML in 2003.

On the 19th of March 2007 the Saudi Council of Ministers approved the establishment of the Tadawul Company as a joint stock company (Tadawul 2011). Tadawul electronic system was implemented in 2001 and by contracting with OMX (Swedish stock market software company specialise in stock markets systems) in 2006, the new system enabled Tadawul to further expand with great flexibility in its services. The two main rules of Tadawul are depository and trading services along with its sharing role of surveillance with CMA.

Capital Market Authority of Saudi Arabia established a bond and sukuk market in the 13 June 2009 (Tadawul 2013). At present, Tadawul deals in Islamic bond issues, by offering only seven sukuks through only six listed companies - Saudi Electricity, Saudi Hollandi Bank, Sadara Basic Services Company, Saudi ORIX Leasing Company, Saudi International Petrochemical Company and Arabian Aramco Total Services Company. Hence, the Saudi government owns the majority of these companies' stakes (Karam 2009). Recently, Tadawul launched its new ETFs market in 28th March 2010 with only four ETF available to date (Tadawul 2013).

In July 2009 the Dow Jones Indexes of the USA became the first international index provider to offer indexes on the Saudi Tadawul. This encouraged other international companies such as Standard & Poor's and Bloomberg to consider Saudi indexes (Tadawul 2013).

3.2 Performance

Tadawul All Share Index (TASI) is the only general price index for the Saudi stock market. It is computed based on the calculation that takes into account traded securities or free-floating shares. According to Saudi capital law, shares owned by the following parties are excluded from TASI calculations: the Saudi government and its institutions; a foreign partner, if he or she is not permitted to sell without the prior approval of the supervision authority; a founding partner during the restriction period; and owners who hold 10% or more of a company's shares listed on the Saudi stock market (Tadawul website 2013).

Table 1. Empirics Included Saudi Arabia

Author(s)	Empirical study	Sample	Period	Method	Results
Darrat (1999)	Are financial deepening and economic growth causality related? Another look at the evidence	Saudi Arabia, Turkey & UAE,	1964-93	Granger-Causality tests within VAR model	Feedback view
Xu (2000)	Financial development, investment, and economic growth	41 Countries	1960-93	VAR	Supply-leading view, a negative long term relationship
Al-Tamimi et. al. (2002)	Finance and Growth: Evidence from Some Arab Countries	8 Arab countries	1964-98	VAR	Positive and signification relationship in the long run when using bank based variables
Omran & Bolbol (2003)	Foreign direct investment, financial development, and economic growth: evidence from the Arab countries	17 Arab countries	1975-99	OLS & Causality tests	Supply-leading view
Al-Awad & Harb (2005)	Financial development and economic growth in the Middle East	10 MENA countries	1969-2000	**J-J** & Granger panel cointegration tests	Supply-leading view in short term
Chuah & Thai (2004)	Financial Development and Economic Growth: Evidence from Causality Tests for the GCC countries	6 GCC countries	1962-1999	bVAR	Supply-leading view
Goaied et. al. (2011)	Financial Development, Islamic Banking and Economic Growth Evidence from MENA Region	16 MENA countries	1962-2006	GMM	Negative and signification relationship in the long run when using bank based variables
Kar et. al. (2011)	Financial development and economic growth nexus in the MENA countries: Bootstrap panel granger causality analysis	15 MENA countries	1980-2007	GMM	Demand-following view
Al-Yousif (2002)	Financial development and economic growth: another look at the evidence from developing countries	30 Developing countries	1970-99	VECM	Feedback view
Boulila & Trabelsi (2004)	The Causality Issue in the Finance and Growth Nexus: Empirical Evidence from Middle East and North African Countries	16 MENA countries	1960-2002	bVAR	Independent view
Naceur and Ghazouani (2007)	Stock markets, banks, and economic growth: empirical evidence from the MENA region	11 MENA countries	1991-2003	GMM	Independent view
Masih et. al. (2009)	Causality between financial development and economic growth: an application of vector error correction and variance decomposition methods to Saudi Arabia	Saudi Arabia	1985-2004	VAR	Supply-leading view

At the end of 2010, freefloating shares on the TASI index accounted for 41% of total issued shares. TASI reflects the performance of all the 146 listed companies within fifteen sectors in the Saudi stock market taking into account the free-floating shares.

3.2.1 Free Share Float

Being liquid is one matter. Having enough 'free float' shares available for trading is just as important to enable markets to operate efficiently without distorting prices based on trades in a few shares. Earlier studies on the Saudi stock market (Azzam 1997) had estimated the level of free float to be around 47.7 per cent for 1995. By the end of 2009, according to Tadawul, the level of free float had fallen to just under 38 per cent for the whole market (see Table 2), but with significant sectoral differences.

Table 2 indicates that the lowest free float was in the multi-investment sector at just 8.4 per cent, while the highest free float was in the retail services and transport sectors at around 71 per cent. The primary reason for the low float in the multi-investment sector was the fact that only five per cent or 315 million shares were available for trading out of 6,300 million issued by Kingdom Holding Company owned by Prince Al Waleed bin Tallal bin Abdulaziz. This skewed the sector average considerably, but the energy/utilities, telecommunications and insurance sectors had low free float shares. As noted earlier in the chapter, there is a need to list more Saudi companies on the exchange to enable a larger float of shares and avoid undue price movements affecting the overall market due to trades in a few shares of closely held sectors.

Table 2. Saudi Arabia Shares Outstanding and Those Held by the Public as Free Float (2003-2009)

Sector	2003[25]		
	Total outstanding shares (Millions)	Shares held by public free float (Millions)	Free float as % of total shares outstanding
1. Banking and financial services	378.9	226.8	60
2. Petrochemical industries sector	455.7	186.8	41
3. Cement	118.9	80.8	68
4. Retail Services	177.5	127.8	72
5. Energy and Utilities	765.7	290.9	38
6. Agriculture and Food	36.0	30.6	85
7.Telecommunicati on	300.0	249.0	83
8. Insurance Sector	N/A	N/A	N/A
9. Multi-investment	N/A	N/A	N/A
10. Building and construction	N/A	N/A	N/A
11. Real Estate Development	N/A	N/A	N/A
12. Transport	N/A	N/A	N/A
13. Media and Publishing	N/A	N/A	N/A
14. Hotel and Tourism	N/A	N/A	N/A
15. Industrial Investment Sector	N/A	N/A	N/A
Total Sectors	2, 232.7	1, 192.7	53.4

[25] The level of financial and technical knowledge among the SISTs were below average; 80 per cent had no formal training in stock trading.

Table 2 continue

	2009		
Sector	Total outstanding shares (Millions)	Shares held by public free float (Millions)	Free float as % of total shares outstanding
1. Banking and financial services	8, 903.9	4, 711.5	52.9
2. Petrochemical industries sector	8664.7	3, 533.7	40.8
3. Cement	828.0	569.9	68.8
4. Retail Services	302.5	215.8	71.3
5. Energy and Utilities	4, 241.6	766.9	18.0
6. Agriculture and Food	939.4	666.2	70.9
7.Telecommunicati on	4, 200	1, 400	33.3
8. Insurance Sector	661.0	254.3	38.5
9. Multi-investment	6, 616.6	552.4	8.27
10. Building and construction	666.2	447.6	67.2
11. Real Estate Development	3, 136.2	1, 427.6	47.2
12. Transport	476.3	339.5	71.3
13. Media and Publishing	155.0	91.8	59.3
14. Hotel and Tourism	79.3	46.5	58.8
15. Industrial Investment Sector	1, 352.4	586.5	43.4
Total Sectors	41,223.1	15, 660.2	37.9

By 2007, the CMA had introduced 15 sub-sectors compared with seven N/A: Not available as not segregated

Source: SAMA (2011), CMA (2012)

3.2.2 Sectorial Performance

Like any other stock market in the world, the Saudi TASI composite stock market index masks sectorial differences. The Saudi stock market has 15 sectors and, in order of size, finance and basic materials are the dominant sectors, together accounting for just under 70 per cent of market capitalisation, with the two biggest companies Saudi Arabian Basic Industries (SABIC) and Al Rajhi Bank accounting for around 11 per cent of the market.

What is of some concern for the Saudi capital market is that while some of the smaller sectors have a larger number of companies, they only account for a smaller per cent of the market capitalisation. As such, a small movement in the highly capitalised sectors will unduly influence the whole market index.

3.2.3 Investor Behaviour

Anecdotal evidence suggests that the Saudi stock market is currently driven by irrational exuberance and herd-like mentality characterised by rumours and bouts of buying followed by panic selling (Al-Twaijry 2007, Ramady 2010),. Over time, with investor experience and CMA investor awareness programmes, such type of investment behaviour could change towards a long-term investment outlook and asset holding. It is important to highlight that there are differences in Saudi individual investors' behaviour based on education, gender and age. Field research results carried out by Khoshhal (2004) showed some interesting differences amongst Saudi individual stock traders (SISTs), indicating the following:

- The majority of SISTs were risk-takers who believed that they would continue to make high profits on the Saudi stock market, despite falls.
- In picking stocks, some 40 per cent of SISTs depended on technical analysis, some 32 per cent depended on financial analysis while 25 per cent depended on other people's opinions and Internet forums. Only 3 per cent went with their personal feelings.
- The 25-35 age group seemed to make the most profit on the Saudi stock market, which the research survey correlated to higher levels of education and formal course training.
- The lowest level of profits were found amongst those who depended on others' opinions, while the highest was achieved by those who depended on technical analysis.
- Respondents with the highest education levels

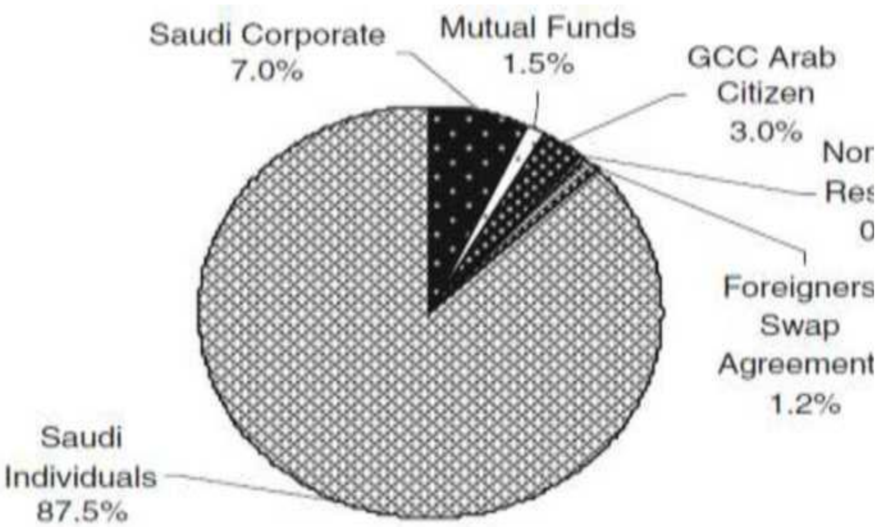
(masters and doctorates) depended on financial analysis and made medium to high profits. Those with lower levels of education depended on others' opinions and made the lowest profits.

- Respondents with lower risk aversion depended solely on financial information in their decision-making and realised medium profits.

Research conducted for other developed markets seemed to corroborate the above Saudi field research findings (Ackert et al. 2003), but such findings have important implications for the future development of the Saudi stock and capital market, concerning how to widen the number of players (foreign and domestic) and type (institutional or individual). Figure 1 illustrates that the SISTs represent an average of over 87 per cent of the monthly traded value. Hence, in larger European bourses such as London's, institutional investors tend to account for around 90% of the transactions value.

Analysis of net investment flows for each investor category indicates that the significantly smaller size of the Saudi corporate investors is the main driver. They seemed to do poorly when it came to forecasting market direction compared to SISTs, mutual funds and foreigners. Thus, the corporate investors in Saudi Arabia seem to play a significant balancing role when it comes to market movements.

Figure 1. Average Monthly Contribution to Saudi Stock Market Trades by Category of Investor and % of Value Traded (2009)



Source: Tadawul (2013)

3.2.4 The 2006 Bubble

Through the Gulf Cooperation Council and the Arab's world which includes other Middle Eastern countries that are mostly oil exporting states, together they all created actions in order to raise the quality of the economy (Abu-mustafa, 2007). Based on the study provided by Al- Twaijry (2007), the final five years of the 20th century, the stock market of Saudi Arabia stayed intact and immovable which presented a stabilised economy, while the major capital markets in the international community were developing to their highest peaks (Abdul-Hadi 1988). However, during the first few years of the 21st century, prices of the stocks in Saudi Arabia had shown drastic changes but it did not show major collapse (Al-Twaijry 2007).

Moreover, large proportion of the Saudi population have become interested in the stock market due to the stability and possibility of being much stronger and profitable to them, thus the increase of investment at the stock market reflected positively on the economy (Ramady 2010). The Saudi citizens were encouraged to trade at the stock market through the help of the Saudi government national privatisation scheme, the IPO's policy, the media and the private banks lending programs (Al-Twaijry 2007, Ramady 2010, Cordesman and Al- Rodman 2006). Consequently, SISTs' represented an average of 90 per cent of the stock market's monthly traded value.

In February 2006, the Tadawul All Share Index (TASI) had been increasing and reached a historical level of 20,000 mark. However, few weeks later, from February 21 until February

TASI fell very sharply and reached 7,000 mark by November that year.

As a result, the immediate decrease in the movement of the stock market index within the span of three weeks had created severe conclusions to the investors especially to SISTs (Al- Twaijry 2007, Ramady 2010).

It could be analysed that there are four major parties had been involved which are the government, the traders, the media and the banks (Cordesman and Al-Rodman 2006, Al- Twaijry 2007, Ramady 2010).

1. The decision for market correction interference, which have been done by CMA, was either late or was not enough. Nevertheless, the Saudi policy makers should give attention to the lack of investment banks, independent brokerage firms, and asset management firms as well as the inadequate amount of venture capital.

2. SISTs are mainly lack of financial and investment education and usually base their trading decisions upon rumours, family and friend.

3. The media made it self as a negative mediator to the people and the government. Media practitioners such as writers have indirectly encouraged common Saudi citizens in stock market trading in the while readers, those who are mostly uneducated. Later on, it was stated that, 'Saudi media kept stressing on this extraordinary event in the stock market and probably participate on creating fear in the investor's mind' (Al-Twaijry 2007; 9).

4. The banks encouraged SISTs to take on higher personal debt levels in forms of loans designed from shares instead of cash. This has been advertised as an Islamic loan which was very appealing and popular among common Saudis. Thus, gave easy access for common Saudis to the stock market.

4. Methodology

4.1 Data

This study investigates the relationship between stock market development and economic growth of the Saudi economy over the period January 1993 to December 2009. The secondary monthly data (204 observations) of the eleven variables selected for the VAR models are collected from the IMF, SAMA and the Saudi stock exchange Tadawul. The VAR model and VECM offers a feasible approach for this investigation due to the robustness and rigour of the data.

4.2 Model

This study investigates nine macroeconomic variables that all have a significant impact on the real growth rate GDP of the Saudi economy over the period January 1993 to December 2009. These macroeconomic variables include: Stock market development (SMD) proxied by the Tadawul All share index (TASI); Controlled by (1) a short term interest rate (IR), the Saudi Arabia Interbank Offered Rate (Isa3); (2) inflation (INF) in the Saudi economy measured by the consumer price index (CPI); (3) world oil price (OP) proxied by the UK- Brent crude price oil; and (4) The influence of international stock markets (ISM) proxied by Standard and Poor's 500 stock price index (S&P 500).

In this study the method of vector autoregressive model (VAR) is adopted to estimate the effects of stock and credit market development on economic growth. In order to test the causal relationships, the following multivariate model is to be estimated

$$Y = f\,(SMD, CV)$$

Where:

Y= Economic Growth is the Growth Rate GDP.

SMD = Stock Market Development proxied by the Saudi stock market index.

CV = Control Variables [interest rate (IR), inflation (INF), international stock market (ISM), oil price (OP)].

All variables are in logarithm except interest rate and GDP because of some negative values. GDP = f(SMD, INF, IR, ISM, OP)

4.3 Variables

4.3.1 Real GDP Growth Rates

Economic growth is defined as the increase in a nation's ability to produce goods and services over time as is shown by increased production levels in the economy. This thesis employs real GDP growth rates as a proxy for economic growth as it focuses on actual domestic production per person, which has a bearing on the general welfare of a country's citizens. Following the empirical study of King and Levine (1993), the variable of economic growth (GDP) is measured by the rate of change of real GDP. Due to the unavailability of monthly data for GDP in Saudi Arabia, monthly figures are obtained from annual data through geometric interpolation, following Darrat and Al-Sowaidi's (2010) empirical study.

4.3.2 Stock Market Index (SMI)

The All-Share Index and the number of listed companies have a positive significant effect on economic growth (Asiegbu & Akujuobi 2010, Athanasios & Antonios 2010). This is supported by Olweny and Kimani's (2011) findings that imply that the causality between economic growth and the stock market runs unilaterally from the NSE 20-share index to the GDP. From their results, it was inferred that the movement of stock prices in the Nairobi stock exchange reflect the macroeconomic condition of the country and can therefore be used to predict the future path of economic growth. Similarly, the study by Kirankabes and Ba§arir (2012) found that there is a long-term relationship between economic growth and the ISE 100 Index, and a one-way causality relationship with the ISE 100 towards economic growth.

TASI reflects the performance of all the 146 listed companies within fifteen sectors in the Saudi stock market taking into account the free-floating shares. Thus, it is expected to provide better insight into the overall performance of the Saudi stock market in response to fundamental changes within the Saudi economy.

4.3.3 Inflation (INF)

In line with, Bekaert and Harvey (1997), Darrat (1999), Al-Tamimi et. al. (2002), Omran and Bolbol (2003), Naceur and Ghazouani (2007) and Goaied et. al. (2011) they used inflation rate as an important variable on the economy. Fisher (1930) believes that the real and monetary sectors of the economy are independent, and claims that the nominal interest rate fully reflects the available information concerning the possible futures values of the rate of inflation. Thus, he hypothesises that the real return on interest rates is determined by real factors such as the productivity of capital and time preference of savers, hence, the real return on interest rates and the expected inflation rate are independent.

Thus, investors may benefit from this study to learn how to allocate their recourses more efficiently to protect the purchasing power of their investments, especially during inflationary periods.

4.3.4 Interest Rate (IR)

In line with the literature review most empirics used real interest rate to measure financial repression. For example, Khan Qayyum and Sheikh (2005) found that changes in real interest rate exerted positive (negative) impact on economic growth. However, the response of real interest rate is very small in the short run investigating the relationship between a short-term interest rate such as Isa3 and the Saudi economy is of particular interest to researchers for at least two reasons. First, the Saudi Monetary Authority works in a unique institutional environment in which charging interest is prohibited by Islamic law. That is, Islamic law does not consider money as an asset, and thus, money is viewed only as a measurement of value. For that reason, SAMA, the central bank in Saudi Arabia, has no direct control over the interest rate (Ramady 2010). Second, the Saudi currency has been pegged to the US dollar at a fixed exchange rate since 1986. This restriction makes local monetary policy conditional on the monetary policy of the US. In such an environment, interest rate based assets are not the primary alternative for the majority of investors in the Saudi economy. Money and capital markets in the Saudi economy are not substitutes but rather are independent.

This study uses a proxy for the local interest rate, Isa3, to account for fundamental changes in the local economy. Most empirical studies related to the Saudi economy use a short or a long term interest rate of the US market as a proxy for the Saudi market due to the Saudi exchange rate policy.

4.3.5 Prices (OP)

Oil price was used in empirics associated with oil producing countries such as Mosesov and Sahawneh (2005) on the UAE and Naceur and Ghazouani (2007) on the MENA region.

The Saudi economy is a small oil-based economy that possesses nearly 20 per cent of the world's known petroleum reserves and is ranked as the largest exporter of petroleum (OPEC 2013). The oil sector in the Saudi economy contributes more than 85 per cent of the country’s exports and government revenues (SAMA 2013). As a result, oil revenue plays a vital role in all major economic activities in Saudi Arabia. Hence, the Saudi economy also imports almost all manufactured and raw goods except for oil from developed and emerging countries.

Even though high oil prices impose a positive impact on the economy this may indirectly harm the economy through its influence on the prices of imported products. In other words, a high oil price may be fed back to the local economy as imported inflation, which increases future interest rates.

4.3.6 International Stock markets (ISM)

Understanding how international stock markets affect each other and the economy became critical for investors and policymakers after the stock market crash in 2008 that affected global markets Understanding how international stock markets affect each other and the economy became critical for investors and policymakers after the stock market crash in 2008 that affected global markets. While policymakers want to diminish the negative effects of international crises on the local economy, investors are interested in taking advantage of international diversification. The benefit of international diversification, however, is limited when capital markets are cointegrated because of the presence of common factors that limit the amount of independent variation (Wong et al. 2004).

This study aims to examine whether the international stock market (ISM) contributed to the Saudi economy as measured by real growth rate GDP during the sample time period 1993 – 2009.

To accomplish this goal, the S&P 500 price index is included as a proxy international stock market effects. The S&P 500 is one of the most popular international benchmark indexes used to capture the overall US stock market. In fact the Saudi Riyal has been pegged to the US dollar at a fixed exchange rate, this study argues that the US stock market is the optimal alternative market for Saudi investors to take advantage of the exchange rate policy mentioned above, as it reduces exchange rate risks usually associated with foreign investments using something other than the US dollar due to the exchange rate peg arrangements between the Saudi Riyal and US dollars.

4.4 Method

This study uses the Brent oil price rather than other oil benchmarks - and Dubai-Oman oil prices - mainly because it is used to price two-thirds of the crude oil internationally traded. The analytical framework of this study can be modelled in VAR form for the proposed empirical investigation:

$$Yt = a + O\ Yt\text{-}1 + St\ st\ IID\ (0, Q)$$

Where: O = a matrix of AR (1) coefficients
Q = a covariance matrix of the error terms
Yt = a vector, which contains GDP, CMD and CV

Many researchers use Vector Autoregression (VAR) modelling (Agrawalla & Tuteja 2007; Ake & Ognaligui 2010; Demirhan, Aydemir & Inkaya 2011; Khan, Qayyum & Sheikh 2005). The VAR model, according to Juselius (2006), is a flexible model for the analysis of multivariate time series. It is a natural extension of the univariate autoregressive model for dynamic multivariate time series. The VAR model is especially useful for describing the dynamic behaviour of economic and financial time series. Due to these advantages, VAR and vector error correction models (VECM) were generally used in previous studies. However, VAR models may require a large lag length to adequately describe a series; thus, there is a loss of precision due to the extent of the parameters estimated.

5. Results

5.1 Descriptive Analysis

Table 2. Descriptive Stats

	GDP	SMD	INF	IR	OP	ISM
Mean	2.619588	8.063578	4.627353	4.216176	3.385539	6.862304
Median	2.645867	7.770000	4.610000	4.845000	3.240000	7.000000
Maximum	7.946421	9.880000	4.830000	7.070000	4.900000	7.350000
Minimum	-1.102634	7.040000	4.550000	0.200000	2.280000	6.080000
Std. Dev.	2.177265	0.788975	0.064226	1.891467	0.620846	0.375474
Skewness	0.356721	0.599580	1.833241	-0.394305	0.515522	-0.850961
Kurtosis	2.490407	2.001050	5.566163	1.923684	2.221565	2.481098
Jarque-Bera	6.533817	20.70503	170.2404	15.13307	14.18659	26.90929
Probability	0.038124	0.000032	0.000000	0.000517	0.000831	0.000001
Sum	534.3960	1644.970	943.9800	860.1000	690.6500	1399.910
Sum Sq. Dev.	962.3182	126.3639	0.837371	726.2626	78.24624	28.61902
Observations	204	204	204	204	204	204

The correlation analysis in table 3 presents these findings, which indicate, in general, that all variables included in the system are statistically significantly contributing to the long run relationships between GDP and the rest of macroeconomic variables in the system with only one exception, which is inflation (INF).

5.1 Long-Run Analysis

5.2.1 Unit Root Test

The results from the augmented Dickey-Fuller (1979) (ADF) unit root test, and PhillipsPerron (1988) (PP) tests provide additional support for treating all the individual series as non-stationary in their levels but stationary in their first differences.

5.2.2 Long-run Covariance

The cantered long-run covariance analysis in table 5.3 presents these findings, which indicate, in general, that all variables included in the system are statistically significantly contributing to the long run relationships between GDP and the rest of macroeconomic variables in the system with only one exception, which is inflation (INF).

Table 3. Correlation Analysis (Included observations: 204)

Covariance t-Statistic Probability	GDP	SMD	INF	IR	OP	ISM
GDP	4.717246					
SMD	0.943498 9.407491 0.0000	0.619431				
INF	0.011204 1.148073 0.2523	0.020658 6.382936 0.0000	0.004105			
IR	-0.994295 -3.554593 0.0005	-0.676355 -7.271208 0.0000	-0.041264 -5.161396 0.0000	3.560111		
OP	0.508429 5.802587 0.0000	0.438266 29.19788 0.0000	0.024437 11.10994 0.0000	-0.514571 -6.970766 0.0000	0.383560	
ISM	0.296620 5.565406 0.0000	0.167716 9.832641 0.0000	0.006441 3.960387 0.0001	-0.026588 -0.535093 0.5932	0.125810 9.175037 0.0000	0.140289

Table 4. Cantered Long-run Covariance

	GDP	SMD	INF	IR	OP	ISM
GDP	22.58776	4.747924	0.066272	-5.179483	2.603765	1.510256
SMD	4.747924	3.056718	0.100011	-3.337333	2.161176	0.824425
INF	0.066272	0.100011	0.019451	-0.191499	0.117709	0.030608
IR	-5.179483	-3.337333	-0.191499	16.90433	-2.510634	-0.141863
OP	2.603765	2.161176	0.117709	-2.510634	1.856137	0.615386
ISM	1.510256	0.824425	0.030608	-0.141863	0.615386	0.680347

5.2.3 Optimal Lag Selection

We precede our analysis using four lags suggested by the sequential modified LR test statistic (each test at 5% level).

5.2.4 Cointegration Test

Following the rough guide in the EViews 7 User's Guide II (2012), and since we believe that all of the data series have stochastic trends, the analysis proceeds to examine the long run and short run relationships between GDP and the rest of the macroeconomic variables in the system assuming a linear trend in the VAR and the cointegrating relationship only has an intercept. The trace tests support one cointegrating vector at the 5% significance level. The major implications derived from this test are:

1) The macroeconomic variables in the system share a long run relationship. Hence each variable in the system tends to adjust proportionally to remove short run deviations from the long run equilibrium.

2) There is at least one direction of causality among the variables in the system as expected by the Granger representation theorem.

Finding a long run relationship between GDP and a set of macroeconomic variables in the Saudi economy is consistent with a large body of empirical studies including Levine (1991); King and Levine (1993); Atje and Jovanovic (1993), Levine and Zervos (1996,1998); Demirguc-Kunt and Levine (1996); Arestis et al (2001); Al-Yousif (2002); Thangavelu and James (2004); Mosesov and Sahawneh (2005); Abu-Sharia (2005); Abu-Bader and

Abu- Oarn (2006); Athanasios and Antonios (2010); Mishal (2011); Demirhan, Aydemir and Inkaya (2011); and Al-Malkawi et al. (2012).

Given that there is at least one cointegration vector among the variables in the system, the analysis normalises the cointegrating vector on (GDP). Equation 5.1 presents these findings, which indicate, in general, that all variables included in the system are statistically significantly contributing to the long run relationships between GDP and the rest of macroeconomic variables in the system.

Normalised cointegrating coefficients (standard error in parentheses) Equation (5.1)

GDP = 477.1 - 22.7 SMD - 104.99 INF - 2.115 IR + 32.74 OP + 13.47 ISM

(4.815) (31.04) (0.85) (7.0) (4.61)

[4.714] [3.38] [2.48] [-4.675] [-2.9]

Note: Standard Errors in parentheses and t-statistics in square brackets.

That is, the normalised cointegrating vector given in Equation 5.1, suggest the following results.

5.2.4.1 Stock Market Development (SMD) and GDP

A significant negative long-run relationship between GDP and SMD is found in this study. The significance of this relationship is not surprising due to the lack of transparency and illiquidity that limit the effectiveness of these markets in the economy (Chuah & Thai 2004). This lack of relationship must be linked to underdeveloped stock markets in the MENA region that hamper economic growth (Boulila & Trabelsi 2004, Mosesov & Sahawneh (2005), Abu-Bader & Abu-Qarn 2006, Naceur & Ghazouani 2007). Ake and Ognaligui (2010) used the Granger-causality test to examine causality relationships between stock markets and economic growth in Cameroon, findings suggest that the Douala Stock Exchange still does not affect Cameroonian economic growth. Results also indicate that there is no significant relationship between the equity markets and the early stages of economic development (Boyd & Smith 1998).

These results are in alignment with the ‘independent’ view that argues that capital market and economic growth is not causally related (e.g. Stiglitz 1985, Mayer 1988, Boyd and Smith 1998, Boulila & Trabelsi 2004, Mosesov & Sahawneh 2005, Abu-Bader & Abu-Qarn 2006, Naceur & Ghazouani 2007). These empirics were mostly conducted in the developing Middle East and North Africa (MENA) countries.

Moreover, Singh (1997) argue that stock markets do more harm than good, and that certain features of mature stock markets, such as volatility, deterrence of risk-averse savers and the demands of speculative investors for short-term profits at the expense of long-term growth, would pose far greater problems in developing countries and have an adverse effect on their economies. Nonetheless, Mayer (1988) demonstrates that stock markets, no matter their size, are not significant sources of corporate finance, while Stiglitz (1985) maintains that liquid stock markets will not increase motivation to obtain information about companies and improve corporate governance. Morck et al., (1990b), among others, stress that economic growth can be hindered by stock markets through facilitating the mechanisms for corporate takeover.

This is in-line with empirical studies by Athanasios and Antonios (2010) and Olweny and Kimani’s (2011) findings imply that the causality between economic growth and stock market runs unilaterally from the NSE 20-share index to the GDP. From the results, it was inferred that the movement of stock prices in the Nairobi stock exchange reflect the macroeconomic condition of the country and can therefore be used to predict the future path of economic growth; Kirankabes and Ba§arir (2012) found that there is a long-term relationship between economic growth and the ISE 100 Index, and a one-way causality relationship with the ISE 100 towards economic growth. Asiegbu and Akujuobi (2010) found that the All-Share Index and number of listed companies have a positive significant effect on economic growth.

The results do make sense because:

1) At the end of 2009, free-floating shares on the TASI index accounted for 37.9 per cent of total issued shares.

2) The number of listed companies is very little compare to the size of the market as the Arab, Middle East and North Africa biggest stock market. Kolapo and Adaramola (2012)

3) Recommended that the regulatory authority should initiate policies that would encourage more companies to access the market and also be more proactive in their surveillance role in order to check sharp practices which undermine market integrity and erode investors’ confidence.

4) The stock market is still characterised by a high degree of sectoral concentration and the dominance of banking, electricity and telecommunications, with six companies accounting for nearly 70 per cent of the total market capitalisation.

5) 90 per cent of investors are Saudi individuals who are characterised by irrational exuberance and herd mentality (Al-Twaijry 2007; Ramady 2010).

As a young and rapidly developing stock market, a positive relationship with the economic growth might exist once it has matured as observed in the literature. The establishment of the CMA has helped to overcome some of the previous obstacles in expanding the capital market, namely an increase in the number of listed companies, increase in the number of shareholders, expansion of brokerage and investment advisory services and licensing of non-bank financial institutions. The benefits of the CMA could be felt in several areas: potential to draw back

Saudi resources invested abroad, growth of non-oil financial services sector, improvement in risk management practices and response to the infrastructure services demand. The Saudi stock market has made some progress in opening up to foreign investors through swap facilities and there are some developments in expanding the use of ETFs and index funds.

5.2.4.2 Inflation (INF) and GDP

Equation 5.5 also indicates a statistically significantly negative relationship between GDP and the inflation rate (INF). This result is in line with the economic theory that states inflation reduces the value of money thus GDP (Omran & Bolbol 2003).

5.2.4.3 Interest Rate (IR) and GDP

This study used real interest rate to measure financial repression. Luintel and Khan (1999) argue that a positive real interest rate increases financial depth through the increased volume of financial savings mobilisation, and promotes growth through increasing the volume and productivity of capital. However, the cointegration tests revealed a significant negative relationship between GDP and IR. One possible explanation for this negative relationship is that investors would not consider investing and raising capital when the interest rate is high. This is consistent with Khan Qayyum and Sheikh's (2005) study, which found changes in real interest rate exerted positive (negative) impact on growth. However, the response of real interest rate is very small in the short run.

In addition, in the case of increasing a negative real interest rate, the risks and required rate of return of a particular investment increase and profits of a firm tend to decrease, due to the increased cost of capital (Bjornland & Leitemo 2009).

Investigating the relationship between a short-term interest rate such as Isa3 and the Saudi economy is of particular interest to researchers for at least two reasons. First, the Saudi Monetary Authority works in a unique institutional environment in which charging interest is prohibited by Islamic law. That is, Islamic law does not consider money as an asset, and thus, money is viewed only as a measurement of value. For that reason, SAMA, the central bank in Saudi Arabia, has no direct control over the interest rate (Ramady 2010). Second, the Saudi currency has been pegged to the US dollar at a fixed exchange rate since 1986. This restriction makes local monetary policy conditional on the monetary policy of the US. In such an environment, interest rate based assets are not the primary alternative for the majority of investors in the Saudi economy. Money and capital markets in the Saudi economy are not substitutes but rather are independent.

5.2.4.4 Oil Price (OP) and GDP

In conjunction with the fact that Saudi Arabia is an oil-based economy, Equation 5.1 suggests a positive long-run relationship between GDP and the price of oil (OP) (Mosesov & Sahawneh 2005, Naceur & Ghazouani 2007). This is consistent with the history of the Saudi economy in regards to the 'oil booms'.

5.2.4.5 International Stock Markets (ISM) and GDP

The cointegration tests revealed a significant positive relationship between GDP and International Stock Markets (ISM). This relationship can be found previously in the case of the global financial crises in 2008 that affected the Saudi economy. This finding is supported by Devereux and Smith (1994) and Wong et al. (2004). They emphasise that greater risk sharing through internationally integrated capital markets can actually reduce the saving rate and slow down economic growth. In contrast, Obstfeld (1995) shows that resource allocation is improved by the international risk-sharing resulting from stock market integration and that therefore increases economic growth.

5.3 Short-Run Analysis

Having established that all variables are cointegrated, the fundamental question that needs to be asked is: what is the nature of the dynamic relationship between the variables in the short run? This question can be answered using the causality tests. The following sub sections present the results for these methodologies.

5.3.1 Causality Tests

This section presents Granger causality test results for the short run relationship between all the variables in the system. As we concluded earlier, the short run analysis for these variables is performed using a vector error correction model as developed by Engle and Granger (1987). Granger (1988) states that using a VECM rather than a VAR in differences will not result in any loss in long run information, as is the case for the Granger (1969) causality test.

The Granger causality test is used to examine the short run dynamic relationships between all variables in the system. The following two sections present the results of both the VECM and Granger causality tests.

5.3.1.1. VECM Causality Tests

In this section, a VECM is estimated to investigate the short and long run dynamic adjustment of a system of cointegrated variables. The estimation equation (5.2) is:

$$\Delta Xt = \delta + \sum_{t=1} p\ \Gamma \Delta X\ t - i + \Pi Xt - i + Vt \qquad (5.2)$$

where AXt is an nx1 vector of variables and 5 is an (nxl) vector of constants. n is the error- correction mechanism, which has two components: n=afi' where a is an (nxl) column vector representing the speed of the short run adjustment to the long-run equilibrium, and P' is a (Ixn) cointegrating vector with the matrix of long run coefficients. r is an (nxn) matrix representing the coefficients of the short run dynamics. Finally, vt is an (nxl) vector of white noise error terms, and p is the order of the auto-regression. Interestingly, Equation 5.2 has two channels of causation. The first channel is through the lagged exogenous variables' coefficients. The second channel of causation is through the error correction term. The ECT captures adjustment of the system towards its long run equilibrium. Since the VECM technique is a more general case of the standard VAR model, the analysis proceeds to determine the lag length, , for the dynamic terms, i.e., the lagged variables in first difference form, the number of cointegrating vectors, and the structural cointegrating vector of the VECM. The optimal lag is p = 4 based on the previous equation (5.1).

Table 5 presents the results of the short and long run causality tests for the VECM. The first row in Table 5 presents the short run and long run relationship between GDP and the rest of the system's independent variables. The first column indicates the short run contribution of GDP as an independent variable to other models in the system. The VECM short run results show no relationship between GDP and the rest of the variables. These results are consistent with the independent view that argues that stock market and economic growth are not causally related in the short run (Stiglitz 1985, Lucas 1988, Mayer 1988, Boyd and Smith 1998, Boulila & Trabelsi 2004, Mosesov & Sahawneh 2005, Abu-Bader & Abu-Qarn 2006, Naceur & Ghazouani 2007). These results are supported by the empirics were mostly conducted in the developing Middle East and North Africa (MENA) countries (Boulila & Trabelsi 2004, Naceur).

Table 5. The VECM short run results

Dependent/Independent							ECT
Variable	AGDP	ASMD	AINF	AIR	AOP	AISM	
AGDP		0.25	0.98	0.81	0.93	0.65	-0.00 [-178]
ASMD	0.99		0.15	0.53	0.08	0.23	-0.00 [-158]
AINF	0.96	0.01		0.09**	0.88	0.71	-0.00 [-1.38]
AIR	0.34	0.85	0.21		0.13	0.00*	0.00 [1.00]
AOP	0.23	0.60	0.97	0.04*		0.40	0.00 [1.61]
AISM	.011	0.43	0.02*	0.08**	0.02*		0.00 [3.64]

The table contains both t-statistics associated with the error-correction term (ECT), and the p-values that that associated with the x^2-statistic, which represents test the joint significance of the lagged values of the independent variables.
**Indicates 5 % level of significance.*
*** Indicates 10% level of significance.*

5.3.1.2 Granger Causality Tests

This section presents Granger causality test results for the short run relationships between all macroeconomic variables and GDP. The Granger causality test is appropriate to examine the short run dynamic relationships between these variables. Table 6 shows that the stock market development cause economic growth and vice versa supporting the feedback view, however this relationship is weak. The feedback view contends that there is bi-directional causality between stock market development and economic growth (Patrick 1966, Jung 1986). A country with a well-developed stock market could promote high economic expansion through technological changes, products and services innovation, which in turn creates a high demand for the financial institutions. As the financial institutions effectively respond to this demand, these changes will stimulate higher economic achievement. Both stock market and economic developments are therefore positively interdependent (Majid 2007). These results are supported by Darrat (1999), Al-Yousif (2002), Chuah and Thai (2004), Hondroyiannis, Lolos and Papapetrou (2005), Majid (2007), Demirhan, Aydemir & Inkaya (2011). The reported results of the Granger causality test (1969) are based on a (4) lag models that was chosen previously.

Table 6. Pairwise Granger Causality Tests
Lags: 4

Null Hypothesis:	Obs	F-Statistic	Prob.
SMD does not Granger Cause GDP GDP does not Granger Cause SMD	200	2.31356 1.92635	0.0590 0.1077
INF does not Granger Cause GDP GDP does not Granger Cause INF	200	0.58309 0.25398	0.6752 0.9070
IR does not Granger Cause GDP GDP does not Granger Cause IR	200	0.66823 1.22430	0.6148 0.3019
OP does not Granger Cause GDP GDP does not Granger Cause OP	200	0.47294 0.79922	0.7556 0.5270
ISM does not Granger Cause GDP GDP does not Granger Cause ISM	200	0.95168 0.46962	0.4353 0.7580

Conclusion

This study aimed to determine the relationship between capital market development and economic growth in Saudi Arabia. The study is particularly significant because Saudi Arabia is moving aggressively towards strengthening the private sector role in the economy via privatisation, its establishment of the CMA in 2003, and the creation of seven new economic cities.

This study provided a comprehensive theoretical consideration of how the financial system and stock market development could affect real economic growth. In finance theory, there are four basic functions and channels in which the stock market may influence economic growth:

the stock market provides investors and entrepreneurs with a potential exit mechanism;

capital inflows in both foreign direct investment and portfolio are potentially important sources of investment funds; (3) the provision of liquidity through an organised stock market encourages both international and domestic investors to transfer their surplus from short-run assets to the long-run capital market; and (4) the stock market provides important information that improves the efficiency of financial intermediation generally.

In contrast, the endogenous growth model in economic theory illustrates that stock market development may affect economic growth through an increase in the saving rate, the channelling of more savings to investment, and the improvement of capital productivity with better resource allocation towards their most productive use. Thus, savings channelled through the stock market is allocated more efficiently, and the higher capital productivity leads to higher economic growth.

This study investigated the relationship between stock market development and the real GDP growth rate per capita of the Saudi economy from January 1993 to December 2009. The secondary data was collected from the IMF, SAMA and TadawuL. The VAR model was used to estimate the effects of stock market development on economic growth.

The results show a long run relationship between stock market development and economic growth. Meanwhile, a we found a bidirectional causal relation between the two variables, supporting the feedback view.

References

1. Abdeen, Adnan & Shook, Dale 1984, The Saudi financial system in the context of Western and Islamic finance, John Wiley & Sons, New York, NY.
2. Abdul-Hadi, Ayman & Shafiq, Fayyad 1988, Stock markets of the Arab world: trends, problems and prospects for integration, Routledge, London.
3. Abu-Bader, S & Abu-Qarn, AS 2006, Financial development and economic growth nexus: time series evidence from Middle Eastern and North African countries, Discussion Paper 06-09, Monaster Centre for Economic Research, Ben Gurion University of the Negev, Beer-Sheva, Israel.

4. Abu-mustafa, N 2007, 'A review of regulation, opportunity and risk in Gulf Cooperation Council stock markets: the case of Kuwait', International Research Journal of Finance and Economics, vol. 8, pp.134-146.
5. Acaravci A, Ozturk I & Acaravci, SK 2007, 'Finance-growth nexus: evidence from Turkey, International Research Journal of Finance and Economics, no. 11, pp. 30-40.
6. Agarwal R 2000, ' Capital market development, corporate financing pattern and economic growth in India', Working paper, no. 20, Institute of Economic Growth, Delhi, India.
7. Agarwal, Sumit 2001, 'Stock market development and economic growth: preliminary evidence from African Countries', Memo, http:// publicpolicy. subr.edu//J SDA/Spring).
8. Agrawalla, R & Tuteja, S 2007, 'Causality between stock market development and economic growth: a case study of India', Journal of Management Research, vol. 7, no. 3, pp. 158-168.
9. Ake, B & Ognaligui, RW 2010, 'Financial stock market and economic growth in developing countries: the case of Douala Stock Exchange in Cameroon', International Journal of Business and Management, vol. 5, no. 5, pp. 82-88.
10. Akeel, M 2006, 'New CMA rules restricts expats from IPOs', Arab News, viewed 21 April 2010, http://www.arabnews.com/node/282238
11. Akinlo, Anthony Enisan & Egbetunde, Tajudeen 2010, 'Financial development and economic growth: the experience of 10 Sub-Saharan African countries revisited', The Review of Finance and Banking, vol. 2, no. 1, pp. 17-28.
12. Alajekwu, Udoka Bernard & Achugbu, Austin A 2012, 'The role of stock market development on economic growth in Nigeria: a time series analysis', African Research Review, vol. 6, no. 24, pp. 51-70.
13. Al-Awad & Harb, Nasri. 2005. 'Financial development and economic growth in the Middle East', Applied Financial Economics, vol. 15, pp. 1041-1051.
14. Al-Dukheil, Abdulaziz M 1995, The banking system and its performance in Saudi Arabia, Saqi Books, London.
15. Al-Dukheil, Abdulaziz M 2002, Saudi stock market, The Consulting Center for Finance & Investment, Saudi Arabia, Riyadh.
16. Alexander, P 2009, 'Sukuk market faces stern test of maturity', The Banker, viewed 21 April 2010, http://www.thebanker.com/news/fullstory.php/aid/6727 /Sukuk_market_faces_stern_test_of_ maturity .html? current_page=2.
17. Al-Farsi, Fouad 1982, Saudi Arabia: A case study in development, Routledge and Kegan Paul International, London.
18. Al-Malkawi, Husam-Aldin N, Marashdeh, Hazem A & Abdullah, Naziruddin 2012, 'Financial development and economic growth in the UAE: empirical assessment using ARDL approach to co-integration', International Journal of Economics and Finance, vol. 4, no. 5, pp. 105117.
19. Al-Omar, F 1996, 'Privatization in the Gulf Cooperation Council (GCC) countries: the need and the process', Islamic Economic Studies, vol. 2, no. 2, pp. 35-55.
20. Al-Suhaimi, Jammaz 2002 'Consolidation, competition, foreign presence and systematic stability in the Saudi banking industry', SAMA, Riyadh.
21. Al-Tamimi, Hussein A., Al-Awad, Hassan. & Charif, A. Husni. 2002, 'Finance and Growth: Evidence from Some Arab Countries', Journal of Transnational Management Development, vol. 7, no. 2, pp. 3-18.
22. Al-Twaijry, A 2007, Saudi stock market historical view and crisis effect: graphical and statistical analysis, retrieved 21 November 2011, http://beepdf.com/doc/210906/saudi_stock_market_historical_view_and_crisis_effect graphical_and_.html
23. Al-Yousif, Yousif Khalifa 2002, 'Financial development and economic growth: another look at the evidence from developing countries', Review of Financial Economics, vol. 11, pp. 131-150.
24. Ang, J 2008, Financial development and economic growth in Malaysia, Routledge, Abingdon, England.
25. Antonios, A 2010, 'Financial development and economic growth: a comparative study between 15 European Union member-states', International Research Journal of Finance and Economics, no. 35, pp. 143-149.
26. Ardic, O. P & Damar H. E 2006, 'Financial sector deepening and economic growth: evidence from turkey', MPRA Paper No. 4077.
27. Arestis, P, Demetriades, P & Luintel, K 2001, 'Financial development and economic growth: the role of stock markets', Journal of Money, Credit and Banking, vol. 33, no. 1, pp. 16-41.
28. Asante, Stephen, Agyapong, Daniel & Adam, Anokye M 2011, 'Bank competition, stock market and economic growth in Ghana', International Journal of Business Administration, vol. 2, no. 4, pp. 33-41.
29. Aslan, O & Ku9ukaksoy, I 2006, 'Relationship between financial development and economic growth; An econometric application on Turkey's economy', Istanbul University Faculty of Economics and Statistics, Journal of Econometrics, no. 4, pp. 12-28.
30. Asiegbu, BC & Akujuobi, C 2010, 'Performance indicators of capital market and the economic growth of Nigeria' , Interdisciplinary Journal of Contemporary Research In Business, vol. 2, no. 2, pp. 399-417.
31. Athanasios, V & Antonios, A 2010, 'The effect of stock and credit market development on economic growth: an empirical analysis for Italy', International Research Journal of Finance and Economics, no. 41, pp. 33-42.
32. Athapathu, AR & Jayasinghe, P 2012, 'Stock market performance and economic growth: the case of Sri Lanka', Research Paper, 4 April, University of Colombo, Sri Lanka, pp. 83-92.
33. Atje, Raymond & Jovanovic, Boyan 1993, 'Stock markets and development', European Economic Review, no. 37, pp. 632-640.
34. Austrade. 2010, 'Islamic Finance', Austrade, Australia.
35. Auty, RM 2001, Resource abundances and economic development, Oxford University Press, Oxford, UK.
36. Azzam, H 1997, The emerging Arab capital markets, Kegan Paul International, New York.
37. Azzam, H 2002, The Arab world: facing the challenges of the new millennium, IB Tauris, London.
38. Balaam, David & Veseth, Michael 2008, Introduction to international political economy ', 4th edn, Pearson Prentice Hall, New Jersey.
39. Bange, M 1996, 'Capital market forecasts of economic growth: new tests for Germany, Japan, and the United States', Quarterly Journal of Business and Economics, vol. 35, no. 4, pp. 3-17.
40. Barna, F & Mura, PO 2010, 'Capital market

development and economic growth: the case of Romania', Annals of the University ofPetro§ani, Economics, vol. 10, no. 2, pp. 31-42.
41. Barro, Robert J 1990, 'The stock market and investment', Review of Financial Studies, vol. 3, pp. 115-31.
42. Beck, T & Levine, R 2004, 'Stock markets, banks, and growth: panel evidence', Journal of Banking and Finance, vol. 28, pp. 423-442.
43. Bekaert, G & Harvey, C 1997, Growth, capital markets: an engine for economic growth, National Bureau of Economic Research, Cambridge, MA.
44. Bekaert, G, Harvey, C & Lumsdaine, R 2002, 'Dating the integration of world equity markets', Journal of Financial Economics, vol. 65, no. 2, pp. 203-247.
45. Bekaert, G, Harvey, C & Lundblad, Christian 2001, 'Emerging equity markets and economic development', Journal of Development Economics, vol. 66, pp. 465-504.
46. Benjelloun, H & Abdullah, A 2008, 'Index funds and diversification in Saudi Arabia', International Journal of Islamic and Middle Eastern Finance and Management, vol. 2, no. 3, pp. 201-212.
47. Bencivenga, V, Smith, BD & Starr, R 1996, 'Equity markets, transaction costs, and capital accumulation: an illustration', World Bank Economic Review, vol. 10, no. 2, pp. 241-265.
48. Bernanke, BS 2003, 'Monetary policy and the stock market: some empirical results', Remarks by Governor at the Fall 2003 Banking and Finance Lecture, Widener University, Chester, Pennsylvania,
49. Bertola, Giuseppe 1993, 'Factor shares and savings in endogenous growth', American Economic Review, vol. 83, pp. 1184-1198.
50. Biggs, B 2006, Hedgehogging, John Wiley & Sons, New Jersey.
51. Binswanger, M. 1999, Stock markets, speculative bubbles and economic growth: new dimensions in the co-evolution of real and financial markets Growth, Edward Elgar, Cheltenham.
52. Bisisu, Adnan 1984, Offshore banking in Bahrain, Bahrain Chamber of Commerce and Industry Press, Bahrain.
53. Biswas, Shankar 2008, 'Gateway to growth', World Finance, viewed 21 April 2010, http://www.worldfinance.com/home/special-reports-home/gateway-to-growth
54. Bjornland HC & Leitemo, K 2009, 'Identifying the interdependence between US monetary policy and the stock market', Journal of Monetary Economics, vol. 56 no. 2, pp. 275-282.
55. Blanchard, O 2003, Macroeconomics, Prentice Hall Series in Economics, Massachusetts Institute of Technology, MA.
56. Blanchard, OJ & Quah, D 1989, 'The dynamic effects aggregate demand and supply disturbances', American Economic Review, vol. 79, no. 4, pp. 655-673.
57. Bodie, Z 1976, 'Common stocks as a hedge against inflation', Journal of Finance, American Finance Association, vol. 31, no. 2, pp. 459-70.
58. Bodie, Zvi, Kane, Alex & Marcus, Alan J 2002, Investments, McGraw-Hill Higher Education, New York.
59. Bolbol, AA, Fatheldin, A & Omran, MM 2005, 'Financial development, structure, and economic growth: the case of Egypt, 1974-2002' , Research in International Business and Finance, vol. 19, no. 1, pp. 171-194.
60. Botta, A & Vaggi, G 2011, 'Palestine: a theoretical model of an investment-constrained economy', Research paper of the Faculty of Economics, University of Insubria, Varese, Italy.
61. Bonin, J, Hasan, I & Wachtel, P 2005, 'Privatization matters: bank efficiency in transition countries', Journal of Banking and Finance, vol. 29, nos. 8-9, pp. 2155-2178.
62. Boulila, Ghazi, & Trabelsi, Mohamed. 2004. 'The Causality Issue in the Finance and Growth Nexus: Empirical Evidence from Middle East and North African Countries', Review of Middle East Economics and Finance, vo. 2, no. 2, pp. 123-38.
63. Boycko, M, Shleifer, A & Vishny R 1996, 'A theory of privatisation', Economic Journal, vol. 106, March, pp. 309-319.
64. Boyd, J & Smith, B 1998, 'The evolution of debt and equity markets in economic development', Economic Theory, vol. 12, no. 3, pp. 519-560.
65. Brasoveanu, L, Dragota, V, Catarama, D & Semenescu, A 2008, 'Correlations between capital market development and economic growth: the case of Romania', Journal of Applied Quantitative Methods, vol. 3, no.1, pp. 64-75.
66. Brown, J, Earle, J & Telegdy, A 2010, 'Employment and wage effects of privatisation: evidence from Hungary, Romania, Russia and Ukraine', Economic Journal, vol. 120, no. 545, pp. 683708.
67. Calderon, C & Liu, L 2003, 'The direction of causality between financial development and economic growth', Journal of Development Economics, vol. 72, no. 1, pp. 321-334.
68. Capasso, S 2006, 'Stock market development and economic growth', World Institute for Development Economic Research, Research paper no. 2006/102.
69. Caporale, GM, Howells, P & Soliman, AM 2004, 'Stock market development and economic growth: the causal linkage', Journal of Economic Development, vol. 29, pp. 33-50.
70. Caporale, GM, Howells, P & Soliman, AM 2005, 'Endogenous growth models and stock market development: evidence from four countries', Review of Development Economics, vol. 9, no.pp. 166-176.
71. Chapra, U 2009, 'The global financial crisis: can Islamic finance help?', New Horizon, IIBI, viewed 21 April 2010, http://www.newhorizonislamicbanking.com/index.cfm ?section=academicarticles&action=vie w&id=10733
72. Chadhury, Kiren Aziz 1989, 'The price of wealth: business and state in labor remittance and oil economies', International Organization, vol. 43, Winter, pp. 101-45.
73. Chadhury, Kiren Aziz 1997, The price of wealth: economies and institutions in the Middle East, Cornell University Press, Ithaca, NY.
74. Chen, N, Roll, Richard & Ross, Stephen A 1986, 'Economic forces and the stock market', Journal of Business, vol. 59, no. 3, pp. 383-403.
75. Choe, Chongwoo & Moosa, Imad 1999, 'Financial system and economic growth: the Korean experience', World Development, vol. 27, no. 6, pp. 1069-1082.
76. Choi, In 1992, 'Effects of data aggregation on the power of tests for a unit root: a simulation study', Economics Letters, vol. 40, no. 4, pp. 397-40.
77. Choong, Chee Keong, Zulkornain Yusop, Siong Hook Law & Khim Venus Sen 2003, 'Financial development

and economic growth in Malaysia: the stock market perspective', Economics Working Paper Archive at WUSTL.
78. Christopoulos, DK & Tsionas, E 2004, 'Financial development and economic growth: evidence from panel unit root and cointegration tests', Journal of Development Economics, vol. 73, pp. 5574.
79. Chuah, H. L. & Thai, V. 2004. 'Financial Development and Economic Growth: Evidence from Causality Tests for the GCC countries', IMF Working Paper, no. WP/04/XX.
80. Claus, Iris, Haugh, David, Scobie, Grant & Tornquist, Jonas 2001, 'Saving and growth in an open economy', Treasury Working Paper 01/32.
81. Collier, Paul & Gunning, Jan Willem 1998, 'Exploring African economic performance', WPS97-2.2 CSAE Working Papers Series.
82. Cordesman, AH 2003, Saudi Arabia enters the twenty-first century, Greenwoods Publishing Group, Cincinnati.
83. Cordesman, AH & Al-Rhodhan, KR 2006, The changing dynamics of energy in the Middle East, Greenwood Publishing Group, Cincinnati.
84. Cunado J & Garcia, FP 2005, 'Oil prices, economic activity and inflation: evidence for some Asian Countries', Quarterly Review of Economics and Finance, vol. 45, no. 1, pp. 65-83.
85. Darrat, Ali 1999, 'Are financial deepening and economic growth causally related? Another look at the evidence', International Economic Journal, vol. 13, no. 3, pp. 19-35.
86. Darrat, Ali & Al-Sowaidi, Saif 2010, 'Information technology, financial deepening and economic growth: Some evidence from a fast growing emerging economy', Journal of Economics and International Finance, vol. 2, no. 2, pp. 28-35.
87. De Gregorio, Jose & Guidotti, Pablo E 1995, 'Financial development and economic growth', World Development, vol. 23, no. 3, pp. 433-448.
88. Demetriades, Panicos & Hussein, Khaled 1996, 'Does financial development cause economic growth? Time-series evidence from 16 countries', Journal of Development Economics, vol. pp. 387-411.
89. Demirguc-Kunt, Asli & Levine, Ross 1996, 'Stock markets, corporate finance, and economic growth an overview, World Bank Economic Review, vol. 10, no. 2, pp. 223-239.
90. Demirhan, E, Aydemir, O & Inkaya, A 2011, 'The direction of causality between financial development and economic growth: evidence from Turkey', International Journal of Management, vol. 28, no. 1, pp. 3-19.
91. Devereux, M & Smith, G 1994, 'International risk sharing and economic growth', International Economic Review, vol. 35, no. 4, pp. 535-550.
92. DFID (Department for International Development) 2004, 'The importance of financial sector development for growth and poverty reduction' , Policy division working paper, Policy Division.
93. Dickey, D & Fuller, W 1979, 'Distributions of the estimators for autoregressive time series with a unit root', Journal of the American Statistical Association, vol. 75, pp. 427-431.
94. Donwa P & Odia J 2010, 'An empirical analysis of the impact of the Nigerian capital market on her socio-economic development', Journal of Social Science, vol. 24, no. 2, pp. 135-142.
95. Dornbusch, Rudiger & Fischer, Stanley 1980, 'Exchange rates and current account', American Economic Review, vol. 70, pp. 960-971.
96. Dornbusch, Rudiger & Fischer, Stanley 1994, Macroeconomics, McGraw Hill, USA.
97. Dritsaki, C & Dritsaki-Bargiota, M 2005, 'The causal relationship between stock, credit market and economic development: an empirical evidence for Greece', Economic Change and Restructuring, vol. 38, no. 1, pp. 113-127.
98. Ellahi, N & Khan, MA 2011, 'Testing finance growth nexus: an auto regressive distributed lag (ARDL) methodology approach for selected SAARC countries', South Asian Journal of Management, vol. 18, no. 2, pp. 76-91.
99. Eltony, M. Nagy 2003, 'Can an Oil Based Country be Diversified? A Case study of Kuwait', Journal of Energy and Development, vol. 27, no.2.
100. Enders, W 2004, Applied econometric time series, 2nd edn, John Wiley & Sons, New York.
101. Enders, W 2010, Applied econometric time series, 3rd edn, John Wiley & Sons, New York.
102. Engle, R & Granger, C 1987, 'Cointegration and error correction: Representation, estimation and testing', Econometrica, vol. 55, pp. 251-276.
103. Ehteshami, A 2003, 'The politics of participation in the oil monarchies', in Tom Najem & Martin Hetherington (eds) Good Governance in the Middle East Oil Monarchies, Routledge Curzon, London.
104. Essayyad, M, Ramady, M & Al Hejji, M 2003, 'Determinants of bank profitability of petroleum economy: the case of Saudi Arabia', Petroleum Accounting and Financial Management Journal, vol. 22, no. 3, pp. 69-101.
105. Ewah, S, Esang, A & Bassey, U 2009, 'Appraisal of capital market efficiency on economic growth in Nigeria', International Journal of Business and Management, vol. 12, no. 4, pp. 219-228. EViews 2012, 'User's guide I & II', Version 7.0.
106. Faff, RW & Brailsford, TJ 1999, 'Oil price risk and the Australian stock market', Journal of Energy Finance & Development, vol. 4, no. 1, pp. 69-87.
107. Falcom 2010, viewed 17 May, www.falcom.com.sa
108. Fama, EF 1981, 'Stock returns, real activity, inflation, and money', The American Economic Review, vol. 71, no. 4, pp. 545-565.
109. Fasnacht, D 2009, Open innovation in the financial services: growing through openness, flexibility and customer integration, Springer, Berlin.
110. Fattouh, B 2006, 'Middle East crude pricing and the Oman crude oil futures contract: a critical assessment', Middle East Economic Survey, vol. 49, no. 37, http://www.middleeastoil.net/0xford%20Energy%20Comment.pdf.
111. Filer, Randall K, Hanousek, Jan & Campos, Nauro F 1999, 'Do stock markets promote economic growth?', William Davidson Institute, University of Michigan, Working Paper Series no. 267.
112. Fischer, Stanley 2003, 'The importance of financial markets in economic growth', Speech at the International Derivatives and Financial Market Conference, The Brazilian Mercantile and Futures Exchange (Citigroup, Campos do Jordao, Brazil), http://www.piie.com/fischer/pdf/fischer081103.pdf
113. Fisher, I. 1930, The theory of interest, Macmillan, New York.

114. Fisher, I. 1933. 'The debt-deflation theory of Great Depressions', Econometrica, vol. 4, pp. 337-357.
115. FitzGerald, V 2006, 'Financial development and economic growth: a critical survey', Background paper prepared for the World Economic and Social Survey 2006: diverging growth and development.
116. Frankel, JA 1983, Monetary and portfolio-balance models of exchange rate determination in economic interdependence and flexible exchange rates, MIT Press, Cambridge, MA.
117. Goaied, Mohamed. & Sassi, Seifallah, 2011, 'Financial Development, Islamic Banking and Economic Growth Evidence from MENA Region' International Journal of Business and Management Science, vol. 4, no. 2, pp. 105-128.
118. Garcia, Valeriano & Liu, Lin 1999, 'Macroeconomic determinants of stock market development', Journal of Applied Economics, vol. 11, pp. 29-59.
119. Gelb, AH 1989, 'Financial policies, growth and efficiency', World Bank Working Paper 202, June.
120. Ghali, K 1999, 'Financial development and economic growth: the Tunisian experience', Review of Development Economics, vol. 3, no. 3, pp. 310-322.
121. Ghirmay, T 2004, 'Financial development and economic growth in sub-Saharan African countries: evidence from time series analysis', African Development Review, vol. 16, no.3, pp. 415-432.
122. Goldsmith, RW 1969, 'Financial structure and development', Studies in Comparative Economics, no. 9, Yale University Press, New Haven, CT.
123. Graff, M 1999, 'Financial development and economic growth: A new empirical analysis', Dresden discussion paper in economics, no. 05/99,
124. Graff, M 2001, 'Financial development and economic growth: new data and empirical analysis', METUStudies in Development, vol. 28, no. 1, pp. 83-110.
125. Granger, CWJ 1969, 'Investigating causal relations by econometric models and cross spectral methods', Econometrica, vol. 37, no. 3, pp. 428-438.
126. Granger, CWJ 1986, 'Developments in the study of cointegrated economic variables', Oxford Bulletin of Economics and Statistics, vol. 48, pp. 213-228.
127. Granger, CWJ 1988, 'Some recent developments in a concept of causality', Journal of Econometrics, vol. 39, pp. 199-211.
128. Granger, CWJ & Newbold, P 1974, 'Spurious regressions in econometrics', Journal of Econometrics, vol. 2, no. 2, pp. 111-120.
129. Greenwood, J & Jovanovic, B 1990, 'Financial development, growth, and the distribution of income', The Journal of Political Economy, vol. 98, pp. 1076-1107.
130. Greenwood, J & Smith, B 1997, 'Financial markets in development, and the development of financial markets', Journal of Economic Dynamics and Control, vol. 21, no. 1, pp. 145-181.
131. Gronski, Ortrun Anne 2001, Stock markets and economic growth: evidence from South Africa, Peter Lang, Frankfurt.
132. Grossman, Gene M & Helpman, Elhanan 1994, 'Endogenous innovation in the theory of growth', Journal of Economic Perspectives, vol. 8, pp. 23-44.
133. Grossman, S & Hart, O 1986, 'The costs and benefits of ownership: a theory of vertical and lateral integration', Journal of Political Economy, vol. 94, no. 4, pp. 691-719.
134. Gujarati, Damodar 1995, Basic econometrics, McGraw-Hill, New York.
135. Gurusamy, S. 2009, Capital Markets, 2nd edn, Tata McGraw-Hill, New Delhi
136. Hacker SR & Hatemi, A 2006, 'Tests for causality between integrated variables using asymptotic and bootstrap distributions: theory and application', Applied Economics, vol. 38, pp. 14891500.
137. Hakkio, CS & Rush, M 1991, 'Cointegration: how short is the long-run?', Journal of International Money and Finance, December, pp. 571-581.
138. Handa, J & Khan SR 2008, 'Financial development and economic growth: a symbiotic relationship', Applied Financial Economics, vol. 18, no. 13, pp. 1033-1049.
139. Hanware, K 2009, 'Profitability prospects bright for Saudi banks', Sukuk.net, viewed 21 April 2010, http://sukuk.net/news/articles/1/Profitability_prospects_bright_for_Saudi_banks.html
140. Hassounah, M, n.d., 'Saudi Arabia: climate for change: banking on recovery and prosperity', The Washington Post, viewed 21 April 2010, http://www.washingtonpost.com/wp-adv/specialsales/spotlight/saudiarabia/images/Saudi_Arabia_Climate_For_Change.pdf
141. Hayashi, F 2000, Econometrics, Princeton University Press, NJ.
142. Hegelan, A & Palmer, M 1999, 'Bureaucracy and development in Saudi Arabia', in T Niblock & R Wilson (eds), The political economy of the Middle East, vol. 5, pp. 1-22, Edward Elgar, Cheltenham.
143. Henry, PB 2000, 'Stock market liberalisation, economic reform, and emerging market equity prices', The Journal of Finance, vol. 55, pp. 529-564.
144. Holmstrom, B & Tirole, J 1993, 'Market liquidity and performance monitoring', Journal of Political Economy, vol. 101, no. 4, pp. 678-709.
145. Hondroyiannis G, Lolos S & Papapetrou, E 2005, 'Financial markets and economic growth in Greece, 1986-1999', International Financial Markets, Institutions and Money, vol. 15, pp. 173-188.
146. Halicioglu, Ferda 2007, 'The financial development and economic growth nexus for Turkey', MPRA Paper No. 3566.
147. Hossain, S & Kamal, M 2010, 'Does stock market development cause economic growth? A time series analysis for Bangladesh economy', Journal of International Finance and Economics, vol. 10, no. 2, pp. 87-95.
148. Huang, RD, Masulis, RW & Stoll, HR 1996, 'Energy shocks and financial markets', Journal of Futures Markets, vol. 16, no. 1, pp. 1-27.
149. IFIS, 2013, http://www.islamicfinanceservice.com.
150. Im, S, Pesaran, H & Shin, Y 1997, 'Testing for unit roots in heterogeneous panel', Department of Applied Econometrics, University of Cambridge.
151. IMF (International Monetary Fund) 1999, 'Improvements in global financial system hinge on transparency and management of risk', IMF Press (Survey 5 September, p. 110) New York.
152. IMF 2006a, 'Financial system stability assessment', International Monetary Fund Publication Services, June, no.06/199, pp. 1-43.
153. IMF 2006b 'IMF executive board concludes 2006 Article IV consultation with Saudi Arabia', updated 27 September, viewed 21 April 2010,

http://www.imf.org/external/np/sec/pn/2006/pn06108.htm.
154. Jones, ZD 2009, 'Strong Saudi sukuk marks turning point', Maktoob Business, viewed 21 April 2010,http://business.maktoob.com/20090000006998/Strong_Saudi_sukuk_marks_turning_point_/Article.htm.
155. Johany, Ali D, Berne, Michel & Mixon, Wilson Jr 1986, The Saudi Arabian Economy, John Hopkins University Press, Baltimore, MD.
156. Johansen, S & Juselius, C 1990, 'Maximum likelihood estimation and inference on cointegration: with applications to the demand for money', Oxford Bulletin of Economics and Statistics, vol. 52, no. 2, pp. 169-210.
157. Johansen, S 1988, 'Statistical analysis of cointegrating vectors', Journal of Economic Dynamics and Control, vol. 12, pp. 231-254.
158. Johansen, S 1991, 'Estimation and hypothesis testing of cointegration vectors in Gaussian vector autoregressive models', Econometrica, vol. 59, no. 6, pp. 1551-80.
159. Johansen, S 1995, Likelihood-based inference in cointegrated vector autoregressive models, Oxford University Press, Oxford.
160. Jung, WS 1986, 'Financial development and economic growth: international evidence', Economic Development and Cultural Change, vol. 34, no. 2, pp. 333-346.
161. Juselius, K 2006, The cointegrated VAR model: methodology and applications, Oxford University Press, Oxford, England.
162. Kar, M & Pentecost, EJ 2000, 'Financial development and economic growth in Turkey: further evidence on the causality issue', Economic Research Paper No. 00/27.
163. Kar, Muhsin. Nazlioglu, §aban. & Agir, Huseyin. 2011, 'Financial development and economic growth nexus in the MENA countries: Bootstrap panel granger causality analysis', Economic Modelling, vol. 28, pp. 685-693.
164. Karam, Souhail 2009, 'Saudi Arabia plans sukuk, bonds market: regulator', Arabian Business.com, 6 June, viewed 21 April 2010, http://www.arabianbusiness.com/bahraininvestor/feature/557926?marketid=Bahrain
165. Kargbo, SM & Adamu, PA 2009, 'Financial development and economic growth in Sierra Leone', Journal of Monetary and Economic Integration, vol. 9, pp. 30-61.
166. Katos, A 2004, Econometrics: Theory and practice, Thessaloniki, Greece.
167. Khan, A 2000, 'The finance and growth nexus', Federal Reserve Bank of Philadelphia Business Review, pp. 3-14
168. Khan, A, Qayyum, A & Sheikh, S 2005, 'Financial development and economic growth: the case of Pakistan', Pakistan Development Review, vol. 44, no. 4, pp. 819-837.
169. Kikeri, S, Nellis, J & Shirley, M 1992, Privatization: the lessons of experience, World Bank, Washington, DC.
170. King, RG & Levine, R 1993a, 'Finance and growth: Schumpeter might be right', Quarterly Journal of Economics, vol. 108, no. 3, pp. 717-738.
171. King, RG & Levine, R 1993b, 'Finance, entrepreneurship and growth: theory and evidence', Journal of Monetary Economics, vol. 32, no. 3, pp. 513-42.
172. Kirankabe§, Mustafa Cem & Ba§arir, £agatay 2012, 'Stock market development and economic growth in developing countries: an empirical analysis for Turkey', International Research Journal of Finance and Economics, no. 87, pp. 134-146.
173. Kolapo, FT & Adaramola, AO 2012, 'The impact of the Nigerian capital market on economic growth (1990-2010)', International Journal of Developing Societies, vol. 1, no. 1, pp. 11-19.
174. Koutsoyiannis, A 1985, Theory of econometrics, 2nd edn, Macmillan Press, London.
175. Kremers, JJM, Ericsson, NL & Dolado, J 1992, 'The power of cointegration tests', The Journal of Econometrics, vol. 52, pp. 389-402.
176. Kularatne, C 2001, 'An examination of the impact of financial deepening on long-run economic growth: an application of a VECM structure to a middle-income country context', Trade and Industrial Policy.
177. Strategies, annual forum.
178. Kwiatkowski, D, Phillips, P, Schmidt, P & Shin, Y 1992, 'Testing the null hypothesis of stationarity against the alternative of a unit root', Journal of Econometrics, vol. 54, pp.159-178.
179. Kyle, A 1984, 'Market structure, information, futures markets, and price formation', in G Story, A Schmitz & A Sarris (eds), International agricultural trade: advanced readings in price formation, market structure and price instability, Westview Press, Boulder, CO.
180. Laurenceson, James 2002, 'The impact of stock markets on china's economic development: some preliminary assessments', Memo, The University of Queesland, Brisbane.
181. Leahy, Michael, Schich, Sebastian, Wehinger, Gert, Pelgrin Florian & Thorgeirsson, Thorsteinn 2001, 'Contributions of financial systems to growth in OECD Countries', OECD Economic Department Working Papers No. 280.
182. Lesova, P 2008, 'Saudi Arabia takes big step toward opening market', Market Watch, 28 August, viewed 21 April 2010, http://articles.marketwatch.com/2008-08-28/news/30728220_1_foreign-investors-stock-market-gcc
183. Levine, R 1991, 'Stock markets, growth, and tax policy', Journal of Finance, vol. 46, no. 4, pp. 1445-1465.
184. Levine, R 1997, 'Financial development and economic growth: views and agenda', Journal of Economic Literature, vol. 35, pp. 688-726.
185. Levine, R & Zervos, S 1996, 'Stock market development and long-run growth', World Bank Economic Review, vol. 10, no. 2, pp. 323-339.
186. Levine, R & Zervos, S 1998, 'Stock markets, banks, and economic growth', American Economic Review, vol. 88, no. 3, pp. 537-558.
187. Levine, R, Loyaza, N & Beck, T 2000, 'Financial intermediation and growth: causality and causes', Journal of Monetary Economics, vol. 46, pp.31-77.
188. Lopez de Silanes, F (1997), 'Determinants of privatization prices', Quarterly Journal of Economics, vol. 112, no. 4, pp. 965-1025
189. Lucas, Robert E 1988, 'On the mechanics of economic development', Journal of Monetary Economics, vol. 22, pp. 3-42.
190. Luintel, Kul B & Khan, Moshahid 1999, 'A

quantitative reassessment of the finance-growth nexus: evidence from a multivariate VAR', Journal of Development Economics, vol. 60, pp. 381405.
191. Lutkepohl, H 2005, New introduction to multiple time series analysis, 2nd edn, Springer, Berlin.
192. Mah, JJ 2000, 'An empirical examination of the disaggregated import demand of Korea: the case of information technology products', Journal of Asian Studies, vol. 11, pp. 237-244.
193. Majid, MS 2007, 'Does financial development and inflation spur economic growth in Thailand?', Chulalongkorn Journal of Economics, vol. 19, no. 2, pp. 161-184.
194. Masih, Mansur. Al-Elg, Ali. & Madani, Haider. 2009, 'Causality between financial development and economic growth: an application of vector error correction and variance decomposition methods to Saudi Arabia', Applied Economics, vol. 41, no. 13, pp. 1691-1699.
195. Mayer, C 1988, 'New issues in corporate finance', European Economic Review, vol. 32, no. 5, pp. 1167-1188.
196. Mazur, EM & Alexander, R 2001, 'Financial Sector Development and Economic Growth in New Zealand', Applied Economics Letter, vol. 8, pp. 545-549.
197. McKinnon, R 1973, Money and capital in economic development, Brookings Institutions, Washington, DC.
198. Melo, Jaime de 1988,'Commutable General Equilibrium Models for Trade Policy Analysis in Developing Countries: A Survey', Journal of Policy Modeling, vol. 10, no. 4, pp. 469-503.
199. Minier, JA 2003, 'Are small stock markets different?', Journal of Monetary Economics, vol. 50, pp. 1593-1602.
200. Minsky, H. P. 1959. 'A Linear model of cyclical growth', Review of Economics and Statistics. vol. XLI, pp. 137-145.
201. Mishal, Zakia 2011, 'Financial development and economic growth: evidence from Jordan', Economy Journal of Business & Economic Studies, vol. 17, no. 2, pp. 20-34.
202. Mishra, PK 2009, 'Capital market development and economic growth in India: a causality analysis', Working paper series, Institute of Technical Education and Research, Jagamara, Bhubaneswar, Orissa, India.
203. Mishra et al. 2010, 'Capital market efficiency and economic growth: the case of India', European Journal of Economics, Finance and Administrative Sciences, no. 27, pp. 130-138.
204. Mohamed, SE 2008, Finance-growth nexus in Sudan: empirical assesment based on an application of the autoregressive distributed LAG (ARDL) model, Arab Planning Institute, Kuwait.
205. Mohd, Rosylin, Shabri, Yusof M & Majid, Abd 2008, 'Towards an Islamic international financial hub: the role of Islamic capital market in Malaysia', International Journal of Islamic and Middle Eastern Finance and Management vol.1, no. 4, pp. 313-329.
206. Mohtadi, H & Agarwal, S 1997, 'Stock market development and economic growth: evidence from developing countries', Research paper, Department of Economics, University of Wisconsin, Milwaukee, WI.
207. Molivor, Donald & Abbondante, Paul 1980, The economy of Saudi Arabia, Praeger, NY.
208. Morck, R, Shleifer, A & Vishny, R 1990a, 'Do managerial objectives drive bad acquisitions?', Journal of Finance, vol. 45, no. 1, pp. 31-48.
209. Morck, R, Shleifer, A &Vishny, R 1990b, 'The stock market and investment: is the market a sideshow?', Brookings Papers on Economic Activity, vol. 2, pp. 157-215.
210. Mosesov, A & Sahawneh, N 2005, 'UAE: financial development and economic growth', Skyline Business Journal, vol. 1, pp. 1-11.
211. Mukherjee, TK & Atsuyuki N 1995, 'Dynamic relations between macroeconomic variables and the Japanese stock market: an application of a vector error correction model', Journal of Financial Research, vol. 18, pp. 223-237.
212. Mundaca, BG 2009, 'Remittances, financial market development, and economic growth: the case of Latin America and the Caribbean', Review of Development Economics, vol. 13, no. 2, pp. 288-303.
213. Naceur, B & Ghazouani, S 2007, 'Stock markets, banks, and economic growth: empirical evidence from the MENA region', Research in International Business and Finance, vol. 21, no. 2, pp. 297-315.
214. Nashashibi, Hikmat 1983, 'The role of Arab capital markets in investing the financial surpluses', Middle East Banking Finance. Arab Press Service, vol. 3, pp. 195-208.
215. Nasib, Hannan 2008, 'Islamic finance: a global proposition', Capco, viewed 21 April 2010, http://www.capco.com/node/218
216. Naughton Shahnaz & Naughton, Tony 2000, 'Religion, ethics and stock trading: The case of an Islamic equities market', Journal of Business Ethics vol. 23, no. 2, pp. 145-159.
217. Ndako, U 2010, 'Stock markets, banks and economic growth: time series evidence from South Africa', African Finance Journal, vol. 12, no. 2, pp. 72-92.
218. Ngugi, R, Amanja, D & Maana, I 2009, 'Capital market, financial deeping and economic growth in Kenya', Research paper for Centre for the Study of African Economies, Oxford University, Oxford, England.
219. Niblock, T & Malik, M 2007, The political economy of Saudi Arabia, Routledge, New York.
220. Nowbutsing, Baboo M 2009, 'Stock market development and economic growth: the case of Mauritius', International Business & Economics Research Journal, vol. 8, no. 2, pp. 77-88.
221. Nyong, MO 2003, 'Predictability and volatility of stock return in three emerging markets: Nigeria, South Africa and Brazil', Nigeria Journal of Economics and Development Matters, vol. 2, no. 1, pp. 12-29.
222. Obiakor, R & Okwu, A 2011, 'Empirical analysis of impact of capital market development on Nigeria's economic growth (1981-2008) (Case study: Nigerian stock exchange)', De La Salle University Business & Economics Review, vol. 20, no. 2, pp. 79-96.
223. Obstfeld, M 1994, 'Risk-taking, global diversification, and growth', American Economic Review, vol. 84, no. 5, pp. 1310-1329.
224. Ocampo, Jose Antoinio & Stiglitz, Joseph 2008, Capital Market Liberalization and Development, Oxford University Press Inc. New York.
225. Odhiambo, N 2010, 'Finance-investment-growth nexus in South Africa: an ARDL-bounds testing procedure', Economic Change and Restructuring, vol. 43, no. 3, pp. 205-219.

226. Omran, Mohammed & Bolbol, Ali 2003, 'Foreign direct investment, financial development, and economic growth: evidence from the Arab countries', Review of Middle Ea st Economics and Fina nce, vol. 1, no. 3, pp. 231-49.
227. Osinubi, T 2000, 'Does stock market promote economic growth in Nigeria?', Research paper for University of Ibadan, Ibadan, State of Oyo, Nigeria.
228. Olweny, TO & Kimani, D 2011, 'Stock market performance and economic growth empirical evidence from Kenya using causality test approach', Advances in Management and Applied Economics, vol. 1, no. 3, pp. 177-220.
229. OPEC 2013, 'Saudi Arabia'
230. Oxford Business Group (OBG) 2007, 'The Report: Emerging Saudi Arabia 2007', OBG, viewed 6 January 2013, http://www.oxfordbusinessgroup.com/country/Saudi%20Arabia/2007
231. Quartey, P & Prah, F 2008, 'Financial Development and Economic Growth in Ghana: is there a causal link?', African Finance Journal, vol. 10, no. 1, pp. 28-48.
232. Pagano, Marco 1993, 'Financial markets and growth', European Economic Review, vol. 37, pp. 613-622.
233. Patrick, Hugh. 1966, Financial Development and Economic Growth in Underdeveloped Counties, Economic Development and Cultural Change, vol. 14, pp. 174-189.
234. Pesaran, M. H. & Shin, Y. 1995, 'Long-run structural modelling. Cambridge, Department of Applied Economics', University of Cambridge, DAE Working Paper No. 9419.
235. Pesaran, M. H. & Pesaran, B. 1997, Working with Microfit 4.0: an interactive approach, Oxford University Press, Oxford.
236. Pesaran, MH, Shin, Y & Smith, RJ 2001, 'Bounds testing approaches to the analysis of level relationships', Journal of Applied Econometrics, vol. 16, pp. 289-326.
237. Parker, M. 2006, 'Role of Islamic finance in Saudi industry', Arab News, 6 December, viewed 21 April 2010,
238. Phillips, P. C. B. & Perron, P. 1988, 'Testing for a unit root in time series regression', Biometrika, vol. 75, pp. 335-346.
239. Rahman, M & Salahuddin, M 2010, 'The determinants of economic growth in Pakistan: does stock market development play a major role?', Economic Issues, vol. 15, part 2, pp. 68-86.
240. Ram, Rati 1999, 'Financial Development and Economic Growth: Additional Evidence', The Journal of Development Studies, vol. 35, no. 4, pp. 164-174.
241. Ramady, A. M 2007a, 'Saudi capital market 2006: a turbulent year', Arab News, 1 January, viewed 21 April 2010, http://www.arabnews.com/?page=6&section=0&article=90560&d=1&m=1&y=2007
242. Ramady, A. M 2007b, 'Saudi stocks: on a roll and a bubble', Arab News, 10 December, viewed 21 April 2010, http://www.arabnews.com/node/306569
243. Ramady, A. M 2010, The Saudi Arabian economy: policies, achievements, and challenges, 2nd edn, Springer, New York, NY.
244. Ray, H, Biswas, J & Roy, MK 2009, 'Capital market: levels of development and impediments to growth: some international evidences', IUP Journal of Applied Finance, vol. 15, no. 5, pp. 522.
245. Robinson, J. 1952, The Generalization of the General Theory', in the Rate of Interest and Other Essays. MacMillan, London.
246. Rostow, Walt, W 1960, The stages of economic growth: a non-communist manifesto, Cambridge University Press, UK.
247. Romer, Paul 1986, 'Increasing returns and long-run growth', Journal of Political Economy, vol. 94, pp. 1002-1037.
248. Romer, Paul 1990, 'Endogenous technical change', Journal of Applied Economics, vol. 98, pp. 71101.
249. Rousseau, PL & Wachtel, P 2000, 'Equity markets and growth: cross-country evidence on timing and outcomes, 1980-1995', Journal of Banking and Finance, vol, 24, pp. 1933-1957.
250. Ryan, Nick 2008, 'The rise and rise of Islamic finance', The Market, 2 August, viewed 21 April http://www.enterprise-ireland.com/NR/rdonlyres/D71D37D9-9ABB-45E1-8354- 53601A09F 4D6/0/TheRi seandRi seofIslamicFinance.pdf
251. Sadorsky, P 1999, 'Oil price shocks and stock market activity', Energy Economics, vol. 21, no. 5, pp. 449-469.
252. §amiloglu, Famil & Sava§, Bilal 2010, 'Financial development and economic growth in Turkey: an ARDL bounds testing approach', Qankiri Karatekin University the Institute of Social Sciences, no.1, pp. 25-34
253. AME Info 2007, 'Mega projects boost for Saudi banking', AME info.com, viewed 21 April 2010, http://www.ameinfo.com/ 127518.html.
254. SAMA 2004, A case study on globalization and the role of institution building in the financial sector in Saudi Arabia, Riyadh.
255. SAMA 2013, Database, www.sama.gov.sa.
256. Saudi Stock Exchange 2013, official website, http://www.tadawul.com.sa.
257. 'Saudi Arabia: Shariah index shows increasing trends toward Islamic investment' 2009, Sukuk.net, January, viewed 21 April 2010, http://sukuk.net/news/articles/1/ SaudiArabiaShariah_index _shows_ increasing trend.html Schmith, S (n.d.), 'Expanding trade financing opportunities through Islamic finance', ITA, viewed 21 April 2010, <http://www.ita.doc.gov/td/finance/publications/Islamic_Banking.pdf>
258. Schumpeter, JA 1912, The theory of economic development, Oxford University Press, Oxford, England.
259. Schwarz, GW 1978, 'Estimating the dimension of a model', Annals of Statistics, vol. 6, pp. 461-464 Seetanah, B 2008, 'Financial development and economic growth: an ARDL approach for the case of the small island state of Mauritius', Applied Economics Letters, vol. 15, pp. 809 - 813.
260. Sellin, P 2001, 'Monetary policy and the stock market: theory and empirical evidence', Journal of Economic Surveys, vol. 15, no. 4, pp. 491-541.
261. Shahbaz, M, Ahmed, N & Ali, L 2008, 'Stock market development and economic growth: ARDL causality in Pakistan', International Research Journal of Finance and Economics, no. 14, pp. 182-195.
262. Shaheen, A 2010, 'Saudi Arabia five-year plan to create jobs, expand services', Gulf News, 11 August,

viewed 20 November 2011, http://gulfnews.com/business/economy/saudi-arabia-five-year-plan-to-create-jobs-expand-services-1.666670
263. Shaw, ES 1973, Financial deepening in economic development, Oxford University Press, New York. Sfakianakis, J 2011 (11 May), 'Holding back: state spending focus restrains private sector, diversification', Banque Saudi Fransi, viewed 20 November 2011, http://www.saudibrit.com/2011/05/20/saudi-arabia-economics-%E2%80%93-may-2011- %E2%80%93-bsf/
264. Shoult, A & Anwar, H 2009, Doing business with Saudi Arabia, 4th ed, GMB Publishing, London, UK.
265. Shleifer, A & Summers, L 1988, 'Breach of trust in hostile takeovers', in A Auerbach (ed.), Corporate takeovers: causes and consequences, University of Chicago Press, Chicago, IL. Shuaa Capital 2008, 'The project: King Abdullah economic city, equity investment report', 15 April. Sililo, Mulambo 2010, 'Stock market development and economic growth: a case for Zambia', University of Stellenbosch, South Africa.
266. Sinha, Dipendra & Macri, Joseph 2001, 'Financial development and economic growth: The case of eight Asian countries', MPRA Paper No. 18297, posted 2 November 2009.
267. Singh, Ajil 1997, 'Financial liberalisation, stock markets and economic development', The Economic Journal, vol. 107, pp. 771-782.
268. Solow, Robert M 1956, 'A contribution to the theory of economic growth', Quarterly Journal of Economics, pp. 65-94.
269. Solow, Robert M 1994, 'Perspective on growth theory', The Journal of Economic Perspectives, vol. 8, pp. 45-54.
270. Soufi, Wahib Abdulfattah & Mayer, Richard 1991, Saudi Arabian industrial investment: an analysis of government-business relationship, Quorum Books, New York.
271. Stern, Nicholas 1989, 'The economics of development: a survey', The Economic Journal, vol. 99, no. 397, pp. 597-685.
272. Stern, Nicholas 1991, 'The determinants of growth', The Economic Journal, vol. 101, pp. 122-133.
273. Stiglitz, JE 1985, 'Credit markets and the control of capital', Journal of Money, Credit and Banking, vol. 17, no. 2, pp. 133-152.
274. Stiglitz, JE 1993, 'The role of the state in financial markets', in M Bruno & B Pleskovic (eds) Proceedings of the World Bank Annual Conference on Development Economics, World Bank, Washington, DC.
275. Stoica, O 2002, The role of the capital market in economic development, University of Iasi, Romania.
276. Sule, K & Momoh, C 2009, 'The impact of stock market earnings on Nigerian per capita income', African Journal of Accounting, Economics, Finance and Banking Research, vol. 5, no. 5, pp. 77-88.
277. Swan, Trevor W 1956, 'Economic growth and capital accumulation', Economic Record, vol. 32, pp. 334-61.
278. Tachiwou, AM 2010, 'Stock market development and economic growth: the case of West African Monetary Union', International Journal of Economics and Finance, vol. 2, no. 3, pp. 97-103.
279. Unalmi§, Deren 2002, 'The causality between financial development and economic growth: the case of Turkey', Research Department Working Paper No. 3, The Central Bank of the Republic of Turkey.
280. Van Nieuwerburgh, Buelens, S & Cuyvers, F 2006, 'Stock market development and economic growth in Belgium, Explorations in Economic History, vol. 43, no. 1, pp. 3-38.
281. Viney, Christopher 2003, Financial institutions, instruments and markets, McGraw-Hill Australia, Australia.
282. Vogel, R & Buser, S 1976, 'Inflation, financial repression and capital formation in Latin America', in R McKinnon (ed.), Money and finance in economic growth and development: essays in honor of Edward S. Shaw, Marcel Dekkar, New York.
283. Wannocott, R & Wonnocott, TH 1972, Econometrics, John Widey & Sons, New York.
284. Were, M, Nzomoi, J & Rutto, N 2012, 'Assessing the impact of private sector credit on economic performance: evidence from sectoral panel data for Kenya' , International Journal of Economics and Finance, vol. 4, no. 3, pp. 182-190.
285. Wilson, Rodney 1983, Banking and Finance in the Arab Middle East, Macmillan, London.
286. Wilson, R, Malik, M, Al-Salamah, A & Al-Rajhi, A 2004, Economic development in Saudi Arabia, Routledge Curzon, London.
287. Wilson, R 2008, 'Innovation in the structuring of Islamic sukuk securities', Humanomics, vol. 24, no. 3, pp. 170-181.
288. Wong, WK, Penm, J, Terrell, RD & Lim, CKY 2004, 'The relationship between stock markets of major developed countries and Asian emerging markets' , Journal of Applied Mathematics and Decision Sciences, vol. 8, no. 4, pp. 201-218.
289. Wong, A & Zhou, X 2011, 'Development of financial market and economic growth: review of Hong Kong, China, Japan, the United States and the United Kingdom', International Journal of Economics and Finance, vol. 3, no. 2, pp. 111-115.
290. Wooldridge, JM 2006, Introductory econometrics: a modern approach, 3rd edn, Lachina Publishing Services, Ohio.
291. World Bank 2009, World development indicators. Washington, DC.
292. Wurgler, Jeffrey 2000, 'Financial markets and the allocation of capital', Journal of Financial Economics, vol. 58, pp. 187-214.
293. Xu, Z 2000, 'Financial development, investment, and economic growth', Economic Inquiry, vol. 38, no. 2, pp. 331-344.
294. Yang, Jia Lynn 2007, 'Saudi Arabia's stock collapse', Fortune 17 January, CNN Money.com, viewed 21 April 2010, http://money.cnn.com/magazines/fortune/fortune_archive/2006/12/11/8395382/index.htm
295. Yartey, AC & Adjasi, CK 2007, 'Stock market development in Sub-Saharan Africa: critical issues and challenges', International Monetary Fund Working Paper IMF WP/07/209, Washington, DC.
296. Zang, H & Kim, YC 2007, 'Does financial development precede growth? Robinson and Lucas might be right', Applied Economic Letters, vol. 14, pp. 15-19.
297. Zivengwa, T, Mashika, J, Bokosi, FK & Makova, T 2011, 'Stock market development and economic growth in Zimbabwe', International Journal of Economics and Finance, vol. 3, no. 5, pp. 140-150.