CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter proposes a research that will add to an understanding of the relationship between board mechanism and performance of listed government-linked companies (GLCs) in Malaysia. Specifically, this study aims to examine the different impact of mechanisms (board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size) on performance which measured by share price returns (SPR) and cash flows (CF) of listed GLCs in Malaysia. The six main areas which will be discussed in this chapter will be; background of the study, problem statement, research objectives, research questions, hypotheses of the study and significance of the study.

1.1 Background of the Study

After the Asian financial crisis in 1997, performance of many economies of East Asian countries, including Malaysia which has been negatively affected by the bad corporate governance (Tham & Romuald, 2012) such as Perwaja Steel in 1987 (Norwani, Mohamad & Chek, 2011) and Malaysia Airlines System in the 1990s (Norwani et al., 2011). This has resulted in board of directors being largely criticised and accused for the decline in shareholders' wealth and corporate failure (Marte & State, 2010). Hence, the need to

improve corporate governance in order to regain the investors' confidence has been raised in Malaysia (Norwani et al., 2011). An argument that corporate governance mechanisms affect the performance of different organizations have been raised and are equally crucial to listed private and state-owned organizations (the GLCs) (Mohamad, Rashid & Shawtari, 2012).

Corporate governance is a mechanism which aims to reduce the misalignment of management's goals with those of the stakeholders in order to improve firm performance. In accordance with Shukeri, Ong and Shaari (2012), amongst different corporate governance mechanisms, corporate boards are the most important mechanisms (Afandyar, Aziz, Butt & Tasawar, 2013) that able to monitor and advise management in carrying responsibility to protect shareholder interests. The boards are also one important control in managing firms operations (Amran & Che-Ahmad, 2009). Besides, agency problem tends to occur when the managers pursue opportunistic agenda for self-interest without pursuing the objective of shareholders' wealth maximization. Hence, it is very important to have different board mechanisms in place. The mixture of various mechanisms governs the firm. These include the ownership structure, compensation structure, audit structure and board structure etc. Board mechanisms are corporate governance mechanisms which relates to board's activities such as board meeting, borrowings, audit committee and so on (Afandyar et al., 2013).

The importance of board mechanisms is reflected in different governance codes. Firstly, in accordance with the OECD Principles of Corporate Governance: "The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders." ('OECD,' 2004).

In addition, Malaysian Code on Corporate Governance 2012 has been released in March 2012 and has replaced the Malaysian Code on Corporate Governance 2007 with the objectives of strengthening board structure and composition recognising the role of directors as active and responsible fiduciaries.

Directors have a duty in not just setting the strategic direction and overseeing conduct of the business, also to make sure that the company operation complies with laws and ethical values. It is also the duty of the board to maintain an effective governance structure. Hence, in the effort of fulfilling the fiduciary duties and responsibilities, board mechanisms such as board size, board independence, audit committee, board meeting and CEO duality, play crucial roles.

In response to criticisms regarding the role and performance of GLCs due to recurring of poor performance, a new transformation policy which aims to strengthen the government system of GLCs has been issued by the major shareholders, the Malaysian government (Mohamad et al., 2012). Improvement of board mechanisms is one of the most important emphasize that being stressed on in the policy in order to upgrade the effectiveness of the corporate governance of the GLCs. In The Green Book of transformation policy which was launched on 26 April 2006, certain board characteristics which aim to improve the effectiveness of board have been emphasized by the Putrajaya Governance Committee (PGC), such as board size, board meetings and board independence. The Green Book of transformation policy is consistent with and complements the Malaysian Code of Corporate Governance 2012 by asserting on the performance aspects of Boards.

1.2 Problem Statement

In accordance with agency theory, agency cost occurs when the managers pursue opportunistic agenda for self-interest without pursuing the objective of shareholders' wealth maximization. Also in accordance with Amran and Che-Ahmad (2009), misalignment between principal and agents are difficult to be avoided. Hence, it is very important to study the different board mechanisms and their association with the performance of GLCs.

In addition, GLCs have dual objectives of not only maximizing shareholders' return but also to meeting their social obligations. These dual objectives may

lead to an ineffective decision making. In accordance with Norhayati and Siti-Nabiha (2009), argued that although GLCs are large in size, but they are facing internal control problem and are short of strategic direction. Hence, it is very vital to study the effectiveness of different board mechanisms in GLCs in relation to its performance as board plays significant role in effective decision making.

For companies in Malaysia, the importance of role of board of directors is further proven through the happening of corporate scandals in Malaysia. One of the most well-known examples is Perwaja Steel Berhad which involved an estimated loss of more than RM10 billion. One of the issue was the misconduct of directorship when the director pay RM74.6 million to the Japanese company in collaboration, Nippon Steel Corporation, without getting the board of director approval. It was later revealed that there was problem in the internal control of Perwaja Steel that unauthorized and onesided contract which took place within Perwaja Steel with both local and foreign companies amounting to Ringgit Malaysia hundred millions were being revealed. This indicated that conflict of interests within certain enriched directors have happened which then lead to the failure of corporate governance within the company and its financial reporting (Norwani et al., 2011). This proves that corporate governance can cause an impact on the financial reporting of a company.

Other cases like Port Klang Free Zone and many more have also raised corporate governance debates regarding the board effectiveness in acting as the 'watchdog' of the quality of the financial reporting. This debate has then raised a significant reform that emphasized on the effectiveness of audit committee in improving the quality of financial reporting.

In addition, for GLCs in specific, the governance of Malaysia Airline Systems (MAS) fail when the single largest shareholder, Tan Sri Tajuddin Ramli who held both the chief executive officer and chairman at the same time, via Naluri Berhad, conducted unprofitable business activities as he over expanded the flight destination (Norwani et al., 2011). Due to too many orders being placed on planes, the capital expenditure of MAS raised. The

mismatch of earnings and expenditure occurred when the earnings were recorded mostly in ringgit but the expenditure was recorded in the financial reporting system in US dollar (Norwani et al., 2011). Besides, MAS ended up paying RM3.80 for its new aircraft ordered in 1995 with a costing of merely RM2.50 (Norwani et al., 2011).

In addition, in another GLC, Sime Darby Berhad, the ex-CEO, Ahmad Zubir Murshid was removed due to misconduct on failure to disclose overrun costs on hydroelectric dam project (Beleya, Raman, Ramendren & Nodeson, 2012).

In addition, research on the board mechanisms and performance of companies are still lacking behind (Amran & Che-Ahmad, 2011). Many studies have been done in overseas but limited in Malaysia (Amran & Che-Ahmad, 2011). A study by Ibrahim and Abdul Samad (2011) only used data from 1999 to 2005. Besides, Amran and Che-Ahmad (2011) used solely data covering year 2003 to 2007. In addition, Saah and Abdullah (2011) investigated listed companies in main board Bursa Malaysia Securities Berhad from year 2004 to 2006. Other than that, Tham and Romoald (2012)'s study only covered 20 Malaysian listed companies listed on Bursa Malaysia for the period of 2006 to 2010.

Besides, Razak, Ahmad and Aliahmed (2008) stated that little attention has been given in developing economies such as Malaysia to examine the impact of governance on company's performance. Hence, this study intends to examine the impact of corporate governance on the performance.

Meanwhile, there are a few problems pointed out by the past researchers. Firstly, inadequate corporate governance variables being studied in the past studies (Coleman, 2007; Abidin, Kamal & Jusoff , 2009) such as committees (Al-Matari, Al-Swidi, Fadzil & Al-Matari, 2012a; Hussin & Othman, 2012; Hamdan, Sarea & Reyad, 2013) and frequency of board meeting (Al-Matari et al., 2012a). In addition, most of the past studies used market-based measures but not accounting-based measures (Al-Matari et al., 2012a) and using not enough proxy for financial performance (Hussin & Othman, 2012; Marte & State, 2010; Tham & Romuald, 2012). In addition, the period of investigation covered by the past studies was not adequate (Ghabayen, 2012; Al-Matari et al., 2012a; Coleman, 2007). Besides, the past studies pointed out a problem with regards to financial sectors that were being eliminated from the sample investigated (Al-Matari et al., 2012a; Al-Matari, Al-Swidi, Fadzil and Al-Matari, 2012b). Hence, this study intends to fills in the gap by taking into consideration the limitations faced by researchers of past studies by introducing more corporate governance variables and by taking into account the companies from financial sectors.

In addition, in term of the performance indicators used, many past studies (Amran & Che-Ahmad, 2009; Babatunde & Olaniran, 2009; Ibrahim & Abdul Samad, 2011; Maury, 2006; Muttakin, Khan & Subramaniam, n.d.; Ong & Gan, 2013; Rashid, De Zoysa, Lodh & Rudkin, 2010) have used Tobin's Q but only some studies used share price return (Bhagat & Black, 2000; Guest, 2009) to measure the share prices performance.

1.3 Research Objective(s)

1.3.1 General Objective

The objective of this paper aims to determine whether there are improvements in listed GLCs' performance (SPR and CF) after controlling company corporate governance (board mechanisms). In other words, this study aims to investigate if there are associations among board mechanisms and listed GLCs' performance.

1.3.2 Specific Objective

The specific objectives of the study are to examine the relationship among predictor variables (namely board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size) and listed GLCs' performance (SPR and CF).

1.4 Research Question(s)

The research questions to be answered in the research project are is there any relationship among variables (namely board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size) and listed GLCs' performance (SPR and CF).

1.5 Hypotheses of the Study

 H_0 : There is no significant relationship among variables (namely board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size) and listed GLCs' performance (SPR and CF).

 H_1 : There is a significant relationship among variables (namely board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size) and listed GLCs' performance (SPR and CF).

1.6 Significance of the study

In Malaysia, state-owned organisations, commonly known as GLCs, are the main providers of utilities, public transport, water and sewerage, postal services, airlines, airports and banking and financial services (Norhayati & Siti-Nabiha, 2009). GLCs which accounts for 36% of the Malaysian Stock Exchange market capitalization (Lau & Tong, 2008; Norhayati & Siti-Nabiha, 2009) not only play a vital role in the development of Malaysia economy but also play an important role in the national workforce as it employs an estimated 5% of the workforce (Norhayati & Siti-Nabiha, 2009). Hence, it is very crucial to understand whether board mechanisms placed in GLCs are able to help them achieve financial returns while fulfilling social responsibilities in GLCs.

From the public perspective, as explained earlier, GLCs have dual objectives of not only maximizing shareholders' return but also to meeting their social obligations. GLCs are using public funds and are held accountable for every single ringgit spent. Sound corporate governance benefits the society as a whole by making sure that the GLCs take the interests of a wide range of stakeholders into consideration and by holding the GLCs' board accountable to the shareholders (Beleya et al., 2012).

To other corporations in other sectors, GLCs are able to show positive demonstration of corporate governance and improved service to increase their competitiveness and capabilities of whole market.

Hence, answers to whether there is association between board mechanisms and the performance of these GLCs will reveal useful information to Malaysian GLCs and their investors and the public (Amran & Che-Ahmad, 2011). This answer to whether a good corporate governance enhances company performance is useful to investors because a sound corporate governance will lead to better allocation and management of scarce resources within a company and a better management and allocation of these resources will enhance firm performance and lead to improvement in the company's share price, which tally with the ultimate objective of shareholder wealth maximization (Ghabayen, 2012).

To government, as the regulator of corporate governance for GLCs, the implications for this study serve as a base for developing, recommending and correcting the effectiveness of the GLCs transformation policy (Mohamad et al., 2012).

Besides, this study fills in the gap by taking into consideration the recommendations given by researchers of past studies. This study is introducing more corporate governance variables (Coleman, 2007; Abidin, Kamal & Jusoff, 2009) such as committees (Al-Matariet al., 2012a; Hussin & Othman, 2012; Hamdan et al., 2013) and frequency of board meeting (Al-Matari et al., 2012a), using market-based measures but not accounting-based measures (Al-Matari et al., 2012a), using more proxy for financial

performance (Hussin & Othman, 2012; Marte & State, 2010; Tham & Romuald, 2012) and by extending the period of investigation (Ghabayen, 2012; Al-Matari et al., 2012a; Coleman, 2007). In addition, this study fills in the gap by taking into account the companies from financial sectors (Al-Matari et al., 2012a; Al-Matari et al., 2012b).

In addition, in term of the performance indicators used, many past studies (Amran & Che-Ahmad, 2009; Babatunde & Olaniran, 2009; Ibrahim & Abdul Samad, 2011; Maury, 2006; Muttakin, Khan & Subramaniam, n.d.; Ong & Gan, 2013; Rashid, De Zoysa, Lodh & Rudkin, 2010) have used Tobin's Q but only some studies used share price return (Bhagat & Black, 2000; Guest, 2009) to measure the share prices performance.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In this chapter, the first section will be comprehensive review of the board mechanisms followed by the review of relevant theoretical models. In the second section, review of relevant theoretical models will be discussed while the third section will show the conclusion on the models. The next section will present the proposed conceptual framework will be developed based on the research objectives and research questions. Finally, in the last section, hypotheses on each of the components will be examined and tested to review the relationship between board mechanisms and performance.

2.1 GLCs in Malaysia

In Malaysia, GLCs are defined as companies in which the Malaysian Government has direct controlling stake via the Government-Linked Investment Companies and have a primary commercial objective (Lau & Tong, 2008; Razak et al., 2008). Malaysian Government not only has ownership in the GLCs, but also has a controlling stake of appointing board of director members and senior management. In addition, the Malaysian Government also has the ability to make major decisions such as awarding contract, acquisition and so on.

2.1.1 The Green Book

In order to enhance the governance of public listed companies and GLCs, regulators have developed Malaysian Code on Corporate Governance and Bursa Malaysia Listing Requirement which are voluntary and mandatory to adopt. However, the progress of GLCs' corporate governance has been strengthened when the government, the major shareholder of listed GLCs through the GLC transformation program introduced the Green Book in 2004 (Mohamad et al., 2012).

One of the main policy thrusts in the GLC Transformation framework is to upgrade the effectiveness of GLC Boards. "The Green Book: Enhancing Board Effectiveness", is launched in April 2006, is a guide for GLCs to raising GLC Board effectiveness. It is one of the ten initiatives to drive and enhance the performance of GLCs by the government. The GLCs in Malaysia are required to adopt the guidelines in the Green Book by 1st January 2007 ("GLC Transformation Manual," 2005).

2.2 Review of Literature

2.2.1 Independent Variable- Board Size

Board size refers to the number of directors, both non-executive and executive who serve on the board (Amran, 2011). Abidin et al. (2009) suggests that the average board size is eight. From the GLCs perspective, the Green Book states that the best practice standard of number of directors that enable board to discharge its roles and responsibilities are preferably no larger than 10 directors ('The Green Book,' 2006). However, larger board size of up to 12 directors is permitted provided that GLCs have legitimate reasons to do so. However, such rational should be disclosed. For example, complex structure in terms of size, scope or geography area.

Studies claim that a large board size would lead to several advantages to the firms. Firstly, a large board size results in pooling of resources such as problem solving capabilities, ideas and skills (Amran & Che-Ahmad, 2011). Besides, a large board size exposes the firm to wider contracting relationships through the directors' contact.

On the other hand, having a large board size can be problematic. A large board size would result in poorer communication and decision making as more people are involved in the decision making process. The decision making process will be more time consuming (Vafeas, 1999).

2.2.2 Independent Variable-Board Independence

The huge losses by major companies such as Sime Darby Berhad due to unfortunate decision makings made by the top management have raised a serious debate on the role of board of directors especially the role of independent directors on board (Beleya et al., 2012).

In addition, the agency theory provides an argument that in order to monitor and control the actions of opportunistic behaviour by the managers, independent non-executive directors are needed to act as a check and balance in enhancing board effectiveness (Amran & Che-Ahmad, 2009). However, the independent directors must be independent of the management in order to oversee and prevent shareholders interest and other stakeholders' interest from being exploited. In accordance to Ibrahim and Abdul Samad (2011), company value can be strengthen by the experiences and monitoring role brought by the outsider directors or independent directors.

In addition, in accordance to Tham and Romuald (2012), although the executive directors have skills, know-how and valuable knowledge to get involved in a company's day-to-day activities, the contribution of

independence, objectivity and expertise from different fields from the independent directors are important.

Board independence refers to the proportion of the number of independent non-executive directors in relative to the number of both executive and non-executive directors (Abidin et al., 2009). Paragraph 1.01 of the Bursa Malaysia Listing Requirements defines in independent director as "a director who is independent from the management and free from any business or other relationship which could interfere with the exercise of independent judgement or the ability to act in the best interest of an applicant or a listed issuer".

From the corporate governance perspective, board of directors must be balanced. Paragraph 15.02 (1) of the Bursa Malaysia Listing Requirements 2012 requires that a listed issuer to ensure that at least 2 directors or 1/3rd of the board of directors whichever is higher, are independent directors. This requirement is consistent with the agency theory which emphasizes that non-executive directors are required to monitor the managers from pursuing their opportunistic behaviour at the expense of the shareholders. This provision is also in consistent with the Green Book.

2.2.3 Audit Committee

As discussed earlier, corporate scandals like Perwaja Steel Berhad, Sime Darby Berhad, Port Klang Free Zone have raised corporate governance debates regarding the board effectiveness in acting as the 'watchdog' of the quality of the financial reporting which then raised a significant reform that emphasized on the effectiveness of audit committee in improving the quality of financial reporting. This is due to the reason that the integrity of financial reporting is rely on corporate governance (Norwani et al., 2011; Mohamad et al., 2012). In the overall corporate governance structure, the audit committee is seen as a vital component among all as it involves the audit quality which might influence the financial reporting integrity of a company and its transparency (Jamil, n.d.; Mohamad et al., 2012). The people involved in the financial reporting like board of directors, management team and both internal and external auditors may influence the financial reporting integrity through their conduct. Hence, audit committee plays an important role in enhancing the audit quality and acting as a watchdog of financial reporting of a company. Audit committee might play their role by selecting external auditors on behalf of the board of directors after getting approval from the shareholders. Besides, audit committee also actively review the financial statements, audit process and internal accounting controls to avoid any fraud in the financial reporting system of a company.

Hence, the importance of the audit committee in improving sound corporate governance practices is one of the focuses of the Malaysian Code on Corporate Governance 2012. The Audit Committee is held responsible for upholding the integrity in the financial reporting such as responsibility of ensuring the financial reporting is in compliance with the applicable accounting standard (Mohamad et al., 2012). In addition, it is also the responsibility of an audit committee to ensure that a business organisation has adequate internal controls and independent external auditors (Tham & Romuald, 2012).

2.2.3.1 Independent Variable-Audit Committee Size

Audit committee size refers to the number of directors who serve on the committee. In addition, the size of audit committee has a positive effect on earnings quality (Hamdan et al., 2013). A larger size is claimed to be more effective in terms of diversity of expertise which could enhance the monitoring role in ensuring the financial reporting quality. The Green Book (2006) explains that the best practice for an audit committee to work effectively is that it comprises no more than 4 directors.

2.2.3.2 Independent Variable-Audit Committee Independence

Besides, Paragraph 15.10 of the Bursa Malaysia Listing Requirement 2012 requires that majority of the Audit Committee must be independent directors. This provision is also in consistent with the Green Book.

2.2.4 Independent Variable-Board Meeting

From the corporate governance perspective, in order for a board to operate effectively and efficiently, board should meet regularly to discuss on any matter arise. Besides, conducting board meeting is one of the fairly inexpensive ways for the companies to improve firm value and performance (Vafeas, 1999).

In accordance to Vafeas (1999), conducting board meetings incur costs and benefits. The examples of costs include travel expenses and managerial time while benefits including more time for directors to set strategy and monitor the management (Ntim & Osei, 2011). If a firm overemphasizes on costs and conducts fewer meetings than the frequency necessary to run the business, board meeting frequency will be positively related with the firm performance. Vice versa, if a firm overemphasizes on benefits of conducting meetings, the frequency will be negatively associated with the firm performance.

Lane, Astrachan, Keyt and McMillan (2006) recommends not more than six nor less than three meetings a year to keep the lines of communication open between the board and shareholders and between the board and the management team. According to the Green Book (2006), on average, boards conducted meeting for six to eight times a year.

2.2.5 Control Variable-Leverage

A company has two ways of financing, namely equity financing and debt financing. For debt financing, the higher the debt, the higher the risk the company has to face due to the obligations to pay the interest and principal as promised. In addition, debt is a way to raise fund without diluting the equity (Hart & Moore, 1995).

Leverage/debt represents a trade-off between shareholder's return and risk. When a firm has more borrowed debt, it represents a risk to the equity holders. The effect of debt on equity holders is favourable when the cost of debt is lower than the rate of return, vice versa (Ramasamy, Ong & Yeung, 2005). In other words, if company manages to generate a return higher than the cost of debt, investors will be benefited. The higher the debt, the higher the risk the company has to face.

2.2.6 Control Variable-Firm Size

A large firm size can be beneficial to a company. Firstly, by having a larger firm size, barrier for entry to new entrants can be raised. Besides, by having a large firm size, economies of scale can be attained which prevent new entrants from entering with a lower costs (Ramasamy et al., 2005). By having a higher barrier for entry to new entrants, the competition within the industry can be reduced and higher profitability can be achieved by the existing firms.

2.3 Review of Relevant Theoretical Models

The relevant theoretical models discussed below are shown in the Appendices.

2.3.1 Model 1

The model as per in Appendix 1 was developed by Tham and Romuald (2012) to investigate the relationship between corporate governance and company performance by using a panel data of 20 Malaysian listed companies for the period of 2006 to 2010. Five corporate governance variables were investigated, namely board size, board composition, audit committee, CEO status and ownership structure. The dependent variable of the research model was Earnings per Share (EPS).

2.3.2 Model 2

Ntim and Osei (2011) have conducted a study in order to examine the impact of board meetings (frequency) on South Africa corporation performance (Tobin's Q). The model is in Appendix 2.

2.3.3 Model 3

The model as per in Appendix 3 was developed by Ibrahim and Abdul Samad (2011) to investigate the relationship between corporate governance mechanisms (board size, board composition and CEO duality) on the performance (Return on Assets (ROA), Tobin's Q and Return on Equity (ROE)) of 290 public-listed family-ownership in Malaysia by taking into consideration 3 control variables (firm size, debt ratio and firm age).

2.3.4 Model 4

The model as per in Appendix 4 was developed by Hussin and Othman (2012) to investigate top 100 constituent firms from 2007 to 2009. The predictor variables investigated were non-executive directors, independent chairman, CEO duality, board size, audit committee independence, audit committee expert, audit committee meetings, firm size, director ownership, top 20 ownership, big 5 auditors and debt while the company performance was measured using ROA and ROE.

2.3.5 Model 5

The model as per in Appendix 5 was developed by Amran and Che-Ahmad (2011) to examine 189 listed family companies by taking into consideration 3 control variables, namely debt, firm age and firm size. The board mechanisms variables were board composition & size, board independence, director's degree, director's expertise, leadership structure, debt, firm age and firm size while the performance was measured by using Tobin's Q, EPS and operating cash flows. Their study covered a period of 5 years (2003 to 2007).

2.3.6 Model 6

Vafeas (1999) examined the relationship between board activity, measured by frequency of board meetings and corporate performance (net-of-industry market-to-book ratio). The model is shown in Appendix 6.

2.3.7 Model 7

Ong and Gan (2013), to examine if the family-owned banks perform better in Malaysian banking industry, used board composition and board size as the independent variables and Tobin's Q, ROA and ROE as the measurement of performance. The model is shown in Appendix 7.

2.3.8 Model 8

The model as in Appendix 8 which developed by Amran (2011) study the effect of different corporate governance mechanisms on performance of 233 family-controlled firms and 191 non-family controlled firms for the period 2003 to 2007. Board size, board independence, board qualification, director's professional qualification, leadership structure, debt, firm age and firm size were used as the proxy of corporate governance while Tobin's Q was used as the performance measurement.

2.3.9 Model 9

The model as per in Appendix 9 was developed by Yusoff and Alhaji (2012) to study the effect of corporate governance (proportion of independent non-executive directors, board leadership structure and board size) on performance (EPS and ROE) of 813 Malaysian listed companies which covered the period of year 2009 to 2010.

2.3.10 Model 10

Shakir (n.d.), has done a study on the effect of board size and percentage of executive directors on the performance (Tobin's Q) of

81 listed property firms. The model developed by him is in Appendix10.

2.3.11 Model 11

The model developed by Mak and Yuanto (2002) as per Appendix 11 was used to investigate the effect of board size has on firm value (Tobin's Q). The sample employed was 550 listed firms comprised 271 Singaporean listed firms and 279 Malaysian listed firms.

2.3.12 Model 12

In order to investigate the impact of board size on UK listed firms' performance, Guest (2009) developed the model as per in Appendix 12 to study the effect of board size on the performance which was measured by three dependent variables, namely ROA, Tobin's Q and share returns.

2.3.13 Model 13

Afandyar et al. (2013) developed a model (Appendix 13) to study the effect of different board mechanisms (board size, board leadership statues and board composition) on financial performance (Tobin's Q and ROA) of 127 listed Pakistani firms from year 2005 to 2011.

2.3.14 Model 14

Moscu (2013) formed a model (Appendix 14) to study the relationship of board characteristics (board size, non-executive directors, percentage of executive directors out of non-executive directors, presence of institutional investors and ownership concentration) and firm performance (ROA and ROE) in 62 listed Romania firms for the period 2010.

2.3.15 Model 15

Yermack (1996) has carried out his study on the effect of board size has on the performance (Tobin's Q) of 452 US large industrial corporations for the period of year 1984 to 1991. The model is in Appendix 15.

2.3.16 Model 16

In order to study the impact of board structure (board composition, board size, board ownership and CEO duality) on corporate financial performance (Return on Capital Employed (ROCE) and ROE) of 30 listed companies in Nigeria, Marte and State (2010) developed their model in Appendix 16. Their study covered only a year, which was 2007.

2.3.17 Model 17

Saah and Abdullah (2011), carried out their studies to investigate whether a good board characteristics (BOD communication, BOD education and composition of BOD) impact the company's performance of 163 Malaysian listed firms. The performance was measured by market value, price earnings ratio, dividend yield, capital gearing, ROCE, payout ratio and borrowing ratio. The framework is shown in Appendix 17

2.3.18 Model 18

Babatunde and Olaniran (2009), to find out the effects of internal and external mechanisms (board size, block shareholders, director's shareholdings, audit committee independence, number of outside directors on board, leverage and firm size) on the performance (Tobin's Q and ROA) of 62 listed firms in Nigeria for the period 2002 to 2006, have carried out their study.

2.3.19 Model 19

Ghabayen (2012) developed his model in Appendix 19 to study the relationship of board characteristics, namely audit committee size, audit committee composition, board size and board composition and firm performance, as measured by ROA in 102 non-financial listed companies in Saudi Arabia for the year 2011.

2.3.20 Model 20

To study the impact of board characteristics (CEO duality, CEO tenure, audit committee size, board size, board composition) on performance (ROA) of listed companies in Kuwaiti Stock Exchange for the year 2010, Al-Matari et al. (2012a) have developed a model (Appendix 20). Control variables, namely firm size and leverage were taken into this study.

2.3.21 Model 21

To study the impact of audit committee characteristics on performance in 106 financial listed corporations in Jordan, Hamdan, et al. (2013) developed a model, by taking into consideration two control variables, namely company size and financial leverage. The timeframe observed was from year 2008 to year 2009. The audit committee characteristics were measured by the audit committee size, financial expertise and audit committee independence while the performance was measured by ROE, ROA and EPS.

2.3.22 Model 22

Abidin et al. (2009) developed a model to investigate the relationship between board structure (board composition, directors' ownership, CEO duality and board size) and performance (value added intellectual coefficient) in 75 listed companies in Malaysia for the year 2005.

2.3.23 Model 23

Modum, Ugwoke and Onyeanu (2013) have conducted their study (Appendix 23) to investigate the effect of board size, board composition, frequency of board meetings and regularity in attendance at meetings on financial performance (EPS) of 108 quoted companies on Nigerian Stock Exchange for the period year 2006 to year 2012.

2.3.24 Model 24

Coleman (2007) developed a model (Appendix 24) to investigate the effect of corporate governance, as measured by board size, non-executive directors, CEO duality, CEO tenure, audit committee size, non-executive directors in audit committee, institutional shareholding and number of board meeting has on the performance (ROA and

Tobin's Q) 103 listed firms. His study covered a period of 5 years (1997-2001).

2.3.25 Model 25

In order to study the effect of corporate governance has on market valuation of China listed firms, Bai, Liu, Lu, Song and Zhang (2004) developed their model (Appendix 25) by taking into consideration five control variables (firm size, leverage, capital-sales ratio, operation income-sales ratio and industry dummy). The corporate governance was measured by CEO duality, ratio of outside directors, shareholdings of top managers, shareholdings of largest shareholders, parent company (dummy), degree of concentration of shareholdings, domestic investors and state-controlled firms (dummy). The performance measurements used were Tobin's Q and Market/Book ratio. Their study covered the year 2000.

2.3.26 Model 26

The model as per in Appendix 26 was developed by Mohamad et al. (2012) to study the effect of GLCs had before (year 2003) and after (year 2007) the GLCs Transformation Program was implemented. The independent variables were board composition, board size, board leadership, board meetings, board multiple directorships, presence of financial expertise on audit committee, firm size and leverage while the dependent variable was earnings manipulations.

2.3.27 Model 27

Chiang and Chia (2005) formed a model (Appendix 27) to study the impact of corporate governance (board size, CEO duality, proportion

of management shareholdings, proportion of institutional shareholdings, proportion of shareholding of board of directors, transparency of ownership structure and investor relations, financial transparency and information disclosure and board and management structure process) has on corporate performance (ROA, ROE and EPS) by investigating 246 Taiwanese high-tech listed companies in year 2001.

2.3.28 Model 28

Bhagat and Black (2000) developed their model to study the impact board independence has on firm performance (Tobin's Q, ROA, Market adjusted stock price returns and ratio of sales to assets). The period covered 1988 to 1993 (1985-1987 as the retrospective period, 1988-1990 as the prospective period). Their study took five control variables (board size, CEO ownership, outside director ownership, firm size and number of outside 5% stockholders) into consideration.

2.4 Conclusion of Review of Relevant Theoretical Models

Combining all the models (as per Appendix 1 to Appendix 28) as reviewed above, the independent variables which have been used frequently in many past studies involves board size, board composition, board meeting, audit committee in term of its size and independence and ownership structure. In this study, board mechanisms refer to corporate governance mechanisms being placed on the board's day-to-day operation. Hence, only a few independent variables which related to board are to be adopted in this study, namely board size, board composition, board meeting and audit committee independence. For board meeting, Al-Matari et al. (2012a) in their recommendations for future studies say that other board of director characteristics such as board meeting frequency should be taken into consideration. They also recommended that future researcher should consider variable regarding some committees such as audit committee. Ownership structure is not used because it is not suitable in the case of GLCs as the ownerships of GLCs are clear enough to be held by the government. This is in consistent with Lau and Tong (2008) who explained that government has ownerships in GLCs.

In term of the control variables, the most commonly used variables are firm size and debt (leverage).

In term of the dependent variables, the most commonly dependent variables which can be identified from the models discussed above are EPS, Tobin's Q, ROA, ROE, operating cash flow, market ratio, share returns and growth in sales.

The ultimate goal of a company is shareholder wealth maximization. Nakhaei, Hamid, Anuar and Nakhaei (2012) in their study explained that no single accounting criteria are able to explain the changeability in the shareholders wealth. Besides, they further explained that accounting measures cannot predict consistently the firm value as the accounting income is failing to take into consideration the full cost of capital. Thus, accounting measures are not suitable to be used as measurement in corporate performance. However, financial measures are well connected with shareholders wealth (Nakhaei, et al., 2012). Hence, accounting measures such as ROA, ROE, EPS and ROCE will not be employed in this study.

Furthermore, the limitations in accounting measures were identified in the past studies. Tham and Romuald (2013) explained in their recommendations that there are limitations in using EPS. Hence, it is not adopted in this study as it is subject to account manipulation. The same reason goes to ROA, ROE and Tobin's Q as they are calculated based on earnings figures which can be easily manipulated. Al-Matari et al. (2012a) recommend that other market-based measures such as share price returns should be focussed on in future studies. Hence, only the cash flow and share returns are able to show to real performance of GLCs as they measure the real return in finance.

Growth in sales is also being eliminated from this study due to the nature of sales which are volatile. Besides, it's due to the manipulation of sales in accounting which called window dressing (Roychowdhury, 2006). For example, by offering 'limited-time' price discount or lenient credit terms to generate additional sales during the financial year end to 'decorate' better figures to be shown to the stakeholders.

Hence, the proposed conceptual framework is being developed as in the following section.

2.5 Proposed Theoretical / Conceptual Framework

Combining all the models done by the past researchers as in Section 2.3, a new model is developed by taking into considerations the discussion made in Section 2.4.

Figure 1: Proposed Conceptual Framework

Independent Variables

Dependent Variables



Therefore, the model above shows the proposed conceptual framework that serves as the foundation for this research study.

2.6 Hypotheses Development

2.6.1 Relationship among Board Size and Company Performance

2.6.1.1 Malaysia

Ibrahim and Abdul Samad (2011) after examining the relationship between board size and performance of 290 public-listed familyownership firms (125 family firms and 165 non-family firms) in Malaysia from year 1999 to 2005, explains that in family firms, board size has a significant negative effect on firm Tobin's Q and ROE and an insignificant and negative effect on ROA. . In non-family firms, they found that board size is significantly negatively related to Tobin's Q and ROE, but significantly positively related to ROA.

Amran and Che-Ahmad (2011) found a significant positive relationship between board size and EPS and operating cash flow after investigating 189 listed family-ownership companies in Malaysia which covered a period of 5 years (2003 to 2007). However, they found that Tobin's Q is insignificantly positively related to board size.

Amran (2011), after examining 424 listed companies which consisted 233 family-controlled firms and 191 non-family controlled firms for year 2003 to 2007, found that board size is significantly negatively related to Tobin's Q in family-controlled firms and insignificantly negatively related to Tobin's Q in non-family controlled firms.

In addition, Tham and Romuald (2012) explain that there is a significant positive relationship between board size and EPS. Their study was based on 20 public listed companies in Malaysia for the period 2006 to 2010.

Yusoff and Alhaji (2012)'s findings indicated that relationship of board size and performance is mixed. At significant level of 0.05, the relationship is significant in year 2009 and 2011 with ROE and not significant in year 2010. However, the relationship is positive and significant at significant level 0.01 in year 2009, 2010 and 2011 Yusoff and Alhaji (2012)'s study covered 813 listed companies in Malaysia for the period 2009 to 2010.

The findings of Hussin and Othman (2012)'s study indicated a significant negative result between board size and ROE after investigating top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009, covering a period of 3 years (2007 to 2009). Hussin and Othman (2012) also found a significant negative relationship between board size and ROA.

Besides, Shakir (n.d.) found a significant negative relationship between board size and Tobin's Q after examining 81 listed property firms which covered year 1999 to year 2005.

Ong and Gan (2013), after examining 90 banks which comprised 40 family-owned banks and 50 non-family owned banks in Malaysia from year 2001 to 2010, found that in family-owned bank, board size is negatively related to both Tobin's Q and ROE but positively related to ROA.

Abidin et al. (2009) after finished their research on 75 listed companies in Malaysia for the year 2005, found that board size has a significant positive relationship with Value Added Intellectual Coefficient.

Mak and Yuanto (2002) after investigating 550 listed firms comprised 271 firms listed in the Singapore Stock Exchange (SGX) and 279 listed in the Kuala Lumpur Stock Exchange (KLSE), found that board size is negatively related to Tobin's Q in both countries.

2.6.1.2 Other Countries

In UK, Guest (2009), after investigating 2746 UK listed firms for the period 1981 to 2002, found a significant negative relationship between

board size and three independent variables (ROA, Tobin's Q and share return).

In Pakistan, Afandyar et al. (2013) found that board size is significantly positively related to ROA and Tobin's Q. This study involved 127 listed Pakistani firms and covered a period of 7 years, from 2005 to 2011.

In Romania, Moscu (2013) found that board size is insignificantly positively related to both ROA and ROE after examining 62 listed companies in year 2010.

In US, Yermack (1996) says that board size is negatively related to Tobin's Q after completing a study on 452 US large industrial corporation which covers a period of 8 years (1984 to 1991).

While in Taiwan, Chiang and Chia (2005) in 2005 after examining 246 high-tech listed companies for the period 2001, found insignificant negative relationship between board size and ROA and ROE.

In Nigeria, a study by Marte and State (2010), which involved 20 listed companies on Nigerian Stock Exchange for the year 2007, found that board size is significantly positively related to ROE and insignificantly positively related with ROCE. In the same country, Modum et al. (2013) after conducted their study on 108 non-financial Nigerian listed companies for the year 2006 to year 2012, found that board size has a significant and positive relationship with EPS.

In the same country, Nigeria, Babatunde and Olaniran (2009)'s findings indicated that board size is significantly positively related to Tobin's Q and positively related to ROA. This study focussed on 62 Nigerian listed firms and covered the period of year 2002 to 2006.

In Saudi Arabia, Ghabayen (2012) who conducted his study on 102 non-financial listed companies for the year 2011, found no relationship between board size and ROA. In the same country, Al-Matari et al. (2012a) after conducting their study on 136 Saudi Arabia listed firms

for the year 2010, found that board size is insignificantly negatively related to ROA. In the same country, Al-Matari et al. (2012b) also found out that board size has an insignificant negative relationship with Tobin's Q in 2010.

2.6.1.3 Hypothesis

Therefore, due to the inconsistency of findings in the past studies and the recommendation in the Green Book which states that number of directors is preferably no larger than 10 directors ('The Green Book,' 2006), in order to further analyse the relationship between board size and listed GLCs' performance, this study proposed that:

H1 : There is a significant relationship between board size and listed GLCs' performance.

2.6.2 Relationship among Board Independence and Company Performance

2.6.2.1 Malaysia

With respect to independent directors, the study done by Ibrahim and Abdul Samad (2011) finds that in family firms, board size is negatively related to Tobin's Q and significantly negatively related to ROA and ROE. In non-family firms board size is significantly positively related to Tobin's Q, ROA and ROE.

Tham and Romuald (2012) found an insignificant relationship between proportion of independent directors on board and EPS. However, one of the findings of Amran and Che-Ahmad (2011) indicates that proportion of independent directors on boars is negatively related to EPS. Besides, Amran and Che-Ahmad (2011) found that board independence is positively related to Tobin's Q and significantly negatively related to operating cash flow.

In addition, Ong and Gan (2013) that in family-owned bank, board independence has a negative relationship with Tobin's Q and ROE and a positive relationship with ROA.

In addition, Yusoff and Alhaji (2012) also found that board independence is significantly positively related to EPS but not significant in explaining the variations in ROE.

Amran (2011) who conducted a study on both family firms and nonfamily firms found that in family controlled firms, board independence is negatively related to Tobin's Q while in non-family firms, the results shows the opposite side (positively related).

Besides, Saad and Abdullah (2011)'s study which involved 163 listed companies for the period 2004 to 2006, revealed that board independence is significantly positively related to market value and insignificantly positively related to price earnings ratio, dividend yield, ROCE, payout ratio and capital gearing.

Hussin and Othman (2012) found that higher proportion of independent non-executive directors are negatively related to performance as measured by ROA and ROE.

In addition, Abidin et al. (2009) found that board independence has a significant positive relationship with Value Added Intellectual Coefficient.

2.6.2.2 Other Countries

In US, a study conducted by Bhagat and Black (2000) which involved 928 large companies for the period 1988 to 1993 revealed that for the retrospective period, board independence was found to be significant negatively related to all performance measures (Tobin's Q, ROA, Market adjusted share price returns, ratio of sales to assets). For the prospective period, the correlation remains negative for all performance measures, but significant only for Tobin's Q.

While in Pakistan, Afandyar et al. (2013) revealed that board independence is significantly and positively related to Tobin's Q, and significantly negatively related to ROA.

In Saudi Arabia, Ghabayen (2012)'s findings indicated that board independence has a significant negative relationship with ROA. However, in the same country, Al-Matari et al. (2012a) found that board independence is insignificantly and negatively related to ROA. In addition, Al-Matari et al. (2012b) also revealed that board independence in insignificant in explaining Tobin's Q.

In Nigeria, Modum et al. (2013) revealed that number of independent directors on board is significantly positively related to EPS.

2.6.2.3 Hypothesis

Thus, as the findings of past studies are not consistent, the following hypothesis is proposed in order to examine the relationship between board independence and listed GLCs' performance:

H2 : There is a significant relationship between board independence and listed GLCs' performance.

2.6.3 Relationship among Audit Committee Size and Company Performance

2.6.3.1 Other Countries

Al-Matari et al. (2012a)'s findings show that audit committee size is insignificantly positively related to ROA after investigating 136 listed

firms in Saudi Arabia for the year 2010. They also found that there is a significant negative relationship among audit committee size and Tobin's Q.

Ghabayen (2012) in the same country, found that audit committee size has no effect on ROA after examining 102 listed firms in Saudi Arabia for the year 2011.

Hamdan et al. (2013), after examining 106 listed financial sector corporations, revealed that audit committee size is significantly positively related to ROE and EPS. In addition, it's positively related to ROA.

Coleman (2007), in Africa after examining 103 listed firms for the year 1997 to year 2001, explained that audit committee size is positively related to both Tobin's Q and ROA.

2.6.3.2 Hypothesis

The Green Book (2006) explains that the best practice for an audit committee to work effectively is that it comprises no more than 4 directors. In addition, the findings of past studies are inconsistent as some past studies explained that a larger audit committee size is favourable to the company performance while some explained that a larger audit committee size is not favourable to the company performance. Hence, to find out what is the results as per in Malaysian GLCs, the hypothesis is presented as:

H3 : There is a significant relationship between audit committee size and listed GLCs' performance.

2.6.4 Relationship among Audit Committee Independence and Company Performance

2.6.4.1 Malaysia

Tham and Romuald (2012) find that the proportion of independent non-executive directors in audit committees is insignificantly negatively related with company performance (EPS), using 20 public listed companies in Malaysia as sample and cover a period of 2006 to 2010.

Hussin and Othman (2012) found that percentage of independent nonexecutive directors is significantly negatively related to performance (ROA and ROE) top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 for the year 2007 to 2009.

2.6.4.2 Other Countries

In Babatunde and Olaniran (2009)'s study which being conducted on 62 Nigeria listed firms from 2002 to 2006, the results show that audit committee has a significant positive relationship with Tobin's Q and a significant negative relationship with ROA.

In Saudi Arabia, Ghabayen (2012), after investigated 102 nonfinancial listed companies for the year 2011, found that there is no relationship between audit committee independence and performance (ROA). In the same country, Al-Matari et al. (2012a) found that audit committee independence is insignificantly related to ROA. In addition, it was also revealed by Al-Matari et al. (2012b) that audit committee independence is insignificantly related to Tobin's Q.

In addition, in Africa, Coleman (2007)'s study which based on 103 listed companies for the year 1997 to 2011, revealed that audit committee independence is insignificantly negatively related to Tobin's Q and insignificantly positively related to ROA.
Besides, in Jordan, Hamdan et al. (2013) who examined 106 corporations from the financial sector listed in Amman Stock Exchange Market for the year 2008 to 2009 found that audit committee independence is significantly positively related to ROE and ROE and insignificantly positively related to EPS.

2.6.4.3 Hypothesis

Thus, as the findings of the relationship among audit committee independence and company performance from the previous studies are not consistent, the following hypothesis is proposed in order to examine the relationship between audit committee and listed GLCs' performance:

H4 : There is a significant relationship between audit committee and listed GLCs' performance.

2.6.5 Relationship among Board Meeting and Company Performance

2.6.5.1 Malaysia

A study conducted by Mohamad et al. (2012) in Malaysian 169 listed corporation for the period 2002 to 2007 revealed that frequency of board meetings are significantly positively related to Tobin's Q, ROA and total shareholder return.

2.6.5.2 Other Countries

Using a sample of 306 US listed firms, Vafeas (1999) found that there is a significant inverse relationship between frequency of board meeting and company performance as measured by Tobin's Q.

The finding of Vafeas (1999) is in contrast with Ntim and Osei (2011) who explains that frequency of board meetings is positively and significantly related to the corporate performance in South Africa. This result provide empirical support for agency theory which explains that boards will have increased capacity to advise and monitor management when they meet more frequency and thus improving corporate performance.

In Nigeria, Modum et al. (2013) also found that frequency of board meetings is positively and significantly related to performance, as measured by EPS.

2.6.5.3 Hypothesis

There are no guidelines regarding number of meetings to be held in every year by the companies. Hence, in order to investigate the relationship between board meetings and listed GLCs' performance, the following hypothesis is presented:

H5 : There is a significant relationship between board meetings and listed GLCs' performance.

2.6.6 Relationship among Leverage and Company Performance

2.6.6.1 Malaysia

In Malaysia, Ibrahim and Abdul Samad (2011)'s findings show that in family firms, dent is significantly positively related to Tobin's Q, significantly negatively related to ROA and negatively related to ROE. In non-family firms, they found that debt is significantly positively related to Tobin's Q, significantly negatively related to ROA and positively related to ROE.

In the same country, Amran (2011) found a similar result as Ibrahim and Abdul Samad (2011) though not significant. In family-controlled firms, debt is positively related to Tobin's Q while in non-family controlled firms, debt is positively related to Tobin's Q.

Hussin and Othman (2012) after their study, found significant and positive relationship between debt and ROA and between debt and ROE.

While Amran and Che-Ahmad (2011) explained that debt is significantly positively related to Tobin's Q and negatively related to both EPS and operating cash flow.

Mohamad et al. (2012) found that in GLCs firms, the debt ratio has a significant relationship with discretionary accrual during the pretransformation period. For the post-transformation period, they found that debt ratio has a negative relationship with discretionary accrual.

2.6.6.2 Other Countries

In the Nigeria, Babatunde and Olaniran (2009) found that debt has a positive relationship with Tobin's Q. In addition, it has a significant positive relationship with ROA.

Al-Matari et al. (2012a), in Saudi Arabia, revealed that debt has an insignificant and negative correlation with ROA. In addition, leverage has an insignificant relationship with Tobin's Q (Al-Matari et al., 2012b).

In addition, in Jordan, Hamdan et al. (2013) upon completion of their study, found that debt has a significant positive relationship with ROE; a negative relationship with ROA; and a positive relationship with EPS.

In China, Bai et al. (2004) explained that debt is significantly negatively related to Tobin's Q.

2.6.6.3 Hypothesis

In accordance to the findings from previous studies, having a high or low leverage level can be both advantageous or disadvantageous and can have either positive or negative impact on the company performance. Thus, in order to find out the effect of leverage level on Malaysian GLCs, the following hypothesis is presented:

H6 : There is a significant relationship between leverage and listed GLCs' performance.

2.6.7 Relationship among Firm Size and Company Performance

2.6.7.1 Malaysia

Ibrahim and Abdul Samad (2011)'s findings show that, in family firms, firm size has a significant negative relationship with Tobin's Q; a negative relationship with ROA; and a significant negative relationship with ROE. Amran (2011) also found a similar result on Tobin's Q. Their findings show that in family-controlled firms, firm size has a significant negative relationship with Tobin's Q while in non-family controlled firms, firm size also has the same relationship with Tobin's Q.

Hussin and Othman (2012) also found that firm size has a negative relationship with ROE. In addition, their findings show that firm size is also negatively correlated to ROA.

Amran and Che-Ahmad (2011) explained that in listed family companies, firms size is significantly negatively related to Tobin's Q; positively related to EPS; and significantly positively related to operating cash flow.

Mohamad et al. (2012) found that in the pre-transformation period, firm size has a significant positive relationship with discretionary accruals while in the post-transformation period, firm size also has the same relationship with discretionary accruals.

2.6.7.2 Other Countries

Babatunde and Olaniran (2009)'s results revealed that firm size has a significant negative relationship with both Tobin's Q and ROA. This is in consistent with Al-Matari et al. (2012a)'s findings that firm size has a significant negative relationship with ROA. In addition, firm size has an insignificant relationship with Tobin's Q (Al-Matari et al., 2012b).

For Jordan case, Hamdan et al. (2013) found that in the financial listed firms, firm size has negative relationship with ROE; and significant positively relationship with both ROA and EPS.

In China, Bai et al. (2004) in their study explained that firm size has a significant negative relationship with Tobin's Q.

However, in US, Bhagat and Black (2000) found an insignificant positive relationship between firm size and performance.

2.6.7.3 Hypothesis

The previous studies suggested that a larger board size or a smaller board size can both be advantageous and disadvantageous. Thus, in order to find out whether larger board size or smaller board size is more beneficial to the GLCs' performance, the following hypothesis is presented:

H7 : There is a significant relationship between firm size and listed GLCs' performance.

2.7 Conclusion

In this research, study of board mechanisms in relation to performance of Malaysian listed GLCs is focused on seven conceptual dimensions which include five board mechanisms (board size, board independence, audit committee size, audit committee independence and board meeting) variables and two control variables (leverage and firm size). The relationship between the dependent variable and independent variables are discussed and clearly defined in the hypotheses form.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter focuses on the detailed methodology used to test the hypotheses which are mentioned in the previous chapter. This chapter starts with the research design, data collection methods, sampling design, research instrument, construct measurement, data processing and data analysis.

3.1 Research Design

According to Cooper and Schindler (2011), research design is defined as a blueprint for the fulfillment of the research objectives and answer of the research question. It is a master plan which specifies the methods and procedures for collecting and analyzing data.

The purpose of a quantitative study is to test hypotheses, look at cause and effect, and to make predictions. In other words, it aims to test the relationship between predictor variable(s) and dependent variable(s). It's is consistent with the purpose of this study. Hence, this research is a quantitative study as it tests hypotheses which are mentioned in the previous chapter.

In this study, the effects of different board mechanisms have on the performance (SPR and CF) of listed GLCs for an extended period of 6 years (2007-2012), which is the period after the Green Book of GLCs was launched. Although the population involves 33 GLCs as quoted by PGC, the sample selected is only 17 companies which categorised in the G20 GLCs as G20 is a selection of large GLCs which took part under the GLCT Programme and is used as a proxy for performance of the GLCs ('GLCT Programme Progress Review,' June 2013).

Hence, the unit of analysis will be the G20 GLCs which are listed on Bursa Malaysia. Listed G20 companies which are listed were chosen as the financial statements are readily available and reliable due to the mandatory audit imposed. In this study, unlisted G20 GLCs is excluded due to unavailability of information. Besides, only G20 with complete set of data (2007-2012) is selected.

3.2 Data Collection Method

3.2.1 Secondary Data

Secondary data is used in this research study. Secondary data are unobtrusive, are of higher-quality, permanent and can be gathered quickly (Saunder, Lewis & Thornhill, 2009). The data will be taken from the annual reports of company and financial databases such as Bursa Malaysia website and Datastream. Information on board mechanisms such as board size, board independence, audit committee size, audit committee independence, board meetings, leverage and firm size were obtained manually from the annual reports for the year 2007 to 2012. The data obtained from the annual reports is reliable and of quality due to the mandatory audit of independent and qualified auditors. In addition, documented secondary data such as journals and organisations' databases are also used. For examples, Science Direct and Securities Commissions.

3.3 Sampling Design

3.3.1 Target Population

In accordance to Saunders et al. (2009) and Sekaran (2003), population is defined as the complete set of cases (people, event or things) from which sample is drawn. Population of this study includes all 33 GLCs on Bursa Malaysia as quoted by PCG on 13 March 2009 (as attached in Appendix III). However, only the 17 G20 companies are selected as the sample in this study (as attached in Appendix IV). G20 is a selection of large GLCs which took part under the GLCT Programme and is used as a proxy for performance of the GLCs ('GLCT Programme Progress Review,' June 2013). Non-listed GLC is excluded in this study due to unavailability of information.

3.3.2 Sampling Design and Sampling Location

In accordance to Saunders et al. (2009), sampling frame is defined as the complete list from which the sample will be drawn, a list which includes all the cases in the population. Sampling frame in this study is all the GLCs from which sample will be drawn. The complete list of whole population is adopted from PGC's website¹. The G20 companies list is also adopted from PGC's website².

3.3.3 Sampling Element

Sekaran (2003) explains that sampling element is the sampling units which can be chosen or selected in the sampling process. However, in this study, unlisted G20 GLCs is excluded due to unavailability of information.

¹ http://www.pcg.gov.my/PDF/GLCs%20(Mar%2013%202009).pdf

² http://www.pcg.gov.my/PDF/List%20of%20G20%20GLCs%20as%20at%2028%20February%202013.pdf

3.3.4 Sampling Technique

In this study, random stratify sampling method is applied as only the G20 GLCs which used as proxy of performance of all GLCs are selected.

3.3.5 Sampling Size

After excluding the unlisted G20 GLC, 16 observations were available (Appendix V).

Table 3.1 Sample Selection

	Number of Samples
G20 companies	17
(less) Non-listed G20	1
Final sample	16

3.4 Research Instrument

Secondary data, annual reports are used in this study. The annual reports for respective samples are downloaded from the Bursa Malaysia website. Besides, the share prices are downloaded from Datastream. In addition, Microsoft Excel is used as a terminal to record the data of the samples. These data then be transferred to SPSS 20.0 and EViews 6 to analyze the results.

3.5 Construct Measurement

3.5.1 Origin of Construct

The construct of this study is board mechanisms. There are six variables in this study and are consisted of five independent variables and one dependent variable.

Table 3.2: Dependent Variables Table

Dependent	Derived from	Adopted from
Variable		
Share Price	Annual Share Price Return=	• Guest (2009)
Returns	[(Share Price _t – Share Price _t -	
	1)/ Share Price _{t-1}]*100	
Dependent	Source	Derived from
Variable		
Cash Flows	Cash Flow Statements of	Log (Cash and cash
	respective GLCs	equivalents at the end
		of the year)

Table 3.3: Independent Variables Table

Independent	Measured by	Adopted from
Variables		
Board Size	Number of	• Ibrahim and Abdul Samad
	directors on board	(2011)
		• Amran and Che-Ahmad
		(2011)
		• Amran (2011)
		• Tham and Romuald (2012)
		• Yusoff and Alhaji (2012)
		• Shakir (n.d.)

Board Independence	% of independent non-executive director/ total directors	 Ong and Gan (2013) Mak and Yuanto (2002) Hussin and Othman (2012) Abidin et al. (2009) Guest (2009) Afandyar et al. (2013) Moscu (2013) Yermack (1996) Chiang and Chia (2005) Marte and State (2010) Babatunde and Olaniran (2009) Modum et al. (2013) Ghabayen (2012) Al-Matari et al. (2012a) Ibrahim and Abdul Samad (2011) Tham and Romuald (2012) Amran and Che-Ahmad (2011) Ong and Gan (2013) Yusoff and Alhaji (2012) Hussin and Othman (2012) Amran (2011) Abidin et al. (2009) Afandyar et al. (2013) Ghabayen (2012) Al-Matari et al. (2013) Abidin et al. (2013) Abidin et al. (2013) Ahran (2011) Abidin et al. (2013) Afandyar et al. (2013) Afandyar et al. (2013) Ahatari et al. (2012) Al-Matari et al. (2012) Al-Matari et al. (2013) Abidin et al. (2013) Abidin et al. (2013) Al-Matari et al. (2012b) Modum et al. (2013)
ruun		• An-ivialan et al. $(2012a)$

Size	committee	• Ghabayen (2012)
		• Coleman (2007)
		• Hamdan et al. (2013)
Audit	Percentage of	• Tham and Romuald (2012)
Committee	independent	• Hussin and Othman (2012)
Independence	directors in Audit	• Babatunde and Olaniran
	Committee	(2009)
		• Ghabayen (2012)
		• Al-Matari et al. (2012a)
		• Al-Matari et al. (2012b)
		• Coleman (2007)
Board	Frequency of board	• Mohamad et al. (2012)
Meetings	meetings per year	• Vafeas (1999)
		• Ntim & Osei (2011)
		• Coleman (2007)
		• Modum et al. (2013)

Table 3.4: Control Variables Table

Control	Derived by	Adopted from
Variables		
Leverage	Total	• Al-Matari et al. (2012a)
	liabilities/total	• Al-Matari et al. (2012b)
	assets	• Hashim and Devi (2008)
Firm Size	Natural log of the	• Amran (2011)
	book value of total	• Ibrahim and Abdul Samad
	assets	(2011)
		• Al-Matari et al. (2012a)
		• Al-Matari et al. (2012b)
		• Hamdan et al. (2013)

3.5.2 Scale Measurement

In accordance with Sekaran (2003), there are 4 types of scales, which are nominal data, ordinal data, interval data and ratio data. In this study, all the variables are of ratio scale as they represent exact amounts.

3.6 Data Processing

In accordance with Cooper and Schindler (2011) and Zikmund, Babin, Carr and Griffin (2010), data processing includes data editing, data coding and data entry.

The first step in data processing is data editing. At this stage, the checking and adjustment of completeness, accuracy and consistency of data is conducted in order for the data to be ready to go to the next stage. Sekaran and Bougie (2010) explains that data editing stage deals with detection of inconsistent, incompleteness and illogical data. This involves eliminating a whole case when the data is inconsistent, not complete and is not logical. In addition, the amount of cash flows is 'log' before being used of analysis purpose due to the volatility of amount between each GLCs.

After deleting the necessary cases, the process proceeds to data coding stage. At this stage, for the purpose of the Mann-Whitney Test, board size, audit committee size and board meetings are assigned with a numerical number or symbol. The best practice standard in the Green Book states that number of directors is preferably no larger than 10 directors ('The Green Book,' 2006). Hence, for the purpose of this test, the coding of "0" indicates board size which is equal or larger than 10, "1" indicates board size which smaller than 10. The variable "board size" is recoded into a new variable "BSize" for the purpose of this test.

In addition, the Green Book (2006) explains that the best practice for an audit committee to work effectively is that it comprises no more than 4 directors. For the purpose of this test, the coding of "0" indicates audit

committee comprises no more than 4 directors, "1" indicates audit committee with more than 4 directors. The variable "audit committee size" is recoded into a new variable "ACSize" for the purpose of this test.

In respect of number of board meetings, the Green Book (2006) did not provide any guideline on number of board meetings to be held in a year. However, according to the Green Book (2006), on average, boards conducted meeting for 6 to 8 times a year. Hence, in this study, differences in performance between GLCs which met below 6 times and above 6 times per year are examined. For the purpose of this test, the coding of "0" indicates number of board meetings below 4 times, "1" indicates number of board meeting which more than 4 times. The variable "board meeting" is recoded into a new variable "BM6" for the purpose of this test.

In addition, differences in performance between GLCs which met below 8 times and above 8 times per year are also examine. For the purpose of this test, the coding of "0" indicates number of board meetings below 8 times, "1" indicates number of board meeting which more than 8 times. The variable "board meeting" is recoded into a new variable "BM8" for the purpose of this test.

The third stage is data entry. At this stage, information gathered by either secondary or primary methods is converted to a medium which facilitates the viewing of data. In this study, the information of board mechanism gathered from secondary source (the annual reports) will be transferred from Microsoft Excel to SPSS. In the SPSS data view sheet, the first column represents the name of the samples while rows represent the variables with the years. However, for EViews, the first and second column represents the name of the samples and the years while the rows only represent the variables. In our study, the number of years investigated is 6 years, hence there will be 6 columns for each GLC in column 1 and column 2 of the Excel sheet.

3.7 Data Analysis

After the data collection is completed, Statistical Package for Social Science (SPSS) software 20.0 and EViews 6 are used to analyse the data.

3.7.1 Descriptive Analysis

Cooper and Schindler (2011) explain that descriptive analysis is used to display the characteristics of a data array. Zikmund et al. (2010) define a descriptive analysis as the transformation of raw data into description of the characteristics of the fata such as central tendency and distribution. In addition, Cooper and Schindler (2011) also state that a descriptive study concerns about hypotheses by stating something about the variables. For example, the frequency, size and distribution of the variables. In this study, descriptive analysis will be used to describe the performance of GLCs through the determination of the maximum, minimum, standard deviations and means.

3.7.2 Inferential Analysis

Zikmund et al. (2010) describes inferential analysis as an analysis technique that able to project characteristics of sample to an entire population.

3.7.2.1 Spearman Correlation

Spearman correlation analysis is used in this study to examine the strength, direction and significance of the relationship between the independent variables and dependent variable.

3.7.2.2 Multiple Regression Analysis

Lastly, Multiple Regression Analysis is used to analyse the strength of the relationship between the independent variables and dependent variable(s) (Zikmund et al., 2010). The following are the regression models used for testing hypotheses,

$$\begin{split} SPR &= \beta_0 + \beta_1 \ BSIZ + \beta_2 BIND + \beta_3 ACS + \beta_4 ACI + \beta_5 \ BMEET + \ \beta_6 LEV + \\ \beta_7 FS \\ CF &= \beta_0 + \beta_1 BSIZ + \beta_2 BIND + \beta_3 ACS + \beta_4 ACI + \beta_5 BMEET + \ \beta_6 LEV + \ \beta_7 FS \end{split}$$

Whereby SPR is share price returns; CF is the cash flows (cash and cash equivalents at the end of the year); BSIZ is board size; BIND is board independence; ACS is audit committee size; ACI is audit committee independence; BMEET is board meeting; LEV is leverage and FS is firm size.

3.7.2.3 Mann-Whitney Test

In this study, Mann-Whitney Test is used to compare two different groups of participants perform both conditions. For the purpose of the Mann-Whitney Test, board size, audit committee size and board meetings are assigned with a numerical number or symbol as stated in Section 3.6. Non-parametric test was employed because the samples employed are not small (Pallant, 2011).

3.8 Panel Data Analysis

3.8.1 Unit Root Test

Prior to the regression test, Unit Root test is conducted to determine if there is existence of unit root in the data as the presence of unit root may lead to spurious estimates (Granger & Newbold, 1974). When the data in a panel study is stationary, it means that meaningful economic regression in the regression models is in existence.

3.8.1.1 Phillip and Perron Test (PP)

In PP test, the hypothesis is as follows:

The hypothesis of PP Unit Root Test is suggested as follow:

H₀: The series of data contain a unit root.

H₁: The series of data do not contain a unit root test.

3.8.2 Fixed Effect Model and Random Effect Model

In fixed effect model, all the studies in the panel analysis are functionally identical while in random effect model, it is unlikely that the studies are functionally identical.

3.8.3 Hausman Test

To decide whether it is fixed effect model or random effect model, Hausman Test is applied. Both models in this study (Share Price Returns and Cash Flows) will be tested using Hausman Test in order to identify if they are of fixed effect or random effect in order to carry out the estimation test. If the p-value of the Hausman Test is significant (p<0.05), the model will be fixed effect model while if the p-value is not significant (p>0.05), the model will be random effect model.

3.8.4 Wald Test

To further decide if a fixed effect model or pooled ordinary least square is most appropriate, Wald Test is carried out by creating dummy variable for the sample GLCs. However, only 15 dummy variables will be created for 15 GLCs as EViews always include a constant whether it is being specified or not, thus one dummy need to be dropped. If the dummies equal zero, that means pooled Ordinary Least Square (OLS) will be most appropriate for the model.

3.8.5 Ordinary Least Square Test

Ordinary Least Square (OLS) method is employed in this study to conduct the panel or time series regression analysis in order to explain the behaviour of the changes in dependent variables (SPR and CF) by changes in the predictor variables (board size, board independence, audit committee size, audit committee independence, board meeting, leverage and firm size). On the other words, OLS estimates the relationships between the dependent variable(s) and the predictor variables.

3.9 Conclusion

The research design and methods are explained in this chapter to collect and analyse the data. Besides, the procedures of data coding and editing are carried out after the data collection. The data will be analysed by using both SPSS and EViews 6.

CHAPTER 4

RESEARCH RESULTS

4.0 Introduction

In the previous chapter, the way the research methodology carried out is discussed. In this chapter, the pattern of the results and the interpretation of the results are shown. This chapter comprises descriptive analysis, spearman correlation analysis, multiple regression analysis and the conclusion.

4.1 Descriptive Analysis

4.1.1 Descriptive Statistics for Board Size for the year 2007 to year 2012

Minimum	Maximum	Mean	Standard Deviation	Variance
6	12	9.19	1.559	2.429
6	12	9	1.549	2.4
6	13	9.44	1.825	3.329
6	15	9.69	2.301	5.296
6	13	9.37	1.996	3.983
6	12	8.94	1.948	3.796
	Minimum 6 6 6 6 6 6 6	Minimum Maximum 6 12 6 12 6 13 6 15 6 13 6 12	Minimum Maximum Mean 6 12 9.19 6 12 9 6 12 9 6 13 9.44 6 15 9.69 6 13 9.37 6 12 8.94	MinimumMaximumMeanStandard Deviation6129.191.55961291.5496139.441.8256159.692.3016139.371.9966128.941.948

Table 4.1: Descriptive Statistics (Board Size)

Variable: BS= Board Size.

Table 4.1 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for board size for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

In 2007, 2008 and 2012 the minimum and maximum of board size are 6 and 12 respectively. In 2009 and 2011, the minimum and maximum are 6 and 13 respectively each while in 2010, the minimum and maximum is 6 and 15 respectively. This is in accordance with the best practice standard in the Green Book which states that number of directors is preferably no larger than 10 directors and the provision that larger board size of up to 12 directors is permitted ('The Green Book,' 2006).

The mean for year 2007, 2008, 2009, 2010, 2011 and 2012 are 9.19, 9, 9.44, 9.69, 9.37 and 8.94 respectively. In addition, the standard deviation for year 2007, 2008, 2009, 2010, 2011 and 2012 are 1.559, 1.549, 1.825, 2.301, 1.996 and 1.948 respectively. The variance for year 2007, 2008, 2009, 2010, 2011 and 2012 are 2.429, 2.4, 3.329, 5.296, 3.983 and 3.796 respectively.

4.1.2 Descriptive Statistics for Board Independence for year 2007 to year 2012

Minimum (%)	Maximum (%)	Mean (%)	Standard Deviation	Variance	Minimum (number)
0.3	0.75	0.484125	0.1113869	0.012	3
0.286	0.778	0.483125	0.1181479	0.014	2
0.3	0.778	0.492375	0.1189251	0.014	3
0.273	0.778	0.510375	0.1248577	0.016	3
0.3	0.778	0.503813	0.1364367	0.019	3
0.3	0.778	0.55925	0.1363918	0.019	3
	Minimum (%) 0.3 0.286 0.3 0.273 0.3 0.3	Minimum (%)Maximum (%)0.30.750.2860.7780.30.7780.2730.7780.30.7780.30.778	Minimum (%) Maximum (%) Mean (%) 0.3 0.75 0.484125 0.286 0.778 0.483125 0.3 0.778 0.492375 0.273 0.778 0.510375 0.3 0.778 0.503813 0.3 0.778 0.503813 0.3 0.778 0.55925	Minimum (%)Maximum (%)Standard Deviation0.30.750.4841250.11138690.2860.7780.4831250.11814790.30.7780.4923750.11892510.2730.7780.5103750.12485770.30.7780.5038130.13643670.30.7780.559250.1363918	Minimum (%)Maximum (%)Standard DeviationVariance0.30.750.4841250.11138690.0120.2860.7780.4831250.11814790.0140.30.7780.4923750.11892510.0140.2730.7780.5103750.12485770.0160.30.7780.5038130.13643670.0190.30.7780.559250.13639180.019

Table 4.2: Descriptive Statistics (Board Independence)

Variable: BI= Board Independence.

Table 4.2 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for board independence for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

Paragraph 15.02 (1) of the Bursa Malaysia Listing Requirements 2012 requires that a listed issuer to ensure that at least 2 directors or 1/3rd of the board of directors whichever is higher, are independent directors. This requirement is in consistent with the Green Book (2006).

The minimum of board independence in year 2007, 2008, 2009, 2010, 2011 and 2012 are 30% (0.3), 28.6% (0.286), 30% (0.30), 27.3% (0.2730), 30% and 30% respectively. Although the minimum does not reach $1/3^{rd}$ of the board of directors but all the GLCs are having at least 2 independent directors. Hence, these GLCs are still complying with the Bursa Malaysia Listing Requirements.

Overall, the mean in year 2007, 2008, 2009, 2010, 2011 and 2012 are 48.4%, 48.3%, 49.2%, 51%, 50.4% and 56% respectively. While standard deviations in year 2007, 2008, 2009, 2010, 2011 and 2012 are 0.1113869, 0.1181479, 0.1189251, 0.1248577, 0.1364367 and 0.1363918 respectively. The variance in year 2007, 2008, 2009, 2010, 2011 and 2012 are 0.012, 0.014, 0.014, 0.016, 0.019 and 0.019 respectively.

4.1.3 Descriptive Statistics for Audit Committee Size for year 2007 to year 2012

	Minimum	Maximum	Mean	Standard Deviation	Variance
ACS2007	3	5	3.69	0.704	0.496
ACS2008	3	5	3.56	0.629	0.396
ACS2009	3	5	3.44	0.629	0.396
ACS2010	3	5	3.44	0.629	0.396
ACS2011	3	5	3.5	0.632	0.4
ACS2012	3	4	3.44	0.512	0.262

Table 4.3: Descriptive Statistics (Audit Committee Size)

Variable: ACS= Audit Committee Size.

Table 4.3 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for audit committee size for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

The Green Book (2006) explains that the best practice for an audit committee to work effectively is that it comprises no more than 4 directors. However, the audit committee size shows a maximum of 5 in year 2007, 2008, 2009, 2010 and 2011. Only the audit committee size in 2012 indicates 4 directors, which comply with the best practice provided by the Green Book (2006). The minimum audit committee size for all the years are 3.

The mean for the year 2007, 2008, 2009, 2010, 2011 and 2012 are 3.69, 3.56, 3.44, 3.44, 3.50 and 3.44 respectively while the standard deviation are 0.704, 0.629, 0.629, 0.629, 0.632 and 0.512 respectively. The variance for the year 2007, 2008, 2009, 2010, 2011 and 2012 are 0.496, 0.396, 0.396, 0.396, 0.4 and 0.262 respectively.

4.1.4 Descriptive Statistics for Audit Committee Independence for the year 2007 to year 2012

	Minimum	Maximum	Mean	Standard Deviation	Variance
ACI2007	0.6	1	0.773	0.1447048	0.021
ACI2008	0.667	1	0.831313	0.1396136	0.019
ACI2009	0.667	1	0.862563	0.1461602	0.021
ACI2010	0.667	1	0.846938	0.1438325	0.021
ACI2011	0.6	1	0.808438	0.1585993	0.025
ACI2012	0.667	1	0.85425	0.1535506	0.024

Table 4.4: Descriptive Statistics (Audit Committee Independence)

Variable: ACI= Audit Committee Independence.

Table 4.4 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for audit committee independence for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

Paragraph 15.10 of the Bursa Malaysia Listing Requirement 2012 requires that majority of the Audit Committee must be independent directors. This provision is also in consistent with the Green Book (2006).

The GLCs have a maximum of 100% of independent non-executive directors on audit committee for all the years. The minimum percentage of independent non-executive directors on board in year 2007 and year 2011 are 60% while for the year 2008, 2009, 2010 and 2012 the minimum percentage are 66.7% for each year. The requirement to have a majority of independent directors on audit committee is being complied with.

The mean for year 2007 to year 2012 are 77.3%, 83.1%, 86.3%, 84.7%, 81% and 85.4% respectively. The standard deviations from year 2007 to year 2012 are 0.1447048, 0.1396136, 0.1461602, 0.1438325, 0.1585993 and 0.1535506 respectively. The variances are 0.021 for year 2007, 2009 and 2010, 0.019 for year 2008, 0.025 for year 2011 and 0.024 for year 2012.

4.1.5 Descriptive Statistics for Board Meeting for the year 2007 to year 2012

	Minimum	Maximum	Mean	Standard Deviation	Variance
BM2007	4	17	10.56	4.211	17.729
BM2008	4	15	10	3.286	10.8
BM2009	4	24	10.13	4.938	24.383
BM2010	5	21	10.75	4.171	17.4
BM2011	4	22	10.56	5.006	25.062
BM2012	4	18	10.56	3.558	12.663

Table 4.4: Descriptive Statistics (Board Meeting)

Variable: BM= Board Meeting.

Table 4.5 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for board meeting for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

The Green Book (2006) did not provide any guideline on number of board meetings to be held in a year. However, according to the Green Book (2006), on average, boards conducted meeting for six to eight times a year.

In the year 2007, GLCs conducted board meetings for a minimum of 4 times and a maximum of 17 times; in the year 2008, GLCs conducted board meetings for a minimum of 4 times and maximum of 15 times; in the year 2009, GLCs had their board meetings for a minimum of 4 times and maximum of 24 times; in the year 2010, their board meetings were held for a minimum of 5 times and a maximum of 21 times; in the year 2011, GLCs met for a minimum of 4 times and maximum of 22 times; and in year 2012, the board meetings were conducted for a minimum of 4 times and maximum of 18 times.

On average, GLCs conducted their board meetings in year 2007 to year 2012 for 10.56 times, 10 times, 10.13 times, 10.75 times, 10.56 times and 10.56

times respectively. This is in consistent with the Green Book (2006)'s statement that board met for 6 times to 8 times a year on average.

The standard deviations for each year (2007 to 2012) are 4.211, 3.286, 4.938, 4.171, 5.006 and 3.558 respectively while the variances are 17.729, 10.8, 24.383, 17.4, 25.062 and 12.663 respectively.

4.1.6 Descriptive Statistics for Leverage for the year 2007 to year 2012

	Minimum	Maximum	Mean	Standard Deviation	Variance
LEV2007	0.3214	0.9287	0.62106	0.2087073	0.044
LEV2008	0.3625	0.9301	0.660275	0.2107762	0.044
LEV2009	0.3531	0.9406	0.666699	0.2265416	0.051
LEV2010	0.3847	0.9688	0.653919	0.20662	0.043
LEV2011	0.3433	0.9349	0.678873	0.2090244	0.044
LEV2012	0.3208	0.9432	0.67183	0.2150456	0.046

Table 4.5: Descriptive Statistics (Leverage)

Variable: LEV= Leverage.

Table 4.6 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for leverage for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

The minimum level of leverage for the GLCs for year 2007, 2008, 2009, 2010, 2011 and 2012 are 32.14%, 36.25%, 35.31%, 38.47%, 34.33% and 32.1% respectively while the maximum leverage level are 92.9% in 2007, 93% in 2008, 94.1% in 2009, 96.9% in 2010, 93.5% in 2011 and 94.3% in 2012. The average mean for the leverage level for the GLCs are 62.1% in 2007, 66% in 2008, 66.7% in 2009, 65.4% in 2010, 67.9% in 2011 and 67.2% in 2012.

	Minimum	Maximum	Mean	Standard Deviation	Variance
FS2007	8.5213	11.4094	10.137713	0.76443	0.584
FS2008	8.9603	11.4299	10.2018	0.686059	0.471
FS2009	8.9744	11.4924	10.222706	0.6977085	0.487
FS2010	9.0451	11.5272	10.284563	0.6822231	0.465
FS2011	9.0957	11.6547	10.337419	0.6902349	0.476
FS2012	9.3122	11.6945	10.408069	0.6601485	0.436

Table 4.7: Descriptive Statistics (Firm Size)

Variable: FS= Firm Size.

Table 4.7 shows the summary of total sample size, minimum, maximum, mean, standard deviation and variance for firm size for the year 2007 to year 2012.

The total sample is 16 Malaysian GLCs.

The minimum firm size for the GLCs is 8.52 in 2007, 8.96 in 2008, 8.97 in 2009, 9.05 in 2010, 9.1 in 2011 and 9.31 in 2012 while the maximum firm size for the GLCs in year 2007 to year 2012 are 11.41, 11.43, 11.49, 11.53, 11.65 and 11.69 respectively. The mean for the GLCs firm size in year 2007 to year 2012 are 10.14, 10.20, 10.22, 10.28, 10.34 and 10.41 respectively.

4.1.8 Descriptive Statistics for Dependent Variables (CF and SPR) for the year 2007 to year 2012

	Minimum	Maximum	Mean	Standard Deviation	Variance
CF2007	7.5688	10.5752	9.261175	.8415098	.708
CF2008	7.7571	10.4416	9.209738	.8469149	.717
CF2009	7.2580	10.4290	9.206244	.8343478	.696
CF2010	010 8.1104 10.4665		9.352844 .6870373		.472
CF2011	8.2214 10.625		9.349500 .7153630		.512
CF2012	8.0926	10.7078	9.385869	.7057055	.498
SPR2007	-0.0113	0.1223	0.027478	0.0364688	0.001
SPR2008	-0.0898	0.0493	-0.039229	0.0321846	0.001
SPR2009	-0.0292	0.1775	0.033864	0.0469107	0.002
SPR2010	-0.0188	0.0455	0.018938	0.0218879	0
SPR2011	-0.0341	0.0478	0.007538	0.021675	0
SPR2012	-0.0427	0.0498	0.007474	0.0251437	0.001

Table 4.8: Descriptive Statistics (Share Price Returns and Cash Flows)

Variables: CF= Cash Flows; SPR= Share Price Returns.

The minimum cash flows for the year 2007, 2008, 2009, 2010, 2011 and 2012 are 7.5688, 7.7571, 7.2580, 8.1104, 8.2214 and 8.0926 respectively while the maximum cash flows for the year 2007, 2008, 2009, 2010, 2011 and 2012 are 10.5752, 10.4416, 10.4290, 10.4665, 10.6251 and 10.7078 respectively.

The mean of cash flows for the year 2007, 2008, 2009, 2010, 2011 and 2012 are 9.2612, 9.2097, 9.2062, 9.3528, 9.3495 and 9.3859 respectively.

The minimum share price returns are -0.0113 in year 2007, -0.0898 in year 2008, -0.0292 in year 2009, -0.0188 in year 2010, -0.0341 in year 2011 and -0.0427 in year 2012 while the maximum share price returns are 0.1223 in year 2007, 0.0493 in year 2008, 0.1775 in year 2009, 0.0455 in year 2010, 0.0478 in year 2011 and 0.0498 in year 2012. The mean of share price

returns for the year 2007 to 2012 are 0.027478, -0.039229, 0.033864, 0.018938, 0.007538 and 0.007474 respectively.

4.2 Spearman Correlation Analysis

4.2.1 Spearman Correlation Analysis for year 2007

Year 2007		BS	BI	ACS	ACI	BM	LEV	FS
CE	Correlation Coefficient	0.457	0.064	0.259	-0.2	.567*	0.471	.885**
Cr	Sig. (2- tailed)	0.075	0.814	0.332	0.459	0.022	0.066	0
CDD	Correlation Coefficient	562*	-0.388	-0.402	-0.126	-0.328	-0.081	-0.369
SPR	Sig. (2- tailed)	0.023	0.138	0.123	0.642	0.215	0.766	0.159

 Table 4.9: Spearman Correlations (2007)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of board meeting (correlated to CF) is 0.022, as shown in the table above. This indicates that board meeting is significant in predicting the Cash Flows as the p-value is less than 0.05, Hence, H_0 is rejected. Board meeting has a 0.567 correlation with Cash Flows. It means that when the number of board meeting increases, Cash Flows increases. Thus, board meeting has a significant positive relationship with Cash Flows in year 2007.

The p-value of firm size (correlated to CF) is 0.000, as shown in the table above. This indicates that firm size is significant in predicting the Cash Flows as the p-value is less than 0.05, Hence, H_0 is rejected. Firm size has a 0.885 correlation with Cash Flows. It means that when the firm size

increases, Cash Flows increases. Thus, firm size has a significant positive relationship with Cash Flows in year 2007.

The other predictor variables namely board size, board independence, audit committee size and leverage have an insignificant (p-value>0.05) positive relationship with Cash Flows in year 2007. Audit committee independence has an insignificant (p-value>0.05) negative relationship with Cash Flows in year 2007.

The p-value of board size (correlated with SPR) is 0.023, as shown in Table 4.9. This indicates that board size is significant in explaining the Share Price Returns. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Board size has a -0.562 correlation with Share Price Returns. This means that, when the board size increases, Share Price Returns will decrease. Thus, board size has a significant negative relationship with Share Price Returns in year 2007.

In year 2007, the rest of the predictor variables (board independence, audit committee size, audit committee independence, board meeting, leverage and firm size) have an insignificant (p-value>0.05) negative relationship with the Share Price Returns.

4.2.2 Spearman Correlation Analysis for year 2008

Y	ear 2008	BS	BI	ACS	ACI	BM	LEV	FS
	Correlation							
CF	Coefficient	0.496	-0.132	0.418	0.394	.546*	0.371	.915**
Cr								
	Sig. (2-							
	tailed)	0.051	0.627	0.108	0.131	0.029	0.158	0
	Correlation			-	-	-	-	
CDD	Coefficient	-0.21	0.021	0.016	0.146	0.276	0.244	533*
SPK								
	Sig. (2-							
	tailed)	0.434	0.939	0.954	0.59	0.3	0.361	0.033

Table 4.10: Spearman Correlations (2008)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of board meeting (correlated with CF) is 0.029, as shown in Table 4.10. This indicates that board meeting is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Board meeting has a 0.546 correlation with Cash Flows. This means that, when the number of board meeting increases, Cash Flows will increase. Thus, board meeting has a significant positive relationship with Cash Flows in year 2008.

The p-value of firm size (correlated with CF) is 0.000, as shown in Table 4.10. This indicates that firm size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a 0.915 correlation with Cash Flows. This means that, the larger the firm size, the larger the cash flows is. Thus, firm size has a significant positive relationship with Cash Flows in year 2008.

In addition, board size, audit committee size, audit committee independence and leverage are insignificantly (p-value>0.05) positively related to Cash Flows in year 2008. The remaining variable, board independence is insignificantly (p-value>0.05) negatively related to Cash Flows.

The p-value of firm size (correlated with SPR) is 0.033, as shown in Table 4.10. This indicates that firm size is significant in explaining the Share Price Returns. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a -0.533 correlation with Share Price Returns. This means that, when the larger the firm size, the larger the Share Price Returns is. Thus, firm size has a significant positive relationship with Share Price Returns in year 2008.

In addition, board size, audit committee size, audit committee independence, board meeting and leverage are insignificantly (p-value>0.05) negatively related to Share Price Returns in year 2008. The remaining variable, board independence is insignificantly (p-value>0.05) positively related to Share Price Returns.

4.2.3 Spearman Correlation Analysis for year 2009

Year 2009		BS	BI	ACS	ACI	BM	LEV	FS
CE	Correlation Coefficient	0.38	0.259	0.041	-0.194	0.264	.544*	.900**
Cr	Sig. (2- tailed)	0.147	0.333	0.879	0.472	0.323	0.029	0
SDD	Correlation Coefficient	0.483	-0.335	0.189	-0.162	0.135	0.202	0.369
51 K	Sig. (2- tailed)	0.058	0.205	0.484	0.548	0.618	0.454	0.159

Table 4.11: Spearman Correlations (2009)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of leverage (correlated with CF) is 0.029, as shown in Table 4.11. This indicates that leverage is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Leverage has a 0.544 correlation with Cash Flows. This means that, when the leverage increases, the Cash Flows increases. Thus, leverage has a significant positive relationship with Cash Flows in year 2009.

The p-value of firm size (correlated with CF) is 0.000, as shown in Table 4.11. This indicates that firm size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a 0.9 correlation with Cash Flows. This means that, the larger the firm size, the larger the Cash Flows is. Thus, firm size has a significant positive relationship with Cash Flows in year 2009.

Board size, board independence, audit committee size and board meeting is insignificantly (p-value>0.05) positively related to the Cash Flows in year

2009 while audit committee independence is insignificantly (p-value>0.05) negatively correlated with Cash Flows in year 2009.

In respect to share price returns, all the predictor variables are not significant (p-value>0.05) in predicting the variations in Share Price Returns. Board size, audit committee size, board meeting, leverage and firm size have an insignificant and positive relationship with the Share Price Returns in year 2009 while board independence and audit committee independence have an insignificant negative relationship with Share Price Returns in year 2009.

4.2.4 Spearman Correlation Analysis for year 2010

Year 2010		BS	BI	ACS	ACI	BM	LEV	FS
CE	Correlation Coefficient	.566*	0.264	0.388	0.147	0.061	0.382	.968**
Cr	Sig. (2- tailed)	0.022	0.323	0.138	0.587	0.823	0.144	0
CDD	Correlation Coefficient	-0.353	0.107	0.01	0.061	-0.157	-0.356	-0.355
SPR	Sig. (2- tailed)	0.18	0.694	0.97	0.822	0.561	0.176	0.178

Table 4.12: Spearman Correlations (2010)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of board size (correlated with CF) is 0.022, as shown in Table 4.12. This indicates that board size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Board size has a 0.566 correlation with Cash Flows. This means that, the

larger the board size, the larger the Cash Flows is. Thus, board size has a significant positive relationship with Cash Flows in year 2010.

The p-value of firm size (correlated with CF) is 0.000, as shown in Table 4.12. This indicates that firm size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a 0.968 correlation with Cash Flows. This means that, the larger the firm size, the larger the Cash Flows is. Thus, firm size has a significant positive relationship with Cash Flows in year 2010.

In addition, board independence, audit committee size, audit committee independence, board meeting and leverage have an insignificant (p-value>0.05) positive relationship with Cash Flows in year 2010.

In respect to the Share Price Returns in 2010, all the predictor variables are not significant (p-value>0.05) in explaining the variations. Board size, board meeting, leverage and firm size have an insignificant negative relationship with Share Price Returns in 2010 while board independence, audit committee size and audit committee independence have an insignificant positive relationship with Share Price Returns for the year 2010.

4.2.5 Spearman Correlation Analysis for year 2011

Y	Year 2011	BS	BI	ACS	ACI	BM	LEV	FS
CE	Correlation Coefficient	0.368	0.177	0.241	-0.019	0.152	0.379	.918**
Cr	Sig. (2-tailed)	0.16	0.512	0.369	0.946	0.573	0.147	0
CDD	Correlation Coefficient	-0.405	0.164	0.017	-0.435	-0.397	0.099	-0.088
51 K	Sig. (2-tailed)	0.119	0.545	0.951	0.092	0.128	0.716	0.745

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of firm size (correlated with CF) is 0.000, as shown in Table 4.13. This indicates that firm size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a 0.918 correlation with Cash Flows. This means that, the larger the firm size, the larger the Cash Flows is. Thus, firm size has a significant positive relationship with Cash Flows in year 2011.

Board size, board independence, audit committee size, board meeting and leverage are insignificantly (p-value>0.05) positively related to Cash Flows for the year 2011 while board size and audit committee independence are insignificantly (p-value>0.05) negatively related to Cash Flows.

In term of Share Price Returns for the year 2011, all the predictor variables are insignificant. Board independence, audit committee size and leverage have an insignificant (p-value>0.05) positive relationship with the Share
Price Returns for the year 2011 while board size, audit committee independence, board meeting and firm size have an insignificant (p-value>0.05) negative relationship with Share Price Returns for the year 2011.

4.2.6 Spearman Correlation Analysis for year 2012

Y	'ear 2012	BS	BI	ACS	ACI	BM	LEV	FS
CE	Correlation Coefficient	.548*	0.151	0.342	0.352	0.278	0.238	.935**
Cr	Sig. (2- tailed)	0.028	0.578	0.195	0.182	0.297	0.374	0
CDD	Correlation Coefficient	-0.14	0.058	-0.014	-0.259	-0.039	0.056	0.365
SPR	Sig. (2- tailed)	0.606	0.832	0.96	0.333	0.885	0.837	0.165

Table 4.14: Spearman Correlations (2012)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables: CF= Cash Flows; SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The p-value of board size (correlated with CF) is 0.028, as shown in Table 4.14. This indicates that board size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm size has a 0.548 correlation with Cash Flows. This means that, the larger the board size, the larger the Cash Flows is. Thus, board size has a significant positive relationship with Cash Flows in year 2012.

The p-value of firm size (correlated with CF) is 0.000, as shown in Table 4.14. This indicates that firm size is significant in explaining the Cash Flows. This is because the p-value is less than 0.05. Hence, the H_0 is rejected. Firm

size has a 0.935 correlation with Cash Flows. This means that, the larger the firm size, the larger the Cash Flows is. Thus, firm size has a significant positive relationship with cash flow in year 2012.

The remaining predictor variables (board independence, audit committee size, audit committee independence, board meeting and leverage) have an insignificant (p-value>0.05) positive relationship with Cash Flows in year 2012.

With respect to the Share Price Returns in year 2012, all the predictors variables are insignificant (p-value>0.05) in explaining the variations in Share Price Returns. Board size, audit committee size, audit committee independence and board meeting are negatively related to Share Price Returns while board independence, leverage and firm size are positively related to Share Price Returns.

4.3 Multiple Regression Analysis

4.3.1 Multiple Regression Analysis for Year 2007

4.3.1.1 Dependent Variable 1: Share Price Returns

Model	R	R Square	Adjusted R	Std. Error of	
			Square	the Estimate	
SPR	.702	.493	.050	.0355431	

Table 4.15: Model Summary (Share Price Returns 2007)

a. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

R Square represents the proportion of variance in the dependent variable that can be explained by the predictor variables (independent variables and control variables). Table 4.15 reveals that the R^2 is 0.493, which is interpreted as that 49.3% of the variation in Share Price Returns for the year 2007 can be explained by the predictor variables.

Model		Sum of	df	Mean	F	Sig.
		Squares		Square		
	Regression	.010	7	.001	1.113	.437
SPR	Residual	.010	8	.001		
	Total	.020	15			

Table 4.16: ANOVA (Share Price Returns 2007)

a. Dependent Variable: SPR2007

b. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

According to Table 4.16, the P- value for is 0.437, which is more than 0.05, thus is not significant. This is not a good model to describe the relationship between the predictor variables and Share Price Returns. The predictor variables are not significantly explaining the variances in the Share Price Returns for the year 2007.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error Beta			0
	(Const ant)	0.203	0.186		1.09	0.307
	BS	-0.01	0.009	-0.409	-1.065	0.318
	BI	-0.166	0.099	-0.506	-1.674	0.133
SPR	ACS	0.005	0.022	0.094	0.225	0.827
	ACI	0.037	0.078	0.145	0.47	0.651
	BM	-0.002	0.004	-0.23	-0.488	0.638
	LEV	0.012	0.07	0.07	0.174	0.867
	FS	-0.004	0.022	-0.082	-0.182	0.86

Table 4.17: Coefficients (Share Price Returns 2007)

a. Dependent Variable: SPR 2007

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size. The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2007} = 0.203 - 0.01BS - 0.166BI + 0.005ACS + 0.037ACI - 0.002BM + 0.012LEV - 0.004FS$

Table 4.17 shows that all the predictor variables are not statistically significant in explaining the variation in Share Price Returns for year 2007 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

In addition, the table indicates positive coefficients for the predictor variables: audit committee size, audit committee independence and leverage, while it is negative for the rest of the predictor variables.

4.3.1.2 Dependent Variable 2: Cash Flows

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CF	.967	0.935	0.897	0.2930761

Table 4.18: Model Summary (Cash Flows 2007)

a. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

Table 4.18 shows that the R^2 is 0.935. 93.5% of the variation in Cash Flows for the year 2007 can be explained by the predictor variables.

Table 4.19: ANOVA (Cash Flows 2007)

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.935	7	1.419	15.524	.000
CF	Residual	0.687	8	0.086		
	Total	10.622	15			

a. Dependent Variable: CF2007

b. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

According to Table 4.19, the P- value for is 0.000, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2007.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		β	Std. Error	Beta	Ľ	5 1 g .
	(Constant)	929	1.533		606	.561
	BS	.109	.074	.201	1.465	.181
	BI	161	.815	021	197	.848
CF	ACS	340	.179	284	-1.902	.094
	ACI	577	.640	099	901	.394
	BM	.006	.034	.033	.194	.851
	LEV	435	.579	108	751	.474
	FS	1.102	.179	1.001	6.171	.000

a. Dependent Variable: CF 2007

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2007}{=}-0.929+0.109BS-0.161BI-0.34ACS-0.577ACI+0.006 \\ BM-0.435LEV+1.102FS$

Table 4.20 shows for firm size, the p-value is 0.000 (<0.05). Hence, firm size is significant in explaining the variation in Cash Flows for year 2007. Hence, we have enough evidence to reject H_{0} . The β value of 1.102 means that by increasing the firm size by 1 unit, the Cash Flows increased by 1.102 units, providing that other variables remain constant.

The other predictor variables are not statistically significant in explaining the variation in cash flows for year 2007 (P-value>0.05). Hence, there is not enough evidence to reject H_0 .

Besides, the regression results point out that board size, board meeting and firm size have positive relationship with the Cash Flows while the remaining predictor variables have negative association with the Cash Flows.

4.3.2 Multiple Regression Analysis for Year 2008

4.3.2.1 Dependent Variable 1: Share Price Returns

Table 4.21: Model Summary (Share Price Returns 2008)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
SPR	.511	0.261	-0.385	0.0378827

a. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

Table 4.21 shows that the R^2 is 26.1%. In year 2008, only 26.1% of the variations in Share Price Returns can be explained by the predictor variables.

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.004	7	0.001	0.404	.875
SPR	Residual	0.011	8	0.001		
	Total	0.016	15			

Table 4.22: ANOVA (Share Price Returns 2008)

a. Dependent Variable: SPR2008

b. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

According to Table 4.22, the P- value for is 0.875, which is more than 0.05, thus is not significant. This is not a good model to describe the relationship between the predictor variables and share price returns. The predictor variables are not statistically significantly explaining the variances in the Share Price Returns for the year 2008.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		β	Std. Error	Beta	ť	516.
	(Constant)	.041	.184		.222	.830
	BS	014	.014	689	-1.018	.338
	BI	.000	.087	.000	001	.999
SPR	ACS	.034	.034	.656	.979	.356
	ACI	.092	.122	.399	.754	.472
	BM	2.911E-05	.005	.003	.006	.995
	LEV	023	.077	149	296	.774
	FS	013	.026	277	495	.634

Table 4.23: Coefficients (Share Price Returns 2008)

a. Dependent Variable: SPR2008

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2008} = 0.041 - 0.014 \text{ BS} + 0.000 \text{ BI} + 0.034 \text{ ACS} + 0.092 \text{ ACI} + 2.91\text{E-}05 \text{ BM} - 0.023 \text{ LEV} - 0.013 \text{ FS}$

Table 4.20 shows that all the predictor variables are not statistically significant in explaining the variation in Share Price Returns for year 2008 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

Board size, leverage and firm size are revealed to have negative relationship with the Share Price Returns while it is positive for the rest of the predictor variables.

4.3.2.2 Dependent Variable 2: Cash Flows

Table 4 24. Model	Summary	Cash Flows	2008)
1 doie 7.27. Widdei	Summary	Cash I lows	2000)

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CF .958 0.918 0.846 0.3322913	CF	.958	0.918	0.846	0.3322913

a. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

Table 4.24 shows that the R^2 is 91.8%. In year 2008, 91.8% of the variations in Cash Flows can be explained by the predictor variables.

Table 4.25: ANOVA (Cash Flows 2008)

I	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.876	7	1.411	12.777	.001
CF	Residual	.883	8	.110		
	Total	10.759	15			

a. Dependent Variable: CF2008

b. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

According to Table 4.25, the P- value for is 0.001, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2008.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sia
		β	Std. Error	Beta	t	big.
	(Constant)	-2.955	1.613		-1.832	.104
	BS	.098	.123	.178	.791	.452
	BI	-1.135	.761	158	-1.491	.174
CF	ACS	.270	.301	.201	.899	.395
	ACI	.538	1.069	.089	.504	.628
	BM	049	.043	189	-1.144	.286
	LEV	.060	.675	.015	.088	.932
	FS	1.066	.230	.863	4.633	.002

Table 4.26: Coefficients (Cash Flows 2008)

a. Dependent Variable: CF2008

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2008} = -\ 2.955 \ + \ 0.098BS \ - \ 1.135BI \ + \ 0.270ACS \ + \ 0.538ACI \ - \\ 0.049BM \ + \ 0.06LEV \ + \ 1.066FS$

Table 4.20 shows for firm size, the p-value is 0.002 (<0.05). Hence, firm size is significant in explaining the variation in Cash Flows for year 2008. Hence, this study has enough evidence to reject H_0 . The β value of 1.066 means that by increasing the firm size by 1 unit, the cash flow increase by 1.066 units, providing that other variables remain constant.

The other predictor variables are not statistically significant in explaining the variation in Cash Flows for year 2008 (P-value>0.05). Hence, there is not enough evidence to reject H_0 .

In addition, board independence and board meeting have negative influence on the Cash Flows while the rest of the predictor variables have positive influence on the Cash Flows.

4.3.3 Multiple Regression Analysis for Year 2009

4.3.3.1 Dependent Variable 1: Share Price Returns

Table 4.27: Model Summary (Share Price Returns 2009)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
SPR	.607	0.369	-0.184	0.0510443

a. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

Table 4.27 shows that the R^2 is 36.9%. This means that 36.9% of the variations in Share Price Returns in year 2009 can be explained by the predictor variables.

Γ	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.012	7	0.002	0.667	.697
SPR	Residual	0.021	8	0.003		
	Total	0.033	15			

Table 4.28: ANOVA (Share Price Returns 2009)

a. Dependent Variable: SPR2009

b. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

According to Table 4.28, the P- value for is 0.697, which is more than 0.05, thus is not significant. This is not a good model to describe the relationship between the predictor variables and Share Price Returns.

The predictor variables are not statistically significantly explaining the variances in the Share Price Returns for the year 2009.

Model		Unstandardized		Standardized		Sia
		Coefficients		Coefficients	f	
		ß	Std.	Reta	. L	Dig.
		Ч	Error			
	(Constant)	0.064	0.317		0.202	0.845
SPR	BS	0.017	0.014	0.67	1.249	0.247
	BI	-0.12	0.114	-0.304	-1.053	0.323
	ACS	-0.011	0.039	-0.145	-0.277	0.789
	ACI	-0.12	0.135	-0.373	-0.889	0.4
	BM	-0.004	0.004	-0.379	-0.823	0.435
	LEV	0.014	0.085	0.068	0.166	0.872
	FS	0.003	0.025	0.049	0.13	0.9

Table 4.29: Correlations (Share Price Returns 2009)

a. Dependent Variable: SPR2009

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2009} = 0.064 + 0.017BS - 0.12BI - 0.011ACS + 0.12ACI - 0.004BM + 0.014LEV + 0.003FS$

Table 4.29 shows that all the predictor variables are not statistically significant in explaining the variation in Share Price Returns for year 2009 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

Besides, the table indicates negative sign for coefficients board independence, audit committee size, audit committee independence and board meeting while it is positive for the rest of the predictor variables.

4.3.3.2 Dependent Variable 2: Cash Flows

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CF	.966	0.934	0.876	0.2932650

a. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

Table 4.30 shows that the R^2 is 93.4%. It means that 93.4% of the variations in Cash Flows can be predicted by the predictor variables.

Table 4.31: ANOVA (Cash Flows 2009)

I	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.754	7	1.393	16.202	.000
CF	Residual	.688	8	.086		
	Total	10.442	15			

a. Dependent Variable: CF2009

b. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

According to Table 4.31, the P- value for is 0.000, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2009.

Madal		Unstandardized		Standardized		
		Coeffi	Coefficients			Sig
Model	ß	Std.	Boto	ι	Sig.	
	Ч	Error	Deta			
	(Constant)	-2.713	1.820		-1.491	.174
CF	BS	025	.079	054	313	.762
	BI	947	.654	135	-1.449	.185
	ACS	.190	.225	.143	.842	.424
	ACI	.656	.773	.115	.849	.421
	BM	.007	.025	.043	.291	.779
	LEV	.943	.489	.256	1.929	.090
	FS	1.047	.146	.875	7.156	.000

Table 4.32: Coefficients (Cash Flows 2009)

a. Dependent Variable: CF2009

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2009} = -2.713 - 0.025BS - 0.947BI + 0.190ACS + 0.656ACI + 0.007BM + 0.943LEV + 1.047FS$

Table 4.32 shows that only 1 predictor variable, firm size is statistically significantly in explaining the variation in Cash Flows (p-value<0.05). There is enough evidence to reject H_{0} . The rest of the predictor variables (board size, board independence, audit committee size, audit committee independence, board meeting and leverage) are not statistically significant in explaining the variation in Cash Flows for year 2009 (P-value>0.05). Hence, there is not enough evidence to reject H_{0} .

The β value of 1.047 means that by increasing the firm size by 1 unit, the cash flows increased by 1.047 units, providing that other variables remain constant.

Besides, the regression analysis results reveal a negative influence of the board size and board independence on the Cash Flows while the rest of the predictor variables have positive influence on the Cash Flows.

4.3.4 Multiple Regression Analysis for Year 2010

4.3.4.1 Dependent Variable 1: Share Price Returns

Table 4.33: Model Summary (Share Price Returns 2010)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
SPR	.865	0.749	0.529	0.0150138
	· · · · • • • • • • • • • • • • • • • •		010 DI0010 D	00010

a. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

The R^2 is 74.9%, which mean that 74.9% of the variations in Share Price Returns can be explained by the predictor variables.

1	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.005	7	0.001	3.411	.053
SPR	Residual	0.002	8	0		
	Total	0.007	15			

Table 4.34: ANOVA (Share Price Returns 2010)

a. Dependent Variable: SPR2010

b. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

According to Table 4.34, the P- value for is 0.053, which is more than 0.05, thus is not significant. This is a not good model to describe the relationship between the predictor variables and Share Price Returns.

The predictor variables are not statistically significantly explaining the variances in the Share Price Returns for the year 2010.

		Unstandardized		Standardized		
	Model		icients	Coefficients	t	Sia
1			Std.	Reta		515.
		Р	Error	Deta		
	(Constant)	-0.168	0.09		-1.867	0.099
	BS	-0.016	0.004	-1.631	-4.335	0.002
	BI	0.013	0.039	0.076	0.339	0.743
SDD	ACS	0.053	0.013	1.53	4.138	0.003
SIK	ACI	0.143	0.046	0.938	3.076	0.015
	BM	0.001	0.001	0.152	0.707	0.499
	LEV	-0.046	0.03	-0.438	-1.538	0.163
	FS	0.005	0.009	0.147	0.529	0.611

Table 4.35: Coeefficients (Share Price Returns 2010)

a. Dependent Variable: SPR2010

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2010} = -0.168 - 0.016BS + 0.013BI + 0.053ACS + 0.143ACI + 0.001BM - 0.046LEV + 0.005FS$

Table 4.35 shows that board size, audit committee size and audit committee independence are statistically significant in predicting the variation in Share Price Returns for the year 2010 (p-value<0.05). Hence, there is enough evidence to reject H_{0} .

The other predictor variables (board independence, board meeting, leverage and firm size) are not statistically significant in explaining the

variation in Share Price Returns for year 2010 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

The β value for board size is -0.016. This means that by increasing 1 person in the board, Share Price Returns will go down by 0.016 units, providing other variables remain constant. In addition, the β value of 0.053 found regards to audit committee size explains that by increasing 1 director in the audit committee, the Share Price Returns will go up by 0.053 units, providing other variables remain constant. While the β value for audit committee independence is 0.143 means that when other variables remain constant, Share Price Returns will go up by 0.143 units when there is increase of 1 independent director in the audit committee.

In addition, the results illustrate that board size and leverage have negative influences on the Share Price Returns while the rest of the predictor variables have positive influences on the Share Price Returns.

4.3.4.2 Dependent Variable 2: Cash Flows

Table 4.36: Model Summary (Cash Flows 2010
--

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
CF	.978	0.956	0.918	.1970732	

a. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

The R2 of 95.6% explains that 95.6% of the variations in Cash Flows in 2010 can be explained by the predictor variables.

]	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	6.770	7	.967	24.901	.000
CF	Residual	.311	8	.039		
	Total	7.080	15			

Table 4.37: ANOVA (Cash Flows 2010)

a. Dependent Variable: CF2010

b. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

According to Table 4.37, the P- value for is 0.000, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2010.

Model		Unstandardized Coefficients		Standardized		
				Coefficients	t	Sig.
		β	Std. Error	Beta		
	(Constant)	-1.482	1.182		-1.253	.245
	BS	.016	.047	.055	.346	.738
	BI	862	.516	157	-1.669	.134
СЕ	ACS	035	.169	032	207	.841
CF	ACI	.762	.609	.160	1.251	.246
	BM	.009	.015	.053	.586	.574
	LEV	665	.396	200	-1.679	.132
	FS	1.063	.117	1.056	9.091	.000

Table 4.38: Coefficients (Cash Flows 2010)

a. Dependent Variable: CF2010

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size. The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2010} = -1.482 + 0.016BS - 0.862BI - 0.035ACS + 0.762ACI + 0.009BM - 0.665LEV + 1.063FS$

Table 4.38 shows that only one predictor variable, firm size is statistically significantly in explaining the variation in Cash Flows for the year 2010. The rest of the predictor variables are not statistically significant in explaining the variation in Cash Flows for year 2010 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

The β value for firm size is 1.063. This means that by increasing the firm size by 1 unit, Cash Flows will go up by 1.063 units, providing other variables remain constant.

Board independence, audit committee size and leverage are revealed to be negatively associated to the Cash Flows in 2010 while the rest of the predictor variables are revealed to be positively associated to the Cash Flows.

4.3.5 Multiple Regression Analysis for Year 2011

4.3.5.1 Dependent Variable 1: Share Price Returns

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
SPR	.836	0.698	0.434	0.0163006

Table 4.39: Model Summary (Share Price Returns 2011)

a. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

69.8% of the variation in Share Price Returns in 2011 can be explained by the predictor variables.

Table 4.40: ANOVA (Share Price Returns 2011)
--

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.005	7	0.001	2.646	.098
SPR	Residual	0.002	8	0		
	Total	0.007	15			

Oa. Dependent Variable: SPR2011

b. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, rBS2011

According to Table 4.40, the P- value for is 0.098, which is more than 0.05, thus is not significant. This is not a good model to describe the relationship between the predictor variables and Share Price Returns. The predictor variables are not statistically significantly explaining the variances in the Share Price Returns for the year 2011.

Model		Unstandardized Coefficients		Standardized Coefficients	4	Sia
		β	Std. Error	Beta	ι	51g.
	(Constant)	0.139	0.077		1.809	0.108
	BS	0.004	0.003	0.402	1.287	0.234
	BI	0.076	0.039	0.48	1.95	0.087
CDD	ACS	0	0.009	0.007	0.026	0.98
SPK	ACI	-0.138	0.037	-1.01	-3.75	0.006
	BM	-0.003	0.001	-0.587	-2.07	0.072
	LEV	0.077	0.032	0.746	2.457	0.04
	FS	-0.012	0.009	-0.389	-1.298	0.231

Table 4.41: Coefficients (Share Price Returns 2011)

a. Dependent Variable: SPR2010

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size. The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2011} = 0.139 + 0.004BS + 0.076BI + 0.000ACS - 0.138ACI - 0.003BM + 0.077LEV - 0.012FS$

Table 4.41 shows that audit committee independence and leverage are statistically significant in explaining the variation in Share Price Returns for the year 2011 (p-value<0.05). Thus, there is enough evidence to reject to $H_{0.}$

The remaining predictor variables (board size, board independence, audit committee size, board meeting and firm size) are not statistically significant in explaining the variation in Share Price Returns for year 2011 (P-value>0.05). Hence, this study does not have enough evidence to reject H_0 .

The β value for audit committee independence is -0.138. This means that by increasing 1 independent director in the audit committee, Share Price Returns will go down by 0.138 units, providing other variables remain constant. In addition, the β value for leverage is 0.077. This means that by increasing the leverage by 1%, Share Price Returns will go up by 0.077 units, providing other variables remain constant.

In addition, the results point out that other than audit committee independence, board meeting and firm size which have negative association with Share Price Returns, the rest of the variables have positive association with Share Price Returns.

4.3.5.2 Dependent Variable 2: Cash Flows

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CF	.971	0.944	0.895	.2322596

Table 4.42: Model Summary (Cash Flows 2011)

a. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

94.4% of the variation in Cash Flows can be explained by the predictor variables ($R^2 = 94.4\%$).

Table 4.43: ANOVA (Cash Flows 2011)

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.245	7	1.035	19.185	.000
CF	Residual	.432	8	.054		
	Total	7.676	15			

a. Dependent Variable: CF2011

b. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

According to Table 4.43, the P- value for is 0.000, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2011.

		Unstandardized		Standardized		
	Model		Coefficients		f	Sig
	lituuci	ß	Std.	Rata	t	big.
		Ч	Error	Deta		
	(Constant)	568	1.098		518	.619
	BS	.071	.048	.199	1.475	.178
	BI	.198	.558	.038	.354	.732
CE	ACS	040	.128	035	312	.763
Cr	ACI	735	.524	163	-1.401	.199
	BM	026	.017	184	-1.505	.171
	LEV	.148	.449	.043	.330	.750
	FS	.973	.134	.939	7.259	.000

Table 4.44: Coefficients (Cash Flows 2011)

a. Dependent Variable: CF2011

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2011} = -0.568 + 0.071BS + 0.198BI - 0.040ACS - 0.735ACI - 0.026BM + 0.148LEV + 0.973FS$

Table 4.44 shows that all the predictor variables other than firm size are not statistically significant in explaining the variation in Cash Flows for year 2011 (P-value>0.05). Hence, there is not enough evidence to reject H_0 .

Firm size is statistically significant in predicting the variation in Cash Flows for the year 2011 (p-value<0.05). Hence, there is enough evidence to reject H_{0} .

The β value of 0.973 in firm size means that when the firm size increased by 1 unit, the Cash Flows will increase in 0.973 units, provided that other variables remain constant.

Besides, audit committee size, audit committee independence and board meeting have negative relationship with Cash Flows while the rest of the predictor variables have positive relationship with Cash Flows.

4.3.6 Multiple Regression Analysis for year 2012

4.3.6.1 Dependent Variable 1: Share Price Returns

Table 4.45: Model Summary (Share Price Returns 2012)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
SPR	.667	0.446	-0.04	0.0256377		

a. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012, ACI2012, LEV2012, BS2012

The R^2 is 44.6% which means that 44.6% of the variations in Share Price Returns can be predicted by the predictor variables.

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1.695E+21	7	2.422E+20	4.503	.025
SPR	Residual	4.303E+20	8	5.378E+19		·
	Total	2.125E+21	15			

Table 4.46: ANOVA (Share Price Returns 2012)

a. Dependent Variable: SPR2012

b. Predictors: (Constant), FS2012, ACI2012, ACS2012, BM2012, BI2012, LEV2012, BS2012

According to Table 4.46, the P- value for is 0.025, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Share Price Returns.

The predictor variables are statistically significantly explaining the variances in the Share Price Returns for the year 2012.

		Unstand	lardized	Standardized		
Madal		Coefficients		Coefficients	4	Sig
1	Iouci	ß	Std.	Reta		Jig.
		Ч	Error	Deta		
	(Constant)	-0.206	0.12		-1.715	0.125
	BS	-0.002	0.005	-0.189	-0.475	0.647
	BI	0.039	0.059	0.21	0.652	0.533
CDD	ACS	-0.007	0.019	-0.135	-0.345	0.739
51 K	ACI	-0.058	0.059	-0.356	-0.981	0.355
	BM	-0.001	0.002	-0.134	-0.444	0.669
	LEV	-0.05	0.045	-0.424	-1.1	0.303
	FS	0.032	0.014	0.833	2.26	0.054

Table 4.47: Coefficients (Share Price Returns 2012)

a. Dependent Variable: SPR2012

Variables: SPR= Share Price Returns; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $SPR_{2012} = -0.206 - 0.002BS + 0.039BI - 0.007ACS - 0.058ACI - 0.001BM - 0.05LEV + 0.032FS$

Table 4.47 shows that all the predictor variables are not statistically significant in explaining the variation in Share Price Returns for year 2012 (P-value>0.05). Hence, there is not enough evidence to reject H_0 .

Other than board independence and firm size, the other predictor variables have negative association with the Share Price Returns.

4.3.6.2 Dependent Variable 2: Cash Flows

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
CF	.970	0.941	0.890	.2337259

Table 4.48: Model Summary (Cash Flows 2012)

a. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012, ACI2012, LEV2012, BS2012

94.1% of the variation in Cash Flows can be predicted by the predictor variables.

Table 4.49: ANOVA (Cash Flows 2012)

N	Iodel	Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.033	7	1.005	18.393	.000
CF	Residual	.437	8	.055		
	Total	7.470	15			

a. Dependent Variable: CF2012

b. Predictors: (Constant), FS2012, ACI2012, ACS2012, BM2012, BI2012, LEV2012, BS2012

According to Table 4.49, the P- value for is 0.000, which is less than 0.05, thus is significant. This is a good model to describe the relationship between the predictor variables and Cash Flows. The predictor variables are statistically significantly explaining the variances in the Cash Flows for the year 2012.

		Unstand	dardized	Standardized		
	Modol	Coeff	icients	Coefficients	+	Sig
	viouei	ß	Std.	ß	ι	oig.
		۴	Error	F		
	(Constant)	-1.094	1.098		996	.348
	BS	.040	.047	.109	.846	.422
	BI	275	.540	053	509	.624
CF	ACS	071	.175	052	406	.695
Cr	ACI	214	.542	047	395	.703
	BM	.015	.019	.076	.775	.461
	LEV	258	.411	078	627	.548
	FS	1.030	.128	.964	8.052	.000

Table 4.50: Coefficients (Cash Flows 2012)

a. Dependent Variable: CF2012

Variables: CF= Cash Flows; BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The regression equation is formed by using " β " column. The equation is as below:

 $CF_{2012} = -1.094 + 0.040BS - 0.275BI - 0.071ACS - 0.214ACI + 0.015BM - 0.258LEV + 1.030FS$

Table 4.38 shows that only one predictor variable, firm size is statistically significantly in explaining the variation in Cash Flows for the year 2012 with a p-value of 0.000 which is less than 0.05. The rest of the predictor variables are not statistically significant in explaining the variation in Cash Flows for year 2012 (P-value>0.05). Hence, this study does not have enough evidence to reject H₀. Its β value of 1.03 indicates that when the firm size increased by 1 unit, the Cash Flows

will increase by 1.03 units, provided that other variables remain constant.

Besides, the table indicates positive sign for the variables: board size, board meeting and firm size while it is negative for the rest of the predictor variables.

4.4 Multicollinearity Test

		BS	BI	ACS	ACI	BM	LEV	FS
2007	Tolerance	0.429	0.694	0.362	0.667	0.287	0.392	0.307
	VIF	2.331	1.441	2.765	1.499	3.49	2.549	3.254
2008	Tolerance	0.202	0.91	0.205	0.331	0.376	0.364	0.296
	VIF	4.962	1.098	4.868	3.025	2.663	2.749	3.384
2009	Tolerance	0.274	0.949	0.285	0.449	0.373	0.467	0.551
	VIF	3.647	1.054	3.504	2.226	2.683	2.139	1.816
2010	Tolerance	0.221	0.623	0.23	0.337	0.677	0.386	0.407
	VIF	4.515	1.605	4.356	2.967	1.476	2.588	2.458
2011	Tolerance	0.386	0.621	0.55	0.52	0.469	0.408	0.42
	VIF	2.592	1.61	1.817	1.924	2.133	2.448	2.381
2012	Tolerance	0.438	0.671	0.454	0.525	0.759	0.467	0.511
	VIF	2.283	1.49	2.204	1.904	1.317	2.14	1.958

Table 4.51: Multicollinearity Table

Variables: BS= Board Size; BI= Board Independence; ACS= Audit Committee Size; ACI= Audit Committee Independence; BM= Board Meeting, LEV= Leverage; and FS= Firm Size.

The variance inflation factor (VIF) values are below 10 and tolerances are below 1. These indicate good multicollinearity. It means that all the predictor variables are highly independent on themselves and are not affected by other predictor variables.

4.5 Mann-Whitney Test

4.5.1 Board Size and Company Performance (Share Price Returns and Cash Flows)

The best practice standard in the Green Book states that number of directors is preferably no larger than 10 directors ('The Green Book,' 2006). Hence, for the purpose of this test, the coding is shown as below:

"0" indicates board size which is equal or larger than 10;

"1" indicates board size which smaller than 10.

4.5.1.1 Year 2007

Table 4.52: Ranks (BSize2007)

			Mean	Sum of
Bsize		Ν	Rank	Ranks
CF	0.00	7	11.00	77.00
	1.00	9	6.56	59.00
SPR	0.00	7	6.43	45.00
	1.00	9	10.11	91.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2007, there were 7 GLCs with board size which equal or larger than 10 and 9 GLCs with board size smaller than 10.

Table 4.53: Test Statistics (BSize-2007)

	CF2007	SPR2007
Mann-Whitney U	14.000	17.000
Wilcoxon W	59.000	45.000
Ζ	-1.852	-1.536
Asymp. Sig. (2-tailed)	.064	.125
Exact Sig. [2*(1-tailed Sig.)]	.071	.142

a. Grouping Variable: Bsize2007

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of both Cash Flows and Share Price Returns for 2007, the p-values are 0.071 and 0.142 respectively and are above 0.05. This study can conclude that in 2007, there is no statistically difference between the performance of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10.

4.5.1.2 Year 2008

Table 4.54: Ranks (BSize-2008)

			Mean	Sum of
Bsize		Ν	Rank	Ranks
CF	0.00	6	11.33	68.00
	1.00	10	6.80	68.00
SPR	0.00	6	6.92	41.50
	1.00	10	9.45	94.50

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2008, there were 6 GLCs with board size which equal or larger than 10 and 10 GLCs with board size smaller than 10.

Table 4.55: Test Statistics (BSize-2008)

	CF2008	SPR2008
Mann-Whitney U	13.000	20.500
Wilcoxon W	68.000	41.500
Z	-1.844	-1.032
Asymp. Sig. (2-tailed)	.065	.302
Exact Sig. [2*(1-tailed	.073	.313
Sig.)]		

a. Grouping Variable: Bsize2008

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of both Cash Flows and Share Price Returns for 2008, the p-values are 0.073 and 0.313 respectively, which are above 0.05. This study can conclude that in 2008, there is no statistically difference between the performance of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10.

4.5.1.3 Year 2009

Table 4.56: Ranks (BSize-2009)

			Mean	Sum of
Bsiz	e	Ν	Rank	Ranks
CF	0.00	6	10.83	65.00
	1.00	10	7.10	71.00
SPR	0.00	6	11.17	67.00
	1.00	10	6.90	69.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2009, there were 6 GLCs with board size which equal or larger than 10 and 10 GLCs with board size smaller than 10.

	CF2009	SPR2009
Mann-Whitney U	16.000	14.000
Wilcoxon W	71.000	69.000
Z	-1.519	-1.737
Asymp. Sig. (2- tailed)	.129	.082
Exact Sig. [2*(1- tailed Sig.)]	.147	.093

Table 4.57: Test Statistics (BSize-2009)

a. Grouping Variable: Bsize2009

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of both Cash Flows and Share Price Returns for 2009, the p-values are 0.147 and 0.093 respectively, which are above 0.05. It can be concluded that in 2009, there is no statistically difference between the performance of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10.

4.5.1.4 Year 2010

Table 4.58: Ranks (Bsize-2010

			Mean	Sum of
Bsi	ze	Ν	Rank	Ranks
CF	0.00	7	11.14	78.00
	1.00	9	6.44	58.00
SPR	0.00	7	6.86	48.00
	1.00	9	9.78	88.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2010, there were 7 GLCs with board size which equal or larger than 10 and 9 GLCs with board size smaller than 10.

	CF2010	SPR2010
Mann-Whitney U	13.000	20.000
Wilcoxon W	58.000	48.000
Z	-1.958	-1.218
Asymp. Sig. (2-tailed)	.050	.223
Exact Sig. [2*(1-tailed Sig.)]	.055	.252

Table 4.59: Test Statistics (BSize-2010)

a. Grouping Variable: Bsize2010

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of both Cash Flows and Share Price Returns for 2010, the p-values are 0.055 and 0.252 respectively, which are above 0.05. A conclusion that in 2010, there is no statistically difference between the performance of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10 can be made.

4.5.1.5 Year 2011

Table 4.60: Ranks (BSize-2011)

			Mean	Sum of
Bsize	9	Ν	Rank	Ranks
CF	0.00	7	10.29	72.00
	1.00	9	7.11	64.00
SPR	0.00	7	5.71	40.00
	1.00	9	10.67	96.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2011, there were 7 GLCs with board size which equal or larger than 10 and 9 GLCs with board size smaller than 10.

Table 4.61: Test Statistics (BSize-2011)

	CF2011	SPR2011
Mann-Whitney U	19.000	12.000
Wilcoxon W	64.000	40.000
Z	-1.323	-2.066
Asymp. Sig. (2-tailed)	.186	.039
Exact Sig. [2*(1-tailed	.210	.042
Sig.)]		

a. Grouping Variable: Bsize2011

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of Cash flows for 2011, the p-value is 0.210 and is above 0.05. It can be concluded that in 2011, there is no statistically difference between the cash flows of GLCs with board size which equal or larger than 10 and 9 GLCs with board size smaller than 10.

In term of Share Price Returns for 2011, the p-value is 0.042 and is below 0.05. This study can conclude that in 2012, there is a statistically difference between the share price returns of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10.

4.5.1.6 Year 2012

Table 4.62: Ranks (BSize-2012)

			Mean	Sum of
Bsize2012		Ν	Rank	Ranks
CF	0.00	5	11.20	56.00
	1.00	11	7.27	80.00
SP	0.00	5	8.40	42.00
	1.00	11	8.55	94.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In year 2012, there were 5 GLCs with board size which equal or larger than 10 and 11 GLCs with board size smaller than 10.

Table 4.63: Test Statistics (BSize-2012)

	CF2012	SP2012
Mann-Whitney U	14.000	27.000
Wilcoxon W	80.000	42.000
Z	-1.529	057
Asymp. Sig. (2-tailed)	.126	.955
Exact Sig. [2*(1-tailed Sig.)]	.145	1.000

a. Grouping Variable: Bsize2012

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BSize= Board Size.

In term of both Cash Flows and Share Price Returns for 2012, the p-values are 0.145 and 1.000 respectively and are above 0.05. It can be concluded that in 2012, there is no statistically difference between the

performance of GLCs with board size which equal or larger than 10 and GLCs with board size smaller than 10.

4.5.2 Audit Committee Size and Company Performance (Share Price Returns and Cash Flows)

The Green Book (2006) explains that the best practice for an audit committee to work effectively is that it comprises no more than 4 directors. For the purpose of this test, the coding is shown below:

"0" indicates audit committee comprises no more than 4 directors;

"1" indicates audit committee with more than 4 directors.

4.5.2.1 Year 2007

Table 4.64: Ranks (ACSize-2007)

			Mean	Sum of
ACSize		Ν	Rank	Ranks
CF	0.00	14	8.50	119.00
	1.00	2	8.50	17.00
SPR	0.00	14	8.54	119.50
	1.00	2	8.25	16.50

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2007, there were 14 GLCs with no more than 4 directors and 2 GLCs with more than 4 directors.
Table 4.65: Test Statistics (ACSize-2007)

	CF2007	SPR2007
Mann-Whitney U	14.000	13.500
Wilcoxon W	17.000	16.500
Z	0.000	079
Asymp. Sig. (2-tailed)	1.000	.937
Exact Sig. [2*(1-tailed Sig.)]	1.000	.933

a. Grouping Variable: ACSize2007

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In term of both Cash Flows and Share Price Returns for 2007, the pvalues are 1.000 and 0.933 respectively and are above 0.05. Thus, this study can conclude that in 2007, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.2.2 Year 2008

Table 4.66: Ranks (ACSize-2008)

			Mean	Sum of
ACSize		Ν	Rank	Ranks
CF	0.00	15	8.27	124.00
	1.00	1	12.00	12.00
SPR	0.00	15	8.77	131.50
	1.00	1	4.50	4.50

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2008, there were 15 GLCs with no more than 4 directors and 1 GLC with more than 4 directors.

Table 4.67: Test Statistics (ACSize-2008)

CF2008	SPR2008
4.000	3.500
124.000	4.500
759	869
.448	.385
.625	.500
	CF2008 4.000 124.000 759 .448 .625

a. Grouping Variable: ACSize2008

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In term of both Cash Flows and Share Price Returns for 2008, the pvalues are 0.625 and 0.5 respectively and are above 0.05. Hence, this study can conclude that in 2008, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.2.3 Year 2009

Table 4.68: Ranks (ACSize-2009)

			Mean	Sum of
ACSize		Ν	Rank	Ranks
CF	0.00	15	8.40	126.00
	1.00	1	10.00	10.00
SPR	0.00	15	8.37	125.50
	1.00	1	10.50	10.50

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2009, there were 15 GLCs with no more than 4 directors and 1 GLC with more than 4 directors.

Table 4.69: Test Statistics (ACSize-2009)

	CF2009	SPR2009
Mann-Whitney U	6.000	5.500
Wilcoxon W	126.000	125.500
Z	325	434
Asymp. Sig. (2-tailed)	.745	.664
Exact Sig. [2*(1-tailed Sig.)]	.875	.750

a. Grouping Variable: ACSize2009

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In term of both Cash Flows and Share Price Returns for 2009, the pvalues are 0.875 and 0.750 respectively and are above 0.05. Thus, this study can conclude that in 2009, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.2.4 Year 2010

Table 4.70: Ranks (ACSize-2010)

			Mean	Sum of
ACSize		Ν	Rank	Ranks
CF	0.00	15	8.33	125.00
	1.00	1	11.00	11.00
SPR	0.00	15	8.43	126.50
	1.00	1	9.50	9.50

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2010, there were 15 GLCs with no more than 4 directors and 1 GLC with more than 4 directors.

Table 4.71: Test Statistics	(ACSize-2010)
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	CF2010	SPR2010
Mann-Whitney U	5.000	6.500
Wilcoxon W	125.000	126.500
Ζ	542	217
Asymp. Sig. (2-tailed)	.588	.828
Exact Sig. [2*(1-tailed Sig.)]	.750	.875

a. Grouping Variable: ACSize2010

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In term of both Cash Flows and Share Price Returns for 2010, the p-values are 0.750 and 0.875, which are above 0.05. Hence, it can be concluded that in 2010, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.2.5 Year 2011

Table 4.72: Ranks (ACSize-2011)

			Mean	Sum of
ACSize2011		Ν	Rank	Ranks
CF	0.00	15	8.20	123.00
	1.00	1	13.00	13.00
SPR	0.00	15	8.33	125.00
	1.00	1	11.00	11.00

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2011, there were 15 GLCs with no more than 4 directors and 1 GLC with more than 4 directors.

Table 4.73: Test Statistics (ACSize-2011)

	CF2011	SPR2011
Mann-Whitney U	3.000	5.000
Wilcoxon W	123.000	125.000
Z	976	543
Asymp. Sig. (2-tailed)	.329	.587
Exact Sig. [2*(1-tailed Sig.)]	.500	.750

a. Grouping Variable: ACSize2011

b. Not corrected for ties.

Source: Developed for the research

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In term of both Cash Flows and Share Price Returns for 2011, the pvalues are 0.500 and 0.750 respectively, which are above 0.05. Hence, this study can conclude that in 2011, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.2.6 Year 2012

Table 4.74: Ranks (ACSize-2012)

			Mean	Sum of
ACSize		Ν	Rank	Ranks
CF	0.00	16	8.50	136.00
	1.00	0^{a}	0.00	0.00
SPR	0.00	16	8.50	136.00
	1.00	0^{a}	0.00	0.00

a. Mann-Whitney Test cannot be performed on empty groups.

Variables: CF= Cash Flows; SPR= Share Price Returns; ACSize= Audit Committee Size.

In 2012, all the 16 GLCs are with no more than 4 directors. Hence, Mann-Whitney Test cannot be performed as there is only 1 group.

	CF2012	SP2012
Mann-Whitney U	19.000	31.000
Wilcoxon W	64.000	59.000
Z	-1.323	053
Asymp. Sig. (2-tailed)	.186	.958
Exact Sig. [2*(1-tailed Sig.)]	.210	1.000

Table 4.75: Test Statistics (ACSize-2012)

a. Grouping Variable: ACSize2012

b. Not corrected for ties.

In term of both cash flows and share price returns for 2012, the p-values (0.210 and 1.000) are above 0.05. Thus, it can be concluded that in 2012, there is no statistically difference between the performance of GLCs with audit committee size which no larger than 4 directors and GLCs with audit committee size larger than 4 directors.

4.5.3 Board Meetings and Company Performance (Share Price Returns and Cash Flows)

The Green Book (2006) did not provide any guideline on number of board meetings to be held in a year. However, according to the Green Book (2006), on average, boards conducted meeting for six to eight times a year. However, in this study, the Mann-Whitney Test is tested on two situations of board meetings. Firstly (as in part (i)), the test is conducted to examine if there are any differences in performance (Share Price Returns and Cash Flows) between the GLCs which had less than minimum number of average board meetings (6 board meetings) and those which had more than the minimum number of average board meeting (6 board meetings) a year. For

the purpose of this test, the coding of "0" indicates board meetings which less than the average minimum number, which is 6, "1" indicates board meetings which more than the average minimum number, which is 6.

Secondly (as in part (ii)), the test is conducted to examine if there are any differences in performance (Share Price Returns and Cash Flows) between the GLCs which had less than maximum number of average board meetings (8 board meetings) and those which had more than the maximum number of average board meeting (8 board meetings) a year. For the purpose of this test, the coding of "0" indicates board meetings which less than the average maximum number, which is 8, "1" indicates board meetings which more than the average maximum number, which is 8.

4.5.3.1 Year 2007

(i) Board Meetings < 6, Board Meeting \geq 6

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	2	4.50	9.00
	1.00	14	9.07	127.00
SPR	0.00	2	9.00	18.00
	1.00	14	8.43	118.00

Table 4.76: Ranks (BM6-2007)

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2007, there were 2 GLCs which had less than 6 board meetings and 14 GLCs which had more than 6 board meetings.

Table 4.77: Test Statistics (BM6-2007)

	CF2007	SPR2007
Mann-Whitney U	6.000	13.000
Wilcoxon W	9.000	118.000
Z	-1.270	159
Asymp. Sig. (2-tailed)	.204	.874
Exact Sig. [2*(1-tailed Sig.)]	.267	.933

a. Grouping Variable: BM62007

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In term of both Cash Flows and Share Price Returns for 2007, the p-values of 0.267 (Cash Flows) and 0.933 (Share Price Returns) are above 0.05. Hence, this study can conclude that in 2007, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting \ge 8

Table 4.78: Ranks (BM8-2007)

			Mean	Sum of
BM8		Ν	Rank	Ranks
CF	0.00	5	6.40	32.00
	1.00	11	9.45	104.00
SPR	0.00	5	9.20	46.00
	1.00	11	8.18	90.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2007, there were 5 GLCs which had less than 8 board meetings and 11 GLCs which had more than 8 board meetings.

Table 4.79: Test Statistics (BM8-2007)

	CF2007	SPR2007
Mann-Whitney U	17.000	24.000
Wilcoxon W	32.000	90.000
Z	-1.190	397
Asymp. Sig. (2-tailed)	.234	.692
Exact Sig. [2*(1-tailed Sig.)]	.267	.743

a. Grouping Variable: BM82007

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In term of both Cash Flows and Share Price Returns for 2007, the pvalues are 0.267 and 0.743 respectively and are above 0.05. Thus, this study can conclude that in 2007, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year.

4.5.3.2 Year 2008

(i) Board Meetings < 6, Board Meeting \geq 6

Table 4.80: Ranks (BM6-2008)

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	2	9.00	18.00
	1.00	14	8.43	118.00
SPR	0.00	2	8.50	17.00
	1.00	14	8.50	119.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2008, there were 2 GLCs which had less than 6 board meetings and 14 GLCs which had more than 6 board meetings.

Table 4.81: Test Statistics (BM6-2008)

	CF2008	SPR2008
Mann-Whitney U	13.000	14.000
Wilcoxon W	118.000	119.000
Z	159	0.000
Asymp. Sig. (2-tailed)	.874	1.000
Exact Sig. [2*(1-tailed Sig.)]	.933	1.000

a. Grouping Variable: BM62008

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In term of both Cash Flows and Share Price Returns for 2008, the p-values of 0.933 (Cash Flows) and 1.000 (Share Price Returns) are above 0.05. Thus, this study can conclude that in 2008, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting ≥ 8

Table 4.82: Ranks (BM8-2008)

			Mean	Sum of
BM8		Ν	Rank	Ranks
CF	0.00	3	6.33	19.00
	1.00	13	9.00	117.00
SPR	0.00	3	9.50	28.50
	1.00	13	8.27	107.50

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2008, there were 3 GLCs which had less than 8 board meetings and 13 GLCs which had more than 8 board meetings.

Table 4.83: Test Statistics (BM8-2008)

	CF2008	SPR2008
Mann-Whitney U	13.000	16.500
Wilcoxon W	19.000	107.500
Z	874	404
Asymp. Sig. (2-tailed)	.382	.686
Exact Sig. [2*(1-tailed Sig.)]	.439	.704

a. Grouping Variable: BM82008

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 8 board meetings.

In term of both Cash Flows and Share Price Returns for 2008, the pvalues are 0.439 and 0.704 respectively and are above 0.05. It can be concluded that in 2008, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year

4.5.3.3 Year 2009

(i) Board Meetings < 6, Board Meeting ≥ 6

Table 4.84: Ranks (BM6-2009)

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	3	6.33	19.00
	1.00	13	9.00	117.00
SPR	0.00	3	5.67	17.00
	1.00	13	9.15	119.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2009, there were 3 GLCs which had less than 6 board meetings and 13 GLCs which had more than 6 board meetings.

Table 4.85: Test Statistics (BM6-2009)

	CF2009	SPR2009
Mann-Whitney U	13.000	11.000
Wilcoxon W	19.000	17.000
Ζ	874	-1.144
Asymp. Sig. (2-tailed)	.382	.252
Exact Sig. [2*(1-tailed Sig.)]	.439	.296

a. Grouping Variable: BM62009

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2009, the p-value Cash Flows of 0.439 and p-value of Share Price Returns of 0.296 are both above 0.05. This study can conclude that in 2009, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting ≥ 8

Table 4.86: Ranks (BM8-2009)

			Mean	Sum of
BM8		Ν	Rank	Ranks
CF	0.00	5	7.00	35.00
	1.00	11	9.18	101.00
SPR	0.00	5	6.20	31.00
	1.00	11	9.55	105.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2009, there were 5 GLCs which had less than 8 board meetings and 11 GLCs which had more than 8 board meetings.

Table 4.87: Test Statistics (BM8-2009)

	CF2009	SPR2009
Mann-Whitney U	20.000	16.000
Wilcoxon W	35.000	31.000
Z	850	-1.304
Asymp. Sig. (2-tailed)	.396	.192
Exact Sig. [2*(1-tailed	.441	.221
Sig.)]		

a. Grouping Variable: BM82009

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 8 board meetings.

In 2009, the p-value Cash Flows of 0.441 and p-value of Share Price Returns of 0.221 are both above 0.05. It can be concluded that in 2009, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year.

4.5.3.4 Year 2010

(i) Board Meetings < 6, Board Meeting ≥ 6

Table 4.88: Ranks (BM6-2010)

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	3	6.00	18.00
	1.00	13	9.08	118.00
SPR	0.00	3	12.67	38.00
	1.00	13	7.54	98.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2010, there were 3 GLCs which had less than 6 board meetings and 13 GLCs which had more than 6 board meetings

Table 4.89: Test Statistics (BM6-2010)

	CF2010	SPR2010
Mann-Whitney U	12.000	7.000
Wilcoxon W	18.000	98.000
Z	-1.009	-1.683
Asymp. Sig. (2-tailed)	.313	.092
Exact Sig. [2*(1-tailed Sig.)]	.364	.111

a. Grouping Variable: BM62010

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2010, the p-value Cash Flows of 0.364 and p-value of Share Price Returns of 0.111 are both above 0.05. Hence, this study can conclude that in 2010, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting \geq 8

Table 4.90: Ranks (BM8-2010)

				Sum of
BM8		Ν	Mean Rank	Ranks
CF	0.00	3	6.00	18.00
	1.00	13	9.08	118.00
SPR	0.00	3	12.67	38.00
	1.00	13	7.54	98.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2010, there were 3 GLCs which had less than 8 board meetings and 13 GLCs which had more than 8 board meetings.

Table 4.91: Test Statistics (BM8-2010)

	CF2010	SPR2010
Mann-Whitney U	12.000	7.000
Wilcoxon W	18.000	98.000
Z	-1.009	-1.683
Asymp. Sig. (2-tailed)	.313	.092
Exact Sig. [2*(1-tailed Sig.)]	.364	.111

a. Grouping Variable: BM82010

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 8 board meetings.

In 2010, the p-value Cash Flows of 0.364 and p-value of Share Price Returns of 0.111 are both above 0.05. It can be concluded that in 2010, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year.

4.5.3.5 Year 2011

(i) Board Meetings < 6, Board Meeting \geq 6

Table 4.92: Ranks (BM6-2011)

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	3	6.33	19.00
	1.00	13	9.00	117.00
SPR	0.00	3	10.67	32.00
	1.00	13	8.00	104.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2011, there were 3 GLCs which had less than 6 board meetings and 13 GLCs which had more than 6 board meetings.

Table 4.93: Test Statistics (BM6-2011)

	CF2011	SPR2011
Mann-Whitney U	13.000	13.000
Wilcoxon W	19.000	104.000
Z	874	875
Asymp. Sig. (2-tailed)	.382	.382
Exact Sig. [2*(1-tailed Sig.)]	.439	.439

a. Grouping Variable: BM62011

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2011, the p-value Cash Flows of 0.439 and p-value of Share Price Returns of 0.439 are both above 0.05. Hence, this study can conclude that in 2011, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting ≥ 8

Table 4.94: Ranks (BM8-2011)

			Mean	Sum of
BM8		Ν	Rank	Ranks
CF	0.00	5	6.80	34.00
	1.00	11	9.27	102.00
SPR	0.00	5	11.80	59.00
	1.00	11	7.00	77.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2011, there were 5 GLCs which had less than 8 board meetings and 11 GLCs which had more than 8 board meetings.

Table 4.95: Test Statistics (BM8-2011)

	CF2011	SPR2011
Mann-Whitney U	19.000	11.000
Wilcoxon W	34.000	77.000
Z	963	-1.871
Asymp. Sig. (2-tailed)	.336	.061
Exact Sig. [2*(1-tailed	.377	.069
Sig.)]		

a. Grouping Variable: BM82011

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 8 board meetings.

In 2011, the p-value Cash Flows of 0.377 and p-value of Share Price Returns of 0.069 are both above 0.05. Thus, this study can conclude that in 2011, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year.

4.5.3.6 Year 2012

(i) Board Meetings < 6, Board Meeting ≥ 6

Table 4.96: Ranks (BM6-2012)

			Mean	Sum of
BM6		Ν	Rank	Ranks
CF	0.00	1	4.00	4.00
	1.00	15	8.80	132.00
SPR	0.00	1	9.00	9.00
	1.00	15	8.47	127.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In 2012, there were 1 GLC which had less than 6 board meetings and 15 GLCs which had more than 6 board meetings.

Table 4.97: Test Statistics (BM6-2012)

	CF2012	SPR2012
Mann-Whitney U	3.000	7.000
Wilcoxon W	4.000	127.000
Z	976	109
Asymp. Sig. (2-tailed)	.329	.914
Exact Sig. [2*(1-tailed Sig.)]	.500	1.000

a. Grouping Variable: BM62012

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 6 board meetings.

In term of both Cash Flows and Share Price Returns for 2012, the p-values are 0.5 and 1.000 respectively, which are above 0.05. Hence, it can be concluded that in 2012, there is no statistically difference between the performance of GLCs which had less than 6 board meetings and GLCs which had more than 6 board meetings in the year.

(ii) Board Meetings < 8, Board Meeting ≥ 8

Table 4.98: Ranks (BM8-2012)

			Mean	Sum of
BM8		Ν	Rank	Ranks
CF	0.00	3	8.33	25.00
	1.00	13	8.54	111.00
SPR	0.00	3	11.33	34.00
	1.00	13	7.85	102.00

Variables: CF= Cash Flows; SPR= Share Price Returns; BM8= Average 8 board meetings.

In 2012, there were 3 GLCs which had less than 8 board meetings and 13 GLCs which had more than 8 board meetings.

Table 4.99: Test Statistics (BM8-2012)

	CF2012	SPR2012
Mann-Whitney U	19.000	11.000
Wilcoxon W	25.000	102.000
Z	067	-1.144
Asymp. Sig. (2-tailed)	.946	.252
Exact Sig. [2*(1-tailed Sig.)]	1.000	.296

a. Grouping Variable: BM82012

b. Not corrected for ties.

Variables: CF= Cash Flows; SPR= Share Price Returns; BM6= Average 8 board meetings.

In term of both cash flows and share price returns for 2012, the p-value is above 0.05. We can conclude that in 2012, there is no statistically difference between the performance of GLCs which had less than 8 board meetings and GLCs which had more than 8 board meetings in the year.

4.6 Panel Data Analysis

4.6.1 Unit Root Test (PP)

The hypothesis of PP Unit Root Test is suggested as follow:

H₀: The series of data contain a unit root.

H₁: The series of data do not contain a unit root test.

If the p-value resulted from the PP test lower than the significance value of 0.05, it the null hypothesis should be rejected.

Table 4.100: Results of Phillips-Perron (PP) Unit Root	t Test on BS,	BI, ACS,
ACI, BM, LEV, FS, SPR and CF for the period of year	r 2007 to yea	r 2012

	P-value				
	Level		First Differ	rence	
		Trend and		Trend and	
Variable	Intercept	Intercept	Intercept	Intercept	
BS	0.5811	0.1232	0.0021	0.0000	
BI	0.6925	0.0005	0.0001	0.0022	
ACS	0.778	0.2166	0.0079	0.0000	
ACI	0.3246	0.1777	0.0025	0.0000	
BM	0.0000	0.0298	0.0020	0.0001	
LEV	0.0001	0.0000	0.0000	0.0000	
FS	0.0001	0.0000	0.0000	0.0000	
SPR	0.0000	0.0000	0.0000	0.0000	
CF	0.0628	0.0000	0.0000	0.0002	

H₀: The variable is not stationary (unit-root exists)

H₁: The variable is stationary (Unit-root does not exist)

Table 4.100 shows the p-value results from the PP test. The results show that most of the variables (BM, LEV, FS, SPR and CF) are significance at 5% in level form with or without trend.

The variables that shows significance p-value are the BM, LEV, FS, SPR and CF. The p-values with trend and without trend are both lesser than 0.05. Thus the null hypothesis is rejected and the alternative hypothesis that the series data is stationary is accepted.

In the first difference level, the study found that all the series data come with significant p-values. All of the p-values after first differencing shown are below 0.05, therefore the null hypothesis is rejected. Now all the series are in stationary data.

4.6.2 Model 1- Share Price Returns

4.6.2.1 Fixed Effect Model

Table 4.101:	Fixed Effect	Model-	Panel	Least So	uares ((SPR)

R- squared	Adjusted R-squared	F- statistic	Prob(F-statistic)	
0.254664	0.030042	1.133744	0.334	144
	Coefficient	Std. Error	t- Statistic	Prob.
С	0.0904	0.3730	0.2424	0.8091
BS	0.0132	0.0050	2.6632	0.0095
BI	0.0303	0.0701	0.4318	0.6671
ACS	-0.0074	0.0117	-0.6345	0.5277
ACI	0.0005	0.0394	0.0139	0.9890
BM	0.0020	0.0022	0.8977	0.3723
LEV	-0.1113	0.0741	-1.5030	0.1371
FS	-0.0137	0.0369	-0.3712	0.7116

4.6.2.2 Random Effect Model

Weighted Statistics	R-squared	Adjusted R- squared	F- statistic	Prob.
	0.03371	-0.04315	0.43861	0.87534
Variable	Coefficient	Std. Error	t- Statistic	Prob.
С	0.03686	0.07234	0.50955	0.61160
BS	0.00192	0.00310	0.61983	0.53700
BI	-0.00501	0.03432	-0.14598	0.88430
ACS	-0.00676	0.00921	-0.73390	0.46500
ACI	-0.04445	0.03293	-1.35012	0.18040
BM	-0.00139	0.00122	-1.14172	0.25670
LEV	-0.01013	0.02605	-0.38888	0.69830
FS	0.00381	0.00835	0.45646	0.64920

Table 4.102: Random Effect Model- Panel EGLS (SPR)

To test which model (fixed effect or random effect) is appropriate, the Hausman Test is carried out.

4.6.2.3 Hausman Test

Table 4.103: Hausman Test (SPR)

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section	on random	14.09924	7	0.0494
R-squared	Adjusted R- squared	F-statistic	Prob.	
0.254664	0.030042	1.133744	0.33414	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.09043	0.37305	0.24240	0.80910
BS	0.01323	0.00497	2.66322	0.00950
BI	0.03026	0.07006	0.43184	0.66710
ACS	-0.00742	0.01170	-0.63455	0.52770
ACI	0.00055	0.03939	0.01388 0.98	
BM	0.00197	0.00219	0.89772	0.37230
LEV	-0.11134	0.07408	-1.50302 0.137	
FS	-0.01371	0.03694	-0.37118	0.71160

H₀ : Random effect model is appropriate.

H₁ : Fixed effect model is appropriate.

The p-value shown in Hausman Test is 0.049, which is smaller than 0.05. Hence, this study has enough evidence to reject the null hypothesis. The Share Price Returns model is of fixed effect model.

4.6.2.4 Wald Test

To further test whether fixed effect model or pooled regression model is appropriate, dummy variables were created to estimate the model. The equation is as below:

Share Price Returns

 $=c(1)+c(2)*bs+c(3)*bi+c(4)*acs+c(5)*aci+c(6)*bm+c(7)*lev+c(8)*fs+c(9) \\ *d2+c(10)*d3+c(11)*d4+c(12)*d5+c(13)*d6+c(14)*d7+c(15)*d8+c(16)*d9 \\ +c(17)*d10+c(18)*d11+c(19)*d12+c(20)*d13+c(21)*d14+c(22)*d15+c(23) \\ *d16$

R- squared	Adjusted R-squared	F- statistic	Prob(F-s	statistic)
0.254664	0.030042	1.133744	0.334	4144
Variable	Coefficient	Std. Error	t- Statistic	Prob.
C(1)	0.04477	0.36620	0.12225	0.90300
C(2)	0.01323	0.00497	2.66322	0.00950
C(3)	0.03026	0.07006	0.43184	0.66710
C(4)	-0.00742	0.01170	-0.63455	0.52770
C(5)	0.00055	0.03939	0.01388	0.98900
C(6)	0.00197	0.00219	0.89772	0.37230
C(7)	-0.11134	0.07408	-1.50302	0.13710
C(8)	-0.01371	0.03694	-0.37118	0.71160
C(9)	-0.06445	0.03473	-1.85571	0.06750
C(10)	0.01238	0.02249	0.55074	0.58350
C(11)	-0.06223	0.04862	-1.27987	0.20460
C(12)	0.04328	0.03426	1.26338	0.21050
C(13)	0.01810	0.04281	0.42279	0.67370
C(14)	0.00400	0.05274	0.07584	0.93980

Table 4.104: Panel Least Squares-Wald Test (SPR)

C(15)	-0.01043	0.03884	-0.26852	0.78910
C(16)	0.09450	0.03044	3.10493	0.00270
C(17)	-0.01167	0.00451	-2.58441	0.01180
C(18)	0.08395	0.03452	2.43202	0.01750
C(19)	-0.00021	0.04925	-0.00430	0.99660
C(20)	0.08249	0.03830	2.15363	0.03460
C(21)	0.06508	0.05320	1.22340	0.22510
C(22)	0.05295	0.05837	0.90723	0.36730
C(23)	0.13114	0.05367	2.44348	0.01700

Then, the dummy variables were tested to find out if they are equal to zero. The equation is, c(9)=c(10)=c(11)=c(12)=c(13)=c(14)=c(15)=c(16)=c(17)=c(18)=c(19)=c(20)=c(21)=c(22)=c(23)=0

Table 4.105: Wald Test (Share Price Returns)

Wald Test: Equation: Untitled			
Test Statistic	Value	df	Probability
F-statistic Chi-square	1.442695 21.64042	(15, 73) 15	0.1510 0.1176

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(9)	-0.064447	0.034729
C(10)	0.012384	0.022486
C(11)	-0.062231	0.048623
C(12)	0.043277	0.034255
C(13)	0.018101	0.042814
C(14)	0.004000	0.052742
C(15)	-0.010429	0.038839
C(16)	0.094499	0.030435
C(17)	-0.011667	0.004514
C(18)	0.083945	0.034517
C(19)	-0.000212	0.049248
C(20)	0.082489	0.038302
C(21)	0.065082	0.053198
C(22)	0.052953	0.058368
C(23)	0.131141	0.053670

 H_0 = Pooled regression model is appropriate. (All dummy variables are zero)

 H_1 = Fixed effect model is appropriate.

The p-value in the Wald Test is not significant (p>0.05). Hence, this study has not enough evidence to reject the null hypothesis. As a conclusion, pooled regression model is the appropriate model for Share Price Returns.

4.6.2.5 Pooled Ordinary Least Square

R-squared	Adjusted R- squared	F- statistic	Prob.	
0.033713	-0.043151	0.43861	0.875	342
Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.036858	0.075015	0.491347	0.6244
BS	0.001921	0.003215	0.597693	0.5516
BI	-0.005009	0.035587	-0.140762	0.8884
ACS	-0.00676	0.009553	-0.707682	0.481
ACI	-0.044452	0.034145	-1.301891	0.1964
BM	-0.001391	0.001263	-1.100939	0.2739
LEV	-0.010128	0.02701	-0.374991	0.7086
FS	0.00381	0.008656	0.440157	0.6609

Table 4.106: Pooled Least Squares (Share Price Returns)

The equation of Share Price Returns model is identified as below:

Share Price Returns= 0.0369 + 0.019BS - 0.005BI - 0.007ACS - 0.044ACI - 0.001BM - 0.010LEV + 0.004FS

In addition, none of the variables are significant in predicting Share Price Returns. The R-squared of 0.034 explains that 3.4% of the variation in Share Price Returns can be explained by the predictor variables.

Board size and firm size have an insignificant positive relationship with Share Price Returns while the rest of the predictor variables (board independence, audit committee size, audit committee independence, board meeting and leverage) have insignificant negative relationship with the Share Price Returns.

4.6.3 Model 2-Cash Flows

4.6.3.1 Fixed Effect Model

Table 4.107:	Fixed Effect	Model- Pa	anel Least	Squares (Cash Flows)

R-squared	Adjusted R- squared	F-statistic	Pro	b.
0.948811	0.933384	61.5036	0	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	1.291713	1.886894	0.684571	0.4958
BS	0.023585	0.025133	0.938421	0.3511
BI	0.129126	0.354376	0.364375	0.7166
ACS	0.014588	0.05916	0.246578	0.8059
ACI	-0.180937	0.199227	-0.908195	0.3668
BM	0.012915	0.011084	1.165168	0.2477
LEV	-0.517332	0.374692	-1.380686	0.1716
FS	0.781653	0.186858	4.183144	0.0001

4.6.3.2 Random Effect Model

Table 4.108: Random Effect Model- Panel EGLS (Cash Flows)

Weighted	R-squared	Adjusted R- squared	F- statistic	Prob.
Statistics	0.750755	0.730928	37.86652	0
Variable	Coefficient	Std. Error	t- Statistic	Prob.
С	-1.05800	0.68107	-1.55343	0.12390
BS	0.02490	0.02006	1.24146	0.21770
BI	-0.21551	0.26369	-0.81731	0.41600
ACS	0.01307	0.05296	0.24687	0.80560
ACI	-0.18596	0.18662	-0.99646	0.32180
BM	0.00287	0.00871	0.32913	0.74280
LEV	-0.19878	0.22606	-0.87934	0.38160
FS	1.01702	0.07749	13.12480	0.00000

4.6.3.3 Hausman Test

Table 4.109:	Hausman	Test ((Cash Flows	()
				_

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section	random	12.952294	7	0.0733
R-squared	Adjusted R-squared	F-statistic	Pro	ob.
0.94881	0.93338	61.50360	0.00	0000
Variable	Coefficient	Std. Error	t- Statistic	Prob.
С	1.29171	1.88689	0.68457	0.49580
BS	0.02359	0.02513	0.93842	0.35110
BI	0.12913	0.35438	0.36438	0.71660
ACS	0.01459	0.05916	0.24658	0.80590
ACI	-0.18094	0.19923	-0.90820	0.36680
BM	0.01292	0.01108	0.01108 1.16517	
LEV	-0.51733	0.37469	0.37469 -1.38069	
FS	0.78165	0.18686	4.18314	0.00010

H₀ : Random effect model is appropriate.

H₁ : Fixed effect model is appropriate.

The p-value shown in Hausman Test is 0.0733, which is larger than 0.05. Hence, this study has no enough evidence to reject the null hypothesis. The Cash Flows model is a random effect model.

CF= 1.292 + 0.024BS + 0.129BI + 0.015ACS - 0.181ACI + 0.013BM - 0.517LEV + 0.782FS

In addition, only FS is significant in predicting Cash Flows. The R-squared of 0.948811 explains that 94.9% of the variation in Cash Flows can be explained by the predictor variables.

Audit committee independence and leverage are insignificantly negatively related to Cash Flows while other predicting variables (board size, board independence, audit committee size and board meeting) are insignificantly positively related to Cash Flows.

4.7 Conclusion

All the results are described and hypotheses are tested in this chapter. Discussion and interpretation of the result, implications of the results, limitations and recommendations for future studies will be discussed in the next chapter.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter comprises of sections which discuss further on the results obtained in Chapter 4. Besides, the limitations in this study and recommendations for further study are also being discussed in this chapter.

5.1 Summary of Results Obtained

The summary of the results obtained for each year and for 6 year basis is shown in the table below.

Table 5.1: Summar	y of Results Obtained on Hypothesis

Research Questions	Hypothesis	2007	2008	2009	2010	2011	2012	On 6 years basis
1. Is there any relationship among board size and listed GLCs' performance (SPR)?	H1 _a : There is a significant relationship between board size and listed GLCs' performance (SPR).	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected	Rejected
1. Is there any relationship among board size and listed GLCs' performance (CF)?	$H1_b$: There is a significant relationship between board size and listed GLCs' performance (CF).	Rejected						
2. Is board independence related to listed GLCs' performance (SPR)?	$H2_{a}$: There is a significant relationship between board independence and listed GLCs' performance (SPR).	Rejected						

2. Is board independence related to listed GLCs' performance (CF)?	H2 _b : There is a significant relationship between board independence and listed GLCs' performance (CF).	Rejected						
3. Does audit committee size have relationship with listed GLCs' performance (SPR)?	H3 _a : There is a significant relationship between audit committee size and listed GLCs' performance (SPR).	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected	Rejected
3. Does audit committee size have relationship with listed GLCs' performance (CF)?	H3 _b : There is a significant relationship between audit committee size and listed GLCs' performance (CF).	Rejected						

4. Is audit committee independence correlated to listed GLCs' performance (SPR)?	H4 _a : There is a significant relationship between audit committee independence and listed GLCs' performance (SPR).	Rejected	Rejected	Rejected	Accepted	Accepted	Rejected	Rejected
4. Is audit committee independence correlated to listed GLCs' performance (CF)?	H4 _b : There is a significant relationship between audit committee independence and listed GLCs' performance (CF).	Rejected						
5. Is board meeting related to listed GLCs' performance (SPR)?	H5 _a : There is a significant relationship between board meeting and listed GLCs' performance (SPR).	Rejected						

5. Is board meeting related to listed GLCs' performance (CF)?	H5 _b : There is a significant relationship between board meeting and listed GLCs' performance (CF).	Rejected						
6. Is there any relationship among leverage and listed GLCs' performance (SPR)?	H6 _a : There is a significant relationship between leverage and listed GLCs' performance (SPR).	Rejected	Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
6. Is there any relationship among leverage and listed GLCs' performance (CF)?	H6 _b : There is a significant relationship between leverage and listed GLCs' performance (CF).	Rejected						

| 7. Is there any
relationship among firm
size and listed GLCs'
performance (SPR)? | H7 _a : There is a significant
relationship between
leverage and listed GLCs'
performance (SPR). | Rejected |
|---|---|----------|----------|----------|----------|----------|----------|----------|
| 7. Is there any
relationship among firm
size and listed GLCs'
performance (CF)? | H7 _b : There is a significant
relationship between
leverage and listed GLCs'
performance (CF). | Accepted |

The above table shows the summary of hypothesis testing (based on both cross-sectional and time series analysis) after the test is conducted that will be discussed in the next few paragraphs while the details of each hypothesis will be further discussed in the next section.

5.1.1 Multiple Regression Analysis

- Share Price Returns
 - None of the variables are significantly affecting the Share Price Returns in year 2007, 2008, 2009 and 2012;
 - Board size is significantly negatively related to Share Price Returns in year 2010; Audit committee size and audit committee independence are both significantly positively related to Share Price Returns in year 2010;
 - In year 2011, audit committee independence has significant negative relationship with Share Price Returns while leverage is significantly positively related to Share Price Returns.
- Cash Flows
 - Firm size has a significant positive relationship with Cash Flows in year 2007, 2008, 2009, 2010, 2011 and 2012.

In year 2007, all the predictor variables are not statistically significant in predicting the variations in Share Price Returns as the p-values are larger than 0.05. In the same year, only one of the predictor variables, firm size (p-value=0.000, <0.05) is significant in explaining the variation in Cash Flows with a positive association.

In year 2008, all the predictor variables are also not statistically significant in predicting the variations in Share Price Returns as the p-values are larger than 0.05. In term of Cash Flows, the result is similar to the result in 2007. Only firm size is statistically and positively associated to Cash Flows with a p-value of 0.002 (<0.05).

In year 2009, none of the predictor variable has relationship with Share Price Returns as the p-values are larger than 0.05. In the same year, in term of Cash Flows, the result is also similar to previous years. Only the firm size is significant (p-value=0.000, <0.05) in explaining the variation in Cash Flows with a positive association.

In year 2010, board size is found to have a significant (p-value=0.002, <0.05) and negative relationship with Share Price Returns. In addition, audit committee size and audit committee independence are also statistically significant in explaining the Share Price Returns (p-value<0.05) with positive association. In term of Cash Flows, only firm size is statistically significant (p-value=0.000, <0.05) and positively related to Cash Flows.

In year 2011, audit committee independence has a significant (p-value=0.006, <0.05) and negative relationship with Share Price Returns while leverage level is significantly (p-value=0.04, <0.05) positively related to Share Price Returns. In the same year, in term of Cash Flows, the result is also similar to previous years. Only the firm size is significant (p-value=0.000, <0.05) in explaining the variation in Cash Flows with a positive association.

In year 2012, none of the predictor variable has relationship with Share Price Returns as the p-values are larger than 0.05. In the same year, in term of Cash Flows, the result is also same as the findings in previous years. Only the firm size is significant (p-value=0.000, <0.05) in explaining the variation in Cash Flows with a positive association.

5.1.2 Panel Data Analysis

The panel data analysis shows that none of the corporate governance variables (board size, board independence, audit committee size, audit committee independence and board meeting) have significant relationship with both Share Price Returns and Cash Flows over the 6 years (2007 to 2012).

However, one of the control variables, firm size has a significant positive relationship with Cash Flows over the 6 years.
5.1.3 Summary of Findings

Overall, the findings in this study indicate that only firm size has significant positive relationship with the Cash Flows. When the firm size increases, the cash flows also move in the same direction. This is due to the level of ease for large firm to get access to more financing methods if compared to small firm. When the firm is large, the financial institutions will have more confidence to give borrowings. This has then help to increase the cash flows for project investments in the firms which thereby lead to an increase in the overall cash flows.

The overall results (panel data analysis) indicate that Share Price Returns model is not significant. This is due to the volatility in the share prices. In addition, the insignificant result is proven by the Pooled Ordinary Least Square which itself in econometrics is more suitable for testing long-run results for larger sample size.

Besides, although the results of ANOVA shows that Share Price Returns is a good model in describing the relationship between the predictor variables and Share Price Returns in year 2012 (p-value<0.05), as shown in Table 4.46, however, the p-values for the remaining 5 years (2007 to 2011) are larger than 0.05. In other words, Share Price Returns is not a good model in 5 out of 6 years. This proves that in this study, Share Price Returns is not a good model in describing the relationship between the predictor variables and Share Price Returns.

In addition, in a company, investment decisions are made by not only one party in the company but all parties in the company such as audit committee members, independent non-executive directors, executive directors and shareholders. Hence, this explains why the results for each board mechanisms in this study are not significant as only one party was tested at each time.

The details of each hypothesis will be further discussed in the next section.

5.2 Discussion

5.2.1 Board Size and Listed GLCs' Performance

The results of the relationship between board size and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Board size was tested against Share Price Returns and Cash Flows.

H1: There is a significant relationship between board size and listed GLCs' performance.

5.2.1.1 Multiple Linear Regression

Table 5.2: Summary of Multiple Linear Regression (Board Size, and Share Price Returns and Cash Flows)

	SI	'R		lsion p- value β		
Year	p- value	β	Conclusion			Conclusion
2007	0 318	-0.01	Insignificant	0 181	0 109	Insignificant
2007	0.510	0.01	Negative	0.101	0.109	Positive
2008	0.338	-0.014	Insignificant	0.452	0.098	Insignificant
			Negative			Positive
2009 0.247	0.017	Insignificant	0.762	-0.025	Insignificant	
			Positive			Negative
2010	0.002	0.016	Significant	0.729	0.016	Insignificant
2010	0.002	-0.016	Negative	0.758	0.016	Positive
2011	0.234	0.004	Insignificant	0.178	0.071	Insignificant
			Positive			Positive
2012	0.647	-0.002	Insignificant	0.422	0.422 0.040	Insignificant
	0.0	0.001	Negative	J 	0.0.0	Positive

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on board size are presented in Table 5.2. Table 5.2 reported a significant negative relationship among board size and Share Price Returns in 2010, supporting hypothesis H1.

Although the relationship is inconsistent throughout the years, it can be concluded that a relationship exists between board size and listed GLCs' performance.

5.2.1.2 Panel Data Analysis

Table 5.3 Panel Data (Board Size, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	BS	0.001921	0.5516	Insignificant positive
CF	BS	0.023585	0.3511	Insignificant positive

Variables: SPR= Share Price Returns; CF= Cash Flows; BS= Board Size.

However, Overall, for the 6-year-period, board size is insignificantly positively related to both Share Price Returns and Cash Flows (p-value>0.05).

5.2.1.3 Consistency of Findings with Previous Studies

In this study, the results of insignificant positive relationship board size and company performance are in consistent with Amran and Che-Ahmad (2011), Ong and Gan (2013), Moscu (2013), Marte and State (2010), and Babatunde and Olaniran (2009).

5.2.1.4 Implications

The results of panel data indicates that board size has positive relationship with the performance in listed GLCs. Increase in board size can lead to increase capabilities in problem solving, increase in wider resources platform (Ibrahim & Abdul Samad, 2011) and increase in external contracting relationship which then leads to increase in performance (Amran, 2011). A larger board size means more ideas and skills which can contribute toward performance (Amran & Che-Ahmad, 2011).

Companies with large board size can be disadvantageous and expensive for the companies to maintain (Shakir, n.d.). Ibrahim and Abdul Samad (2011) explain that a large board size is not as effective as a smaller board size. Besides, in accordance with Ibrahim and Abdul Samad (2011), Ghabayen (2011) and Shakir (n.d.), smaller board is a good and superior corporate governance mechanism for firms to improve performance due to better work coordination and decision making.

5.2.2Board Independence and Listed GLCs' Performance

The results of the relationship between board independence and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Board independence is tested against Share Price Returns and Cash Flows.

H2: There is a significant relationship between board independence and listed GLCs' performance.

5.2.2.1 Multiple Linear Regression

Year	SI	PR	Conclusion	CF		Conclusion
	P-	β		p-	β	
	value			value		
2007	0.133	-0.166	Insignificant	0.848	-0.161	Insignificant
			Negative			Negative
2008	0.999	0.000	Insignificant	0.174	-1.135	Insignificant
			Positive			Negative
2009	0.323	-0.12	Insignificant	0.185	-0.947	Insignificant
			Negative			Negative
2010	0.743	0.013	Insignificant	0.134	-0.862	Insignificant
			Positive			Negative
2011	0.087	0.076	Insignificant	0.732	0.198	Insignificant
			Positive			Positive
2012	0.533	0.039	Insignificant	0.624	-0.275	Insignificant
			Positive			Negative

Table5.4:Summary ofMultipleLinearRegression(BoardIndependence, and Share Price Returns and Cash Flows)

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on board independence are presented in Table 5.4. Table 5.4 reported that for all the years, board independence is insignificantly related to listed GLCs' performance, rejecting hypothesis H2.

5.2.2.2 Panel Data Analysis

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	BI	-0.005001	0.8884	Insignificant negative
CF	BI	0.129126	0.7166	Insignificant positive

Table 5.5: Panel Data Analysis (Board Independence, and SPR and CF)

Variables: SPR= Share Price Returns; CF= Cash Flows; BI= Board Independence.

However, overall, for the 6-year-period, board independence is insignificantly negatively related to Share Price Returns and insignificantly positively related to Cash Flows (p-value>0.05).

5.2.2.3 Consistency of Findings with Previous Studies

The findings that board independence are not a significant predictor of company performance are consistent with the findings of Ibrahim and Abdul Samad (2011), Tham and Romuald (2012), Amran and Che-Ahmad (2011), Ong and Gan (2013), Hussin and Othman (2012), Amran (2011), Saad and Abdullah (2011), Bhagat and Black (2000), Al-Matari et al. (2012a) and Al-Matari et al. (2012b).

5.2.2.4 Implications

Ibrahim and Abdul Samad (2011) explains that company performance can be improved by presence of outside directors as they could bring in their diversity of skills and expertise and wider contacts to the firms which able to influence the quality of decision-making (Al-Matari et al., 2012a) and strategic direction of a companies (Yusoff & Alhaji, 2012). Besides, in accordance with Yusoff and Alhaji (2012) and Ghabayen (2012), the independent directors contribute to good governance which can lead to increase in performance by acting as check and balance mechanisms on board to minimize opportunistic behaviour by the management team which can impair company performance. By having the independent directors as check and balance, the shareholders' interests can be protected (Al-Matari et al., 2012a). Yusoff and Alhaji (2012) further conclude that independent board is an effective internal monitoring mechanism which able to lead to better performance.

Afandyar et al. (2013) explain that the relationship between board independence and company performance can be negative due to the dominance of the independent non-executive directors on board. In addition, some of the independent directors on board are part-time outside directors who hold multiple directorships in different companies. They might not have enough time to play their monitoring and advisory role effectively (Mohamad et al., 2012). In addition, asymmetry of information which exists as the inside directors might hide some information from the independent directors (Afandyar, et al., 2013) because they do not have contact with the daily operation of the firm (Hussin & Othman, 2012).

However, the mixed results found in this study with regards to board independence could be reflective of a corporate culture board management controlled the boards and there is no discernable effect on the decisions of management by having the independent non-executive directors' presence (Hussin & Othman, 2012).

5.2.3 Audit Committee Size and Listed GLCs' Performance

The results of the relationship between audit committee size and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Audit committee size is tested against Share Price Returns and Cash Flows.

H3: There is a significant relationship between audit committee size and listed GLCs' performance.

5.2.3.1 Multiple Linear Regression

Table 5.6: Summary of Multiple Linear Regression (Audit CommitteeSize, and Share Price Returns and Cash Flows)

Year	SP	'R	Conclusion		CF	Conclusion
	Р-	β		р-	β	
	value			value		
2007	0.827	0.005	Insignificant	0.094	-0.340	Insignificant
			positive			negative
2008	0.356	0.034	Insignificant	0.395	0.270	Insignificant
			positive			positive
2009	0.789	-	Insignificant	0.424	0.190	Insignificant
		0.011	negative			positive
2010	0.003	0.053	Significant	0.841	-0.035	Insignificant
			positive			negative
2011	0.98	0.000	Insignificant	0.763	-0.04	Insignificant
			positive			negative
2012	0.739	-	Insignificant	0.695	-0.071	Insignificant
		0.007	negative			negative

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on audit committee size are presented in Table 5.6. Table 5.6 reported that for all the years, the results are inconsistent.

Table 5.6 reported a significant positive relationship among audit committee size and Share Price Returns in 2010, supporting hypothesis H3.

Although the relationship is inconsistent throughout the years, it can be concluded that a relationship exists between audit committee size and listed GLCs' performance.

5.2.3.2 Panel Data Analysis

 Table 5.7: Summary of Multiple Linear Regression (Audit Committee

 Size, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	ACS	-0.00676	0.481	Insignificant negative
CF	ACS	0.014588	0.8059	Insignificant positive

Variables: SPR= Share Price Returns; CF= Cash Flows; ACS= Audit Committee

However, overall, for the 6-year-period, audit committee size is insignificantly negatively related to Share Price Returns and insignificantly positively related to Cash Flows (p-value>0.05).

5.2.3.3 Consistency of Findings with Past Studies

The mixed results among audit committee size and company performance are consistent with the past studies done by Al-Matari et al. (2012a), Coleman (2007) and Hamdan et al. (2013).

5.2.3.4 Implications

In accordance to Ghabayen (2012), by having a smaller audit committee size, a company performance can be improved as a result of the effectiveness of mistakes monitoring in the financial reporting process. The effectiveness to monitor mistake may lead to a positive impact on the firm performance (Ghabayen, 2012). Besides, the more the members in the audit committee, the more the experts available at hand to overlook the internal controls and financial reporting, the better the company performance is (Al-Matari, 2012a).

However, Al-Matari (2012a) explains that a large audit committee size may result in decline in company performance. By having a large size of audit committee can result in diffusion of responsibility and process losses (Al-Matari et al., 2012b).

5.2.4 Audit Committee Independence and Listed GLCs' Performance

The results of the relationship between audit committee independence and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Audit committee independence is tested against Share Price Returns and Cash Flows.

H4: There is a significant relationship between audit committee independence and listed GLCs' performance.

5.2.4.1 Multiple Linear Regression

Year	SP	'n	Conclusion	CF		Conclusion
	Р-	β		р-	β	
	value			value		
2007	0.651	0.037	Insignificant	0.394	-0.577	Insignificant
			positive			negative
2008	0.472	0.092	Insignificant	0.628	0.538	Insignificant
			positive			positive
2009	0.4	-0.12	Insignificant	0.421	0.656	Insignificant
			negative			positive
2010	0.015	0.143	Significant	0.246	0.762	Insignificant
			positive			positive
2011	0.006	-0.138	Significant	0.199	-0.735	Insignificant
			positive			negative
2012	0.355	-0.058	Insignificant	0.703	-0.214	Insignificant
			negative			negative

Table 5.8: Summary of Multiple Linear Regression (Audit Committee Independence, and Share Price Returns and Cash Flows)

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on audit committee independence are presented in Table 5.8. Table 5.8 reported that for all the years, the results are inconsistent.

Table 5.8 reported a significant positive relationship among audit committee independence and Share Price Returns in 2010 and 2011, supporting hypothesis H4.

Although the relationship is inconsistent throughout the years with respect to both Share Price Returns and Cash Flows, it can be concluded that a relationship exists between audit committee independence and listed GLCs' performance.

5.2.4.2 Panel Data Analysis

Table 5.9: Panel Data Analysis (Audit Committee Independence, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	ACI	-0.044452	0.1964	Insignificant negative
CF	ACI	-0.180937	0.3668	Insignificant negative

Variables: SPR= Share Price Returns; CF= Cash Flows; ACI= Audit Committee Independence.

However, overall, for the 6-year-period, audit committee independence is insignificantly negatively related to Share Price Returns and insignificantly negatively related to Cash Flows (p-value>0.05).

5.2.4.3 Consistency of Findings with Previous Studies

The findings of insignificant negative relationship among audit committee independence and company performance for the 6-yearperiod are in consistent with the findings of Tham and Romuald (2012), Al-Matari et al. (2012a) Al-Matari et al. (2012b) and Coleman (2007).

5.2.4.4 Implications

The reasons of having a negative relationship between the company performance is the same as the board composition's as there are presence of independent non-executive directors.

5.2.5 Board Meeting and Listed GLCs' Performance

The results of the relationship between board meeting and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Board meeting is tested against Share Price Returns and Cash Flows.

H5: There is a significant relationship between board meeting and listed GLCs' performance.

5.2.5.1 Multiple Linear Regression

Table 5.10: Summary of Multiple Linear Regression (Board Meeting,and Share Price Returns and Cash Flows)

	S	PR			CF	
Year	p- value	β	Conclusion	p- value	β	Conclusion
2007	0.638	-0.002	Insignificant negative	0.851	0.006	Insignificant positive
2008	0.995	2.91E- 05	Insignificant positive	0.286	-0.049	Insignificant negative
2009	0.435	-0.004	Insignificant negative	0.779	0.007	Insignificant positive
2010	0.499	0.001	Insignificant positive	0.574	0.009	Insignificant positive
2011	0.072	-0.003	Insignificant negative	0.171	-0.026	Insignificant positive
2012	0.669	-0.001	Insignificant negative	0.461	0.015	Insignificant positive

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on board meeting are presented in Table 5.10. Table 5.10 reported that for all the years, board meeting has an insignificant relationship with both SPR and CF, rejecting hypothesis H5.

5.2.5.2 Panel Data Analysis

Table 5.11: Panel Data Analysis (Board Meeting, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	BM	-0.001391	0.2739	Insignificant negative
CF	BM	0.012915	0.2477	Insignificant positive

Variables: SPR= Share Price Returns; CF= Cash Flows; BM= Board Meeting.

However, overall, for the 6-year-period, board meeting is insignificantly negatively related to Share Price Returns and insignificantly positively related to Cash Flows (p-value>0.05).

5.2.5.3 Consistency of Findings with Previous Studies

The results found are in consistent with Coleman (2007).

5.2.5.4 Implications

Ntim and Osei (2011) in their study suggest that frequency of board meeting is a measurement of board effectiveness and monitoring power which can affect the corporate performance. Hence, the higher the frequency of board meetings, the higher the quality of managerial monitoring and the greater the positive impact on corporate financial performance (Ntim & Osei, 2011).

Besides, the more the frequency of board meetings, the more time is devoted to issues in the company (Mohamad et al., 2012). The more the time devoted to the affairs of the company, the better the position the directors are being placed to address critical problems as they are always remain informed and knowledgeable about the affairs and development of the company (Ntim & Osei, 2011). In addition, by having meeting frequently, the cohesive bonds among directors can be strengthen through the increased interactions can result in a positive effect on performance (Ntim & Osei, 2011).

However, the relationship between frequency of board meeting and corporate performance can also be in inverse direction as frequency of board meetings can be disadvantageous. Firstly, it is claim by Ntim and Osei (2011) that higher frequency of meetings does not mean that directors will have more time spent together for ideas exchange purpose. In reality, in a meeting, routine tasks such as presentation of reports will tend to absorb most of the time of the meeting and the time will not left much for directors to play their role and duties effectively. This can bring a negative impact on corporate performance. Secondly, to organize a meeting, the costs incurred are high (Ntim & Osei, 2011). For example, travelling expenses of outside directors and refreshment fees. The higher the costs incurred by a company, the larger the impact on the company performance.

In this study, the relationship between frequency of board meetings are insignificant throughout the years. Ntim and Osei (2011) suggests that rather than organizing regular meetings, adjusting the frequency of board meetings flexibly to deal with emerging issues can affect the company performance. In other words, it's the system that is responsive to specific challenges which can influence corporate performance. For example, increasing the frequency of meetings during crisis or in the event of hostile takeovers. Vafeas (1999) further argues that economies of scale in agency costs which can enhance company performance can be enjoy by the companies which show efficiency in setting the right and optimal number of board meetings.

5.2.6 Leverage and Listed GLCs' Performance

The results of the relationship between leverage and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Leverage is tested against Share Price Returns and Cash Flows.

H6: There is a significant relationship between leverage and listed GLCs' performance.

5.2.6.1 Multiple Linear Regression

	SI	PR		C	F	
Year	P- value	β	Conclusion	p-value	β	Conclusion
2007	0.867	0.012	Insignificant positive	0.474	-0.435	Insignificant negative
2008	0.774	-0.023	Insignificant negative	0.932	0.06	Insignificant positive
2009	0.872	0.014	Insignificant positive	0.09	0.943	Insignificant positive
2010	0.163	-0.046	Insignificant negative	0.132	-0.665	Insignificant negative
2011	0.04	0.077	Significant positive	0.75	0.148	Insignificant positive

Table 5.12: Summary of Multiple Linear Regression (Leverage, and Share Price Returns and Cash Flows)

2012	0.303	-0.05	Insignificant negative	0.548	-0.258	Insignificant negative
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Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on leverage are presented in Table 5.12. Table 5.12 reported that leverage has a significant positive relationship with Share Price Returns, accepting hypothesis H6.

Although the relationship is inconsistent throughout the years with respect to Share Price Returns, it can be concluded that a relationship exists between leverage and listed GLCs' performance.

5.2.6.2 Panel Data Analysis

Table 5.13: Panel Data Analysis (Leverage, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	LEV	-0.010128	0.7086	Insignificant negative
CF	LEV	-0.517332	0.1716	Insignificant negative

Variables: SPR= Share Price Returns; CF= Cash Flows; LEV= Leverage.

However, overall, for the 6-year-period, leverage is insignificantly negatively related to both Share Price Returns and Cash Flows (p-value>0.05).

5.2.6.3 Consistency of Findings with Previous Studies

This findings is consistent with Amran and Che-Ahmad (2011), Al-Matari et al. (2012a), Al-Matari et al. (2012b) and Hamdan et al. (2013).

5.2.6.4 Implications

A higher amount of debt shows a signal of investment opportunity (Amran & Che-Ahmad, 2011). It helps to enhance company performance by serving as a fund for project investment and fund for business expansion (Amran & Che-Ahmad, 2011).

However, higher debt will result in higher operating cost due to higher interest rates which might affect the performance of the company (Al-Matari et al. 2012a).

5.2.7 Firm Size and Listed GLCs' Performance

The results of the relationship between firm size and listed GLCs' performance, as reported in Chapter 4 are discussed in the following section in, relation to the proposed model (Section 2.5) in Chapter 2. Firm size is tested against Share Price Returns and Cash Flows.

H7: There is a significant relationship between firm size and listed GLCs' performance.

5.2.7.1 Multiple Linear Regression

Table 5.14: Summary	y of Multiple Linear	Regression	(Firm Size, and
Share Price Returns a	and Cash Flows)	•	

Veen	SPR		Combadan	CF		Constant
rear	p-value	β	Conclusion	p-value	β	Conclusion
2007	0.86	-0.004	Insignificant negative	0	1.102	Significant positive
2008	0.634	-0.013	Insignificant negative	0.002	1.066	Significant positive
2009	0.9	0.003	Insignificant positive	0	1.047	Significant positive
2010	0.611	0.005	Insignificant positive	0	1.063	Significant positive
2011	0.231	-0.012	Insignificant negative	0	0.973	Significant positive
2012	0.054	0.032	Insignificant positive	0	1.03	Significant positive

Variables: SPR= Share Price Returns; CF= Cash Flows.

Results of Multiple Linear Regression analysis on firm size are presented in Table 5.14. Table 5.14 reported that firm size has a significant positive relationship with Cash Flows for 6 years, accepting hypothesis H7.

Hence, it can be concluded that a relationship exists between firm size and listed GLCs' performance.

5.2.7.2 Panel Data Analysis

Table 5.15: Panel Data Analysis (Firm Size, and Share Price Returns and Cash Flows)

Dependent Variable	Independent Variable	Coefficient	Prob.	Conclusion
SPR	FS	0.00381	0.6609	Insignificant positive
CF	FS	0.781653	0.0001	Significant positive

Variables: SPR= Share Price Returns; CF= Cash Flows; FS= Firm Size.

However, overall, for the 6-year-period, leverage is insignificantly positively related to SPR (p-value>0.05) and significantly positively related to CF (p-value<0.05).

5.2.7.3 Consistency of Findings with Past Studies

The results between firm size and company performance are consistent with previous studies (Al-Matari et al., 2012b; Amran and Che-Ahmad, 2011).

5.2.7.4 Implications

Increasing firm size allows for incremental advantages by raising the barriers to entry for new or potential entrants (Ramasamy et al., 2005). The higher the barrier to entry for potential entrants, the lower will be the threat of existing or potential competition, which thereby results in increase of profits of the existing firms without inducing entry (Ramasamy et al., 2005).

In addition, increasing firm size allows firms to attain higher profitability through the leverage on the economies of scale (Ramasamy et al., 2005). However, on the other side, firms do not necessary attain higher profit by merely increasing the firm size (Velnampy & Nimalathasan, 2010). This is because, economies of scale which occurs when the operating costs increase at a rate lower than their output are likely to happen only when there are sufficient idle capacity within the firms (Velnampy & Nimalathasan, 2010).

5.3 Limitations of the Study and Recommendations

The results obtained in this study however have some limitations.

Firstly, the results may not be generalised as to the overall context of Malaysia as only the listed GLCs are being examined. Hence, it is recommended that future studies should be conducted by involving more sectors.

Secondly, this study only focused on the use of Share Price Returns and Cash Flows as proxies for performance. More than two proxies for financial performance that produce a more robust result should be used in future researches.

In addition, there is no moderators or mediators effect employed in this study and it is recommended that the future researchers to take into considerations the moderators or mediators effect.

In this study, firm size is found to be significant positively related to cash flows for both year-to-year basis (Multiple Linear Regression) and 6-yearperiod basis (Panel Data Analysis). This means that increase in firm size will lead to increase in cash flows and increase in cash flows will lead to increase in project investment. Other than that, increase in firm size will eventually lead to increase in agency costs or agency problems. Hence, the significant of firm size in relation to cash flows raise the need to have governance in place to monitor the success of the cash flows management within the firms.

In addition, all the board mechanisms variables are not significant in explaining both Share Price Returns and Cash Flows over the 6 years. Hence, it means that there are other factors that may have predicted the Share Price Returns and Cash Flows and thereby raise the need to study in depth of other factors. For example, inflation and interest rates which can cause impact on how the company is operated. Thus, it is recommended that external factors shall be taken into account in future studies. In addition, questionnaire and interviews may also be used in order to reinforce the findings.

5.4 Conclusion

The results of this study show that most of the board mechanisms still seemed to be insignificant in relation to company performance, in this case measured by Share Price Returns and Cash Flows. According to Hussin and Othman (2012), the dynamics and development of corporate economy in developing countries like Malaysia which is different compared to those developed economies in the developed countries like US is probably the reason. The differences can be in term of political stability and so on.

Although the results produced in this study are on overall mixed, the overall mixed results are still consistent with previous studies done by other researchers.

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Appendices

APPENDIX I: REVIEW OF RELEVANT THEORETICAL MODELS



Source: Tham, K. M., & Romuald, D. F. (2012). The impact of corporate governance mechanism and corporate performance: A study of listed companies in Malaysia. *Journal for the Advancement of Science & Arts*, 3(1), 31-45.

Tham and Romuald (2012) found that there is a significant positive relationship between board size and EPS. The same result is found between ownership structure and EPS. However, the remaining variables, namely proportion of independent non-executive directors, proportion of independent non-executive directors in the audit committee and CEO status do not influence company's performance.

Appendix 2: 2.3.2 Model 2 Independent Variable(s)

Dependent Variable(s)





Source: Ntim, C. G., & Osei, K. A. (2011). The impact of corporate board meetings on corporate performance in South Africa. *African Review of Economics and Finance*, 2(2), 83-103.

Ntim and Osei (2011) had conducted a study in order to examine the impact of board meetings on South Africa corporation performance. The sample involved 169 South Africa listed corporation for the period of 2002 to 2007. Ntim and Osei (2011) in the end of their study suggest that there is a statistically significant and positive association between frequency of board meeting and company's performance. This implies that by meeting more, South Africa boards will be able to have higher performance.

Appendix 3: 2.3.3 Model 3



Source: Ibrahim, H., & Abdul Samad, F. (2011). Corporate governance mechanisms and performance of public-listed family-ownership in Malaysia. *International Journal of Economics and Finance*, 3(1), 105-115.

It was reported that in family firms, board size is insignificantly negatively related to ROA, significantly negatively related to Tobin's Q and ROE while in non-family firms, board size is significantly negatively related to Tobin's Q and ROE, significantly positively related to ROA. In term of board independence, in family firms, it is negatively related to Tobin's Q, significantly negatively related to ROA and ROE while in non-family firms, it is significantly positively related to Tobin's Q, significantly positively related to Tobin's Q, ROA and ROE. For CEO duality, in family firms, it is significantly negatively related to Tobin's Q, ROA and ROE while in non-family firms, it is positively related to Tobin's Q, ROA and ROE while in non-family firms, it is positively related to Tobin's Q, ROA and ROE while in non-family firms, it is positively related to Tobin's Q, significantly negatively related to ROA, significantly positively related to ROA.

Appendix 4: 2.3.4 Model 4



Source: Hussin, N., & Othman, R. (2012). Code of corporate governance and firm performance. *British Journal of Economics, Finance and Management Sciences*, 6(2), 1-22.

This study finds that independent chairman is significantly positively related to both ROA and ROE. Besides, proportion of independent non-executive directors are negatively related to the performance. The other variables are insignificant in measuring performance.



Source: Amran, N. A., & Che-Ahmad, A. (2011). Board mechanisms and Malaysian family companies' performance. *Asian Journal of Accounting and Governance*, 2, 15-26.

It was revealed that there is a significant positive relationship between percentage of independent non-executive directors and performance, no relationship between directors' degree and performance and significant negative relationship between director expertise and performance.

Board size shows a mixed result. It is insignificantly positively related to Tobin's Q and significantly positively related to EPS and operating cash flow.

For leadership structure, separate leadership is found to be significantly negatively related to Tobin's Q, positively related to EPS and negatively related to operating cash flow.

Appendix 6: 2.3.6 Model 6

Determinants of Board Activity

Dependent Variable(s)/Moderator

Corporate Governance		
Board size		
Inside ownership		Doord activity
Percentage of independent		Board activity
directors		Fraguency of board
Number of unaffiliated		requercy of board
blockholders	V	meetings
Insider chairman dummy		
Blockholder-director		
dummy		
Director plan dummy		
Average number of		
directorships per outside		
director		
Number of standings board		
committees		
Firm size		

Independent Variable(s)

Dependent Variable(s)



Source: Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, 53, 113-142.

The board size is found to be positively related to board activity (increase in frequency of board meetings) as more time is required to reach an output; The percentage of inside ownership is negatively related to board activity (decrease in frequency of board meetings); The percentage of independent director is unrelated to board activity (does not affect the frequency of meetings); The number of unaffiliated blockholders are also found insignificant in explaining the level of board activity; The percentage of insider chairman is also found to be unrelated to board activity (does not affect the frequency of meetings); Presence of director plan also do not affect the level of board activity (does not affect the frequency of meetings); The average number of directorships per outside director is positively related to level of board activity (increase in frequency of board meetings); Increase in number of standing committees does not seem to reduce the board activity (does not reduce the frequency of meetings); The control variable, firm size is unrelated to level of board activity (does not affect the frequency of meetings).

Overall, the Ordinary Least Square Regression shows that frequency of board meetings is inversely related to performance.



Source: Ong, T. S., & Gan, S. S. (2013). Do family-owned banks perform better? A study of Malaysian banking industry. *Asian Social Science*, 9(7), 124-135.

Ong and Gan (2013), after examining 90 banks in Malaysia, found that in family-owned bank, board size is negatively related to both Tobin's Q and
ROE but positively related to Return on Assets (ROA). Board composition is negatively related to Tobin's Q and ROE but positively related to ROA.



Source: Amran, N. A. (2011). Corporate governance mechanisms and company performance: Evidence from Malaysian companies. *International Review of Business Research Papers*, 7(6), 101-114.

Amran (2011)'s study revealed that in family controlled firms, board size is significantly negatively related to Tobin's Q; Board independence is positively related to Tobin's Q; Board qualification is positively related to Tobin's Q; Director's professional qualification is negatively related to Tobin's Q; Leadership structure (separate leadership) is significantly negatively related to Tobin's Q; While the remaining control variable, namely firm age and firm size are significantly negatively related to Tobin's Q.

In non-family controlled firms, board size is negatively related to Tobin's Q; Board independence is negatively related to Tobin's Q; Board qualification is significantly positively related to Tobin's Q; Director's professional qualification is negatively related to Tobin's Q; Leadership structure (separate leadership) is negatively related to Tobin's Q; The control variable, debt is positively related to Tobin's Q; While the second control variables, firm age is significantly negatively related to Tobin's Q; The remaining control variable, firm size is significantly positively related to Tobin's Q.

Appendix 9: 2.3.9 Model 9



Source: Yusoff, W. F. W., & Alhaji, I. A. (2012). Corporate governance and firm performance of listed companies in Malaysia. *Trends and Development in Management Studies*, 1(1), 43-65.

The authors found that in the listed companies in Malaysia, the relationship between proportion of independent non-executive directors and performance is mixed. The relationship is not significant at significant level of 0.05 for ROE but is positive and significant at significant level of 0.01 with EPS.

For leadership structure, the relationship is also mixed. It's only significant at 0.01 and 0.05 for year 2001with ROE. The leadership structure has no influence on performance.

For board size, the relationship of board size and performance is also mixed. At significant level of 0.05, the relationship is significant in year 2009 and 2011 with ROE and not significant in year 2010. However, the relationship is positive and significant at significant level 0.01 in year 2009, 2010 and 2011.



Source: Shakir, R. (n.d.). *Board size, board composition and property firm performance*. Retrieved January 3, 2014, from http://www.prres.net/papers/Roselina_Board_Size_Board_Composition_ And_Property_Firm.pdf

Shakir (n.d.) after completed his study on 81 listed property firms, found that board size is significantly and negatively related to Tobin's Q. Percentage of executive directors is significant and positively related to Tobin's Q.

<u>Appendix 11: 2.3.11 Model 11</u>



Source: Mak, Y. T., & Yuanto, K. (2002). Size really matters: Further evidence on the negative relationship between board size and firm value. *Working Paper, National University of Singapore*.

The model developed by Mak and Yuanto (2002) investigated the effect of board size has on firm value. The sample employed was 550 listed firms comprised 271 Singaporean listed firms and 279 Malaysian listed firms. The result shows that in both countries, board size is negatively related to Tobin's Q. Besides, it was revealed that firm value is highest when the board size is five.



Source: Guest, P. M. (2009). The impact of board size on firm performance: Evidence from UK. *The European Journal of Finance*, *15*(4), 385-404.

Guest (2009) developed the model as per in Appendix 12. He found out that board size is significantly negatively related to all the three dependent variables, namely ROA, Tobin's Q and share returns.

Appendix 13: 2.3.13 Model 13



Source: Afandyar, Aziz, U., Butt, A. A., & Tasawar, A. (2013). Does board mechanism matter in augmenting the financial performance of firms in Pakistan? *Science International (Lahore)*, 25(3), 627-630.

Afandyar et al. (2013) found that in 127 listed Pakistani firms from year 2005 to 2011, board size has a significant and positive relationship with both ROA and Tobin's Q while board leadership status has significant negative relationship with ROA and a significant positive relationship with Tobin's Q. Board composition is insignificant in explaining the both dependent variables.



Source: Moscu, R. G. (2013). The relationship between firm performance and board characteristics in Romania. *International Journal of Academic Research in Economics and Management Sciences*, 2(1), 167-175.

Moscu (2013) after investigating 62 listed Romania firms for the period 2010, revealed that board size is insignificant and positively related to both ROA and ROE. Non-executive directors have a negative association with performance. Besides, when there are more executive directors on board, the association with performance is significant and positive. Presence of institutional investors is significant and negatively related to both ROA and Return on Equity (ROE). Lastly, for the ownership concentration, it has a negative but not statistically significant relationship with the performance.

Appendix 15: 2.3.15 Model 15

Independent Variable(s)

Dependent Variable(s)



<u>Company's Performance</u> Tobin's Q

Yermack, D. (1996). Higher market values of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185-211.

Yermack (1996) after examining 452 US large industrial corporations for the period of year 1984 to 1991, found that board size is negatively related to Tobin's Q.

Appendix 16: 2.3.16 Model 16

Independent Variable(s)

Dependent Variable(s)



Source: Marte, O., & State, L. (2010). The impact of board structure on corporate financial performance in Nigeria. *International Journal of Business and Management*, 5(10), 155-166.

Marte and State (2010) after investigating 30 Nigerian listed companies for the year 2007, found the following results,

For the first dependent variable, ROE, it was revealed that it is significant and positively relate to board size, insignificant and positively related to board composition, insignificant and significantly negatively related to board ownership and CEO duality.

For the second dependent variable, Return on Capital Employed (ROCE), it was found it is positively relate to the board size, board composition and CEO duality but only significant with CEO duality. While the board ownership is insignificantly negatively related to ROCE.

Appendix 17: 2.3.17 Model 17

Independent Variable(s)



Dependent Variable(s)

Source: Saah, N. M., & Abdullah, W. M. T. W. (2011). Can good boards lead to better firm's performance: Evidence from public listed companies in main board Bursa Malaysia. *Business Management Dynamics*, 1(1), 85-93.

Saah and Abdullah (2011), after investigating 163 Malaysian listed firms for the period of 2004 to 2006, discovered that BOD communication is positively but insignificantly related to all dependent variables.

For BOD education, it is significantly and positively correlated with dividend yield, ROCE and payout ratio. Besides, it is positively related to the remaining dependent variables.

For composition of BOD, it is positively related to all dependent variables, though only significant with market value.

Appendix 18: 2.3.18 Model 18

Independent Variable(s)Dependent Variable(s)Board sizeBlock shareholdersBlock shareholdersCompany's PerformanceDirector's shareholdingsTobin's QAuditcommitteeindependenceROANumber of outside directorsROALeverageFirm size

Source: Babatunde, M. A., & Olaniran, O. (2009). The effects of internal and external mechanism on governance and performance of corporate firms in Nigeria. *Corporate Ownership & Control*, 7(2), 330-34

Babatunde and Olaniran (2009) after conducted a study on 62 listed firms in Nigeria for the period 2002 to 2006, found that board size, block shareholders, leverage and firm size are positively and significantly related to Tobin's Q. The director's shareholdings, audit committee independence and number of outside directors on board are negatively related to Tobin's Q. For ROA, board size, blockholders, land leverage are positively related to ROA. In addition, number of outside directors on board, director's shareholdings and audit committee independence are negatively related to ROA.

Appendix 19: 2.3.19 Model 19



Source: Ghabayen, M. A. (2012). Board characteristics and firm performance: Case of Saudi Arabia. *International Journal of Accounting and Financial Reporting*, 2(2), 168-200.

Ghabayen (2012) after examining 102 non-financial listed companies in Saudi Arabia for the year 2011, reported that audit committee size, audit composition and board size have no effect on ROA. However, board composition is significantly negatively related to firm performance.

Appendix 20: 2.3.20 Model 20

Independent Variable(s)





Source: Al-Matari, E. M., Al-Swidi, A. K., Fadril, F. H. B., & Al-Matari, Y. A. (2012a). The impact of board characteristics on firm performance: Evidence from nonfinancial listed companies in Kuwaiti Stock Exchange. International *Journal of Accounting and Finance*, 2(2), 310-332.

Al-Matari et al. (2012a), after conducting their study on Kuwait listed companies for 2010, revealed that CEO duality is positively but insignificantly related to ROA; CEO tenure is significantly negatively related to ROA; Audit committee size is insignificantly and positively related to ROA; Board size, board composition and the two control variables (firm size and leverage) are insignificant and negatively correlated to ROA.

Appendix 21: 2.3.21 Model 21

Independent Variable(s)





Source: Hamdan, A. M., Sarea, A. M., & Reyad, S. M. R. (2013). The impact of audit committee characteristics on the performance: Evidence from Jordan. *International Management Review*, *9*(1), 32-42.

To study the impact of audit committee characteristics on performance in 106 financial listed corporations

In Jordan, Hamdan, Sarea and Reyad (2013) developed a model, after carry out their study on 106 financial listed corporation from year 2008 to year 2009 found that for ROE, all the audit committee characteristics (audit committee size, financial expertise and audit committee independence) are significantly and positively related to ROE. The first control variable, company size is negatively related to ROE while financial leverage is significantly and positively related to ROE.

For the second dependent variable, all the audit committee characteristics are positively related to ROA, but only audit committee independence is significantly related to ROA. The first control variable, company size is significantly and positively related to ROA while the second control variable, leverage is negatively related to ROA. For the third dependent variable, all the audit committee characteristics are also positively related to EPS, but only audit committee size and financial expertise are significant. Both the control variables are positively correlated to EPS, though only company size is significant.

Model 22: 2.3.22 Model 22

Independent Variable(s)

Board composition C Directors' ownership V CEO duality co Board size C

Company's Performance Value added intellectual coefficient (VAIC)

Dependent Variable(s)

Source: Abidin, Z. Z., Kamal, N. M., & Jusoff, K. (2009). Board structure and company performance in Malaysia. *International Journal of Economics and Finance*, 1(1), 150-164.

Abidin et al. (2009) found that in 75 listed companies in Malaysia for the year 2005, board composition has a significant and positive relationship with VAIC; Directors' ownership has insignificant and negative relationship with VAIC; No evidence to support that there is a relationship between CEO duality and VAIC; and board size is significantly and positively related to VAIC. VAIC is used to measure efficiency of the firm's total resources.

Appendix 23: 2.3.23 Model 23

Independent Variable(s)Dependent Variable(s)Board sizeImage: Company's PerformanceBoard compositionImage: Company's PerformanceFrequency of meetingsImage: EPSRegularity of members'Image: Image: Additional statementsattendanceImage: Image: Additional statements

Source: Modum, U., Ugwoke, R. O., & Onyeanu, E. O. (2013). Content analysis of effect of board size, composition, frequency of meetings and regularity in attendance at meetings on financial performance of quoted companies on the Nigerian Stock Exchange 2006-2012. *European Journal* of Business and Management, 26(5), 186-199.

Modum et al. (2013) after completed their study, found that board size, composition, frequency of meetings and regularity of members' attendance were found to be significantly and positively related to financial performance, as measured by EPS.

Appendix 24: 2.3.24 Model 24

Independent Variable(s)

Dependent Variable(s)



Source: Coleman, A. K. (2007). Corporate governance and firm performance in Africa: A dynamic panel data analysis. *Working Paper*.

Coleman (2007) after completed his study on 103 listed firms, explained that board size has an insignificant positive effect on ROA and a significant positive effect on Tobin's Q; CEO duality is not significant in explaining Tobin's Q and has a negative effect on ROA; CEO tenure has positive effect on ROA but is not significant in explaining Tobin's Q; Audit committee size has a positive effect on both Tobin's Q and ROA; Audit committee is not significant in explaining the both performance measures; Institutional shareholding is significantly negatively related to ROA and significantly positively related to Tobin's Q.

The measure of board activity intensity, frequency of board meetings has a weak positive relationship with Tobin's Q and an insignificant negative relationship with ROA.

Appendix 25: 2.3.25 Model 25

Independent Variable(s)

Dependent Variable(s)



Source: Bai, C., Liu, Q., Lu, J., Song, F., & Zhang, J. (2004). Corporate governance and market valuation in China. *Journal of Comparative Economics*, *32*, 599–616.

In China listed firms, Bai, Liu, Lu, Song and Zhang (2004) found that, in term of Tobin's Q, CEO duality is negative and not statistically significant in predicting the variations in Tobin's Q; Ratio of outside directors is positively and significantly related to Tobin's Q; Shareholdings of top managers is negatively and not significant in explaining the variations in Tobin's Q; Shareholding of the largest shareholders has a negative and significant

relationship with Tobin's Q; Parent company is negatively and significantly related to Tobin's Q; Degree of concentration of shareholdings has a positive and significant relationship with Tobin's Q; Domestic investors also has a positive and significant relationship with Tobin's Q; State-controlled firms has a negative and significant relationship with Tobin's Q; while for the five control variables, only size and leverage have negative relationship with Tobin's Q, the remaining control variables are not significant.

For the market-to-book ratio, the results are consistent with that of Tobin's Q.

Appendix 26: 2.3.26 Model 26

Independent Variable(s)

Dependent Variable(s)







Post-Transformation Period

Source: Mohamad, M. H. S., Rashid, H. M. A., & Shawtari, F. A. M. (2012). Corporate governance and earnings management in Malaysian government linked companies. *Asian Review of Accounting*, 20(3), 241-258.

Mohamad et al. (2012) found out that in 35 listed GLCs after excluding GLCs from the finance sector, none of the corporate governance variables (independent variables) were significant in affecting the earning management of GLCs in year 2003. The control variable, firm size was found to be positively related to discretionary accrual with significant result. This means that higher firm size leads to higher earning manipulation. Besides, leverage was found to be significantly negatively related to discretionary accrual. This means that higher leverage leads to lower earning manipulation.

The results indicated an improvement in corporate governance effectiveness in 2006. Separation of leadership structure, number of board meetings and presence of financial expert in audit committee are significant in predicting the variation in discretionary accrual. The non-duality was found to be significant and negatively related to earning management. This means that separation of CEO and chairman is effective in curbing earning manipulation. Number of board meeting is also significant and negatively related to discretionary accrual. A more active board is effective in curbing earning manipulation. Presence of financial expert was found to be significantly positively related to earning management activities, the earning manipulation. The authors explained that the presence of financial expertise in audit committee has yet to succeed in its monitoring role. However, only one of the control variables, firm size is significant in explaining the variations in discretionary accrual.

Appendix 27: 2.3.27 Model 27

Independent Variable(s) **Dependent Variable(s)** Board size CEO duality Company's Performance Proportion of management ROA shareholding ROE Proportion of institutional EPS shareholdings Proportion of shareholding of board of directors Transparency of ownership structure and investor relations Financial transparency and information disclosure Board and management structure process

Source: Chiang, H. T., & Chia, F. (2005). An empirical study of corporate governance and corporate performance. *Journal of American of Business Cambridge*, 6(1), 95.

Chiang and Chia (2005) revealed that in 246 Taiwanese high-tech listed companies in year 2001, the findings indicated that board size has an insignificant negative relationship with ROA and ROE; CEO duality is also negatively related to operating performance; Proportion of shareholding of board of directors has a significant and negative relationship with ROE; Proportion of institutional shareholdings has no significant relationship with operating performance; Board and management structure process has a significant negative relationship with ROE and EPS; Transparency of ownership structure and investor relations has no significant relationship with operating performance; Financial transparency and information disclosure has a significant positive relationship with operating performance.

Appendix 28: 2.3.28 Model 28

Independent Variable(s)



Dependent Variable(s)

Source: Bhagat, S., & Black, B. (2000). *Board independence and longterm firm performance*. Retrieved July 1, 2013, from http://leedsfaculty.colorado.edu/Bhagat/bb-022300.pdf

Bhagat and Black (2000) explained that for the retrospective period (1985 to 1987), board independence was found to be significant negatively related to all performance measures. For the prospective period (1988 to 1990), the correlation remains negative for all performance measures, but significant only for Tobin's Q.

APPENDIX II: SUMMARY OF PAST EMPRIRICAL STUDIES

Board Size

Author(s)	Country	Methodology	Findings	Limitation(s)/ Recommendation(s)
Ibrahim and Abdul Samad (2011)	Malaysia	 Sample: 290 public-listed companies which comprised 125 family firms and 165 non-family firms. Period: 1999 to 2005 Dependent Variables (DV): Tobin's Q and Return on assets (ROA), Return on equity (ROE) Measurement of IV: Number of directors on board Tests used: Descriptive analysis, Pearson correlation, fixed effect Model 	 Family firms: insignificantly negatively related to ROA, significantly negatively related to Tobin's Q and ROE Non-family firms: Significantly negatively related to Tobin's Q and ROE, significantly positively related to ROA 	The authors did not mention about any limitations or recommendations of their study.
Amran and Che-Ahmad (2011)	Malaysia	 Sample: 189 listed family companies Period: 2003 to 2007 DVs: Tobin's Q, EPS, Operating cash flow Measurement of IV: Number of directors on the board Tests used: Descriptive analysis, univariate analysis (correlation 	 Insignificantly positively related to Tobin's Q Significantly positively related to EPS Significantly positively related to operating cash flow 	Limitation(s):1. This study only investigated the family-ownershiplisted companies.2. The three market based and accounting based performance measurements show inconsistent results.Recommendation(s): 1. Future1. Future

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		matrix), multivariate regression		consider private family business.
		analysis		2
Amran (2011)	Malaysia	 Sample: 424 public listed companies companies (233 family-controlled firms and 191 non-family controlled firms) Period: 2003 to 2007 Dependent Variable: Tobin's Q Measurement of IV: Number of directors on board Tests used: Descriptive analysis, Multivariate regression analysis (Generalized least square method) 	 Family controlled firms: significantly negatively related to Tobin's Q Non-family controlled firms: Insignificantly negatively related to Tobin's Q 	 <u>Limitation(s):</u> Only quantitative aspects are being studied. <u>Recommendation(s):</u> Future researchers should include qualitative aspects for the findings to be more reflective and informative to the readers.
Tham and Romuald (2012)	Malaysia	 Sample: 20 public listed companies in Malaysia Period: 2006 to 2010 DV: Earnings Per Share (EPS) Measurement of IV: Number of directors on board Tests used: Descriptive analysis, Pearson correlation, Regression analysis 	 significant positive relationship with EPS 	 Limitation(s): This study only focuses on EPS in determining performance. This study only concentrates on internal process of a company. The sample size is too small. Not all sectors are being investigated. Recommendation(s): There are limitations in using EPS, future researcher should utilise other performance ratio such as ROA, ROE etc. In additions, more proxy should be

Yusoff and Mal Alhaji (2012)	 Sample: 813 listed companies Period: 2009 to 2011 DVs: EPS and ROE Measurement of IV: Total number of directors on board Tests used: Descriptive analysis, Spearman correlation 	 The relationship of board size and performance is mixed. At significant level of 0.05, the relationship is significant in year 2009 and 2011 with ROE and not significant in year 2010. However, the relationship is positive and significant at 	 used in analysing financial performance to make the study stronger. 2. External environment such as law and regulations should be included in future research. 3. Future researchers should investigate larger sample size to lead to higher generalization. 4. Future researchers should include more sectors in their research. The authors did not mention about any limitations or recommendations of their study.
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			significant level 0.01 in year 2009, 2010	
Shakir (n.d.)	Malaysia	 Sample: 81 listed property firms Period: 1999 to 2005 DV: Tobin's Q Measurement of IV: Total number of directors on the board Tests used: OLS, 2SLS 	 Significant negative relationship with Tobin's Q 	 <u>Limitation(s):</u> Sample size comprised listed property firms. This research tested longitudinal data covering a 7-year period. Descriptive statistics and cross sectional regression results throughout the seven years shows little variation. <u>Recommendation(s):</u> A larger sample which involves industries with operation similar to property firms should be investigated. Another 7-year period should be studied.
Ong and Gan (2013)	Malaysia	 Sample:90 banks in Malaysia (40 family-owned banks and 50 non-family owned banks) Period: 2001 to 2010 DVs: Tobin's Q, ROA, ROE Measurement of IV: Total number of directors on board Tests used: Descriptive analysis, Pearson correlation, Regression 	• In family owned bank, board size is negatively related to both Tobin's Q and ROE but positively related to ROA	The authors did not mention about any limitations or recommendations of their study.

	•			
		analysis		
Mak and Yuanto (2002)	Malaysia and Singapore	 Sample: 550 listed firms comprised 271 firms listed in the Singapore Stock Exchange (SGX) and 279 listed in the Kuala Lumpur Stock Exchange (KLSE) Period: 2000 DV: Tobin's Q Measurement of IV: Number of directors on the board Tests used: Descriptive analysis, regression analysis 	• Negative relationship with Tobin's Q for both countries	The authors did not mention about any limitations or recommendations of their study.
Hussin and Othman (2012)	Malaysia	 Sample: top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 Period: 2007 to 2009 DVs: ROA, ROE Measurement of IV: Total number of directors on board Tests used: Descriptive analysis, Pearson correlation, Multiple Linear regression 	• Significantly negatively related to ROA and ROE	 Limitation(s): This study only focuses on two proxies of financial performance. This study did not take into account external factors such as inflation. This study only focuses on quantitative aspects. Independent variables which relate to audit committee such as audit committee independence and audit committee meeting are not significant variables in measuring effectiveness.

	1			
				Recommendation(s):
				1. A more robust study which
				involves more than two proxies
				of financial performance should
				be carried out.
				2. Future researchers should
				include external factors in their
				studies.
				3. Qualitative aspects should be investigated.
				4. Since level of accounting.
				financial and industrial
				competence are important for
				audit committee to play its
				monitoring role number of audit
				committee with big four
				experience and industrial
				competence may be a good
				measurement for future research
Abidin Kamal	Malaysia	• Sompley 75 listed companies in	• Cignificant positiva	The authors did not mention about any
Addum, Kamar	Walaysia	• Sample: 75 listed companies in Moleveio	• Significant positive	limitations or recommendations of their
(2000)		Malaysia	VAIC with	study
(2009)		• Period: 2005	VAIC	study.
		• DV: value added intellectual		
		coefficient (VAIC)		
		• Measurement if IV: Total		
		number of directors on board		
		• Tests used: Descriptive analysis,		
		Pearson correlation analysis,		

		Content analysis, Regression analysis		
Guest (2009)	UK	 Sample: 2746 UK listed firms Period: 1981-2002 DV: ROA (Profitability), Tobin's Q, share return Measurement of IV: total number of (executive and non- executive) directors on the board Tests used: OLS regression 	• Significant negative relationship with ROA, Tobin's Q and share return	The authors did not mention about any limitations or recommendations of their study.
Afandyar, Aziz, Butt and Tasawar (2013)	Pakistan	 Sample: 127 Pakistani listed firms Period: 2005 to 2011 DVs: ROA, Tobin's Q Measurement of IV: total number of director Tests used: regression 	• Significant positive relationship with ROA and Tobin's Q	 Limitation(s): This study is limited to panel data analysis. Only three factors of board mechanisms were examined. Only a sample of 127 firms were examined. Recommendation(s): Pooled data analysis could be done. To include other factors in future research. For example, participation rate of outside directors and number of board committees. To extend the sample for best representation of population

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Moscu (2013)	Romania	 Sample: 62 companies quoted on Bucharest Stock Exchange Period: 2010 DVs: ROA, ROE Measurement of IV: Number of members of Board of directors Tests used: Descriptive analysis, OLS Regression analysis 	 Insignificant positive relationship with ROA Insignificant positive relationship with ROE 	Limitation(s): 1. There are many Romania corporate governance issues remain unresolved. <u>Recommendation(s):</u> 1. Although the main general trends have been identified in this study, future studies regarding corporate governance in Romania should identify other conclusions.
Yermack (1996)	US	 Sample: 452 US large industrial corporation Period: 1984 to 1991 DV: Tobin's Q Measurement of IV: total number of (executive and non-executive) directors on the board Tests used: Regression 	• Negative relationship with Tobin's Q	The authors did not mention about any limitations or recommendations of their study.
Chiang and Chia (2005)	Taiwan	 Sample: 246 high-tech listed companies Period: 2001 DVs: ROA, ROE, EPS Measurement of IV: Number of members on board Tests used: Descriptive analysis, Regression analysis, Ordinary least square models 	• Insignificant negative relationship with ROA and ROE	The authors did not mention about any limitations or recommendations of their study.

Marte and State (2010)	Nigeria	 Sample: 30 companies listed on the floor of the Nigerian Stock Exchange (NSE) Period: 2007 DVs: ROE, ROCE Measurement of IV: Number of directors on board Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression, ANOVA, Ordinary Least Square regression 	 Significant positive relationship with ROE Insignificant positive relationship with ROCE 	 <u>Limitation(s):</u> Limited variables. Only study on one country. <u>Recommendation(s):</u> Future studies to improve by including more variables that may affect corporate financial management. Comparative studies which compare Nigeria and other developing countries can be conducted.
Babatunde and Olaniran (2009)	Nigeria	 Sample: 62 firms listed on the Nigerian Stock Exchange Period: 2002 to 2006 DVs: Tobin's Q, ROA Measurement of IV: Number of executive directors Tests used: Panel regression (Fixed effect regression) 	 Significant positive relationship with Tobin's Q Positive relationship with ROA 	 <u>Limitation(s):</u> There are many Romania corporate governance issues remain unresolved. Data on some variables were unavailable. Thus, the samples were determined based on data availability. <u>Recommendation(s):</u> Although the main general trends have been identified in this study, future studies regarding corporate governance in Romania should conduct further work to classify more points which give specificity to

	Т			
				policy guidelines.
Modum, Ugwoke and Onyeanu (2013)	Nigeria	 Sample: 108 non-financial companies quoted on the Nigerian stock exchange Period: 2006 to 2012 DVs: EPS Measurement of IV: total number of directors serving on the board of directors Tests used: Descriptive analysis, Pearson correlation, ANOVA, Multiple linear regression 	• Significantly and positively related to EPS	The authors did not mention about any limitations or recommendations of their study.
Ghabayen (2012)	Saudi Arabia	 Sample: 102 non-financial listed companies Period: 2011 DVs: ROA Measurement of IV: total number of directors serving on the board of directors Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	• No relationship with ROA	Limitation(s):1. Only examined the post period after Code of Corporate Governance in Saudi Arabia was issued.2. The period covered is too short.Recommendation(s):1. A study comparing pre-issuance and post issuance of Code of Corporate Governance in Saudi Arabia should be conducted in order to see the improvement.

				2. A study with longer period should be conducted to have better view of corporate
				 governance in Saudi Arabia. 3. A study on the ownership structure and managerial ownership of Saudi Arabia is needed.
Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012a)	Saudi Arabia	 Sample: 136 listed companies in Saudi Arabia Period: 2010 DVs: ROA Measurement of IV: Number of directors serving on board Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	• Insignificantly negatively related to ROA	 Limitation(s): Focussed solely on listed non-financial firms listed on Kuwaiti Stock Exchange. Only general aspects which lead to board effectiveness were examined. This study only focussed on accounting-based measure. Recommendation(s): Financial companies and non-listed companies should be investigated in order for the outcome to be generalise to all sectors. Other board of directors characteristics such as board of directors should be explored.

	3.	Other market-based measures
		such as operating cash flows
		should be focussed on.
	4.	Future researchers should
		employ longer period for their
		studies.
	5.	Effect of some moderating
		variables such as CEO
		compensation, board size,
		accounting experience, etc. on
		performance should be explored.
	6.	Relationships of board
		characteristics and performance
		in different countries should be
		examined intensively to reveal
		the extent of these countries to
		be affected by differences in
		business environments, cultures,
		level of education, etc.
	7.	Future studies should study on
		the integration effect of internal
		and external corporate
		governance factors on the firms'
		performance.
	8.	Future researcher should
		consider variable regarding some
		committees under board
		structure such as risk committee.

Al-Matari, Al-	Saudi	• Sample: 146 Saudi companies	Insignificant	Limitation(s):
Swidi, Fadzil	Arabia	listed in the Saudi stock	negative relationship	1. The findings cannot be
and Al-Matari		exchange	with Tobin's Q	generalized to all sectors
(2012b)		• Period: 2010		because companies in
· · · · ·		• DVs [.] Tohin's O		financial sectors were
		 Measurement of IV: Total 		excluded although the rest of
		number of directors on the board		the whole population is used
		 Tests used: Descriptive analysis 		in this study.
		Pearson correlation Multiple		2. This study only focused on
		linear regression		quantitative aspects.
		inical regression		3. Only six characteristics of the
				board of directors and audit
				committee were examine in this
				study
				4. This study was theoretically built
				on the agency theory and
				institutional theory in relation to
				internal corporate governance
				mechanisms and firm
				performance.
				Recommendation(s):
				1. To include companies from
				financial sectors in the study.
				2. Questionnaire and interviews
				may be used to reinforce the
				findings.
				3. Future studies could include
				more audit committee

	characteristics. 4. To examine other theories which
	4. To examine other theories which relate to corporate governance mechanisms.

Board Independence

Author(s)	Country	Methodology	Findings	Limitation(s)/ Recommendation(s)
Ibrahim and Abdul Samad (2011)	Malaysia	 Sample: 290 public-listed companies which comprised 125 family firms and 165 non-family firms. Period: 1999 to 2005 Dependent Variables (DV): Tobin's Q and Return on assets (ROA), Return on equity (ROE) Measurement: Proportion of independent directors to total directors on board Tests used: Descriptive analysis, Pearson correlation, fixed effect model 	 Family firms: Negatively related to Tobin's Q, significantly negatively related to ROA and ROE Non family firms: Significantly positively related to Tobin's Q, ROA and ROE 	The authors did not mention about any limitations or recommendations of their study.
Tham and Romuald (2012)	Malaysia	 Sample: 20 public listed companies in Malaysia Period: 2006 to 2010 	• Insignificant negative relationship with EPS	Limitation(s): 1. This study only focuses on EPS in determining performance.

		• DV: Earnings Per Share (EPS)		2. This study only concentrates on
		• Measurement: Proportion of		internal process of a company.
		independent directors to total		3. The sample size is too small.
		directors on board		4. Not all sectors are being
		• Tests used: Descriptive analysis		investigated.
		Pearson correlation. Regression		Recommendation(s):
		analysis		1. There are limitations in using
				EPS, future researcher should
				utilise other performance ratio
				such as ROA, ROE etc. In
				additions, more proxy should be
				used in analysing financial
				performance to make the study
				stronger.
				2. External environment such as
				law and regulations should be
				included in future research.
				3. Future researchers should
				investigate larger sample size to
				lead to higher generalization.
				4. Future researchers should
				include more sectors in their
				research.
Amran and	Malaysia	• Sample: 189 listed family	• Positively related to	Limitation(s):
Che-Ahmad		companies	Tobin's Q	1. This study only investigated the
(2011)		• Period: 2003 to 2007	• Negatively related to	family-ownership listed
		• DVs: Tobin's Q, EPS, Operating	EPS	companies.
		cash flow	• Significantly	2. The three market based and

		 Measurement of IV: Percentage of independent non-executive directors out of total directors Tests used: Descriptive analysis, univariate analysis (correlation matrix), multivariate regression analysis 	negatively related to operating cash flow	accounting based performance measurements show inconsistent results. <u>Recommendation(s):</u> 1. Future researchers should consider private family business.
Ong and Gan (2013)	Malaysia	 Sample: 90 banks (40 family and 50 non-family owned banks) in Malaysia Period: 2001 to 2010 DVs: Tobin's Q, ROA, ROE Measurement of IV: Total number of independent non-executive directors divided by total number of directors Tests used: Descriptive analysis, Pearson correlation, Regression analysis 	• In family owned bank, board independence is negatively related to Tobin's Q and ROE but positively related to ROA	The authors did not mention about any limitations or recommendations of their study.
Yusoff and Alhaji (2012)	Malaysia	 Sample: 813 listed companies Period: 2009 to 2011 DVs: EPS and ROE Measurement of IV: Ration of independent directors to total number of directors on board Tests used: Descriptive analysis, 	• The relationship is not significant at significant level of 0.05 for ROE; but is positive and significant at significant level of 0.01 with EPS	The authors did not mention about any limitations or recommendations of their study.
		Spearman correlation		
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Hussin and Othman (2012)	Malaysia	 Sample: top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 Period: 2007 to 2009 DVs: ROA, ROE Measurement of IV: percentage of independent non-executive directors on the board Tests used: Descriptive analysis, Pearson correlation, Multiple Linear regression 	 higher proportion of independent non- Executive Directors are negatively associated with performance 	 Limitation(s): This study only focuses on two proxies of financial performance. This study did not take into account external factors such as inflation. This study only focuses on quantitative aspects. Independent variables which relates to audit committee such as audit committee independence and audit committee meeting are not a significant variables in measuring effectiveness. Recommendation(s): A more robust study which involves more than two proxies of financial performance should be carried out. Future researchers should include external factors in their studies. Qualitative aspects should be investigated.

Amran (2011)	Malaysia	 Sample: 424 public listed companies (233 family-controlled firms and 191 non-family controlled firms) Period: 2003 to 2007 Dependent Variable: Tobin's Q Measurement of IV: Percentage of independent non-executive directors out of total directors Tests used: Descriptive analysis, Multivariate regression analysis (Generalized least square method) 	 Family-controlled firms: negatively related to Tobin's Q Non-family controlled firms: positively related to Tobin's Q 	financialandindustrialcompetenceareimportantforauditcommitteetoplayitsmonitoringrole, number of auditcommitteewithbigfourexperienceandindustrialcompetencemaybeagoodmeasurementforfutureresearch.Limitation(s):1.Onlyquantitativeaspects1.Onlyquantitativeaspectsarebeingstudied.Ecommendation(s):1.Futureresearchers1.Futureresearchersshouldincludequalitativeaspectsforthefindingstobemorereflectiveandinformativetothereadersstatestatestatestatestate
Saad and Abdullah (2011)	Malaysia	 Sample: 163 listed companies in main board Bursa Malaysia Securities Berhad Period: 2004-2006 DVs: Market value, Price earnings ratio, Dividend yield, 	 Significant positive relationship with market value Insignificant positive relationship with price earnings ratio, 	The authors did not mention about any limitations or recommendations of their study.

		 Return on capital employed (ROCE), Borrowing ratio, Payout ratio, Capital Gearing Measurement of IV: number of independent non-executives in the Board of Directors Tests used: Pearson correlation, Regression analysis 	dividend yield, return on capital employed, borrowing ratio, payout ratio and capital gearing	
Abidin, Kamal and Jusoff (2009)	Malaysia	 Sample: 75 listed companies in Malaysia Period: 2005 DV: value added intellectual coefficient (VAIC) Measurement if IV: Percentage of independent non-executive directors to total number of directors Tests used: Descriptive analysis, Pearson correlation analysis, Content analysis, Regression analysis 	• Significant and positive relationship with VAIC	The authors did not mention about any limitations or recommendations of their study.
Bhagat and Black (2000)	US	 Sample: 928 large companies in US Period:1988-1993 (1985-1987 as the retrospective period, 1988-1990 as the prospective period) DVs: Tobin's Q, ROA, Market adjusted stock price returns, 	• For the retrospective period, board independence was found to be significant negatively related to all performance	The authors did not mention about any limitations or recommendations of their study.

		 Ratio of sales to assets Measurement of IV: number of independent directors Tests used: regression 	 measures. For the prospective period, the correlation remains negative for all performance measures, but significant only for Tobin's Q. 	
Afandyar, Aziz, Butt and Tasawar (2013)	Pakistan	 Sample: 127 Pakistani listed firms Period: 2005 to 2011 DVs: ROA, Tobin's Q Measurement of IV: percentage of outside directors on board Tests used: regression 	 Significant positive relationship with Tobin's Q Significant negative with ROA 	 Limitation(s): This study is limited to panel data analysis. Only three factors of board mechanisms were examined. Only a sample of 127 firms were examined. Recommendation(s): Pooled data analysis could be done. To include other factors in future research. For example, participation rate of outside directors and number of board committees. To extend the sample for best representation of population.

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Ghabayen (2012)	Saudi Arabia	 Sample: 102 non-financial listed companies Period: 2011 DVs: ROA Measurement of IV: ratio of independent directors to the total number of directors Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	 Significant negative relationship with ROA 	Limitation(s):1. Only examined the post period after Code of Corporate Governance in Saudi Arabia was issued.2. The period covered is too short.Recommendation(s):1. A study comparing pre-issuance and post issuance of Code of Corporate Governance in Saudi Arabia should be conducted in order to see the improvement.2. A study with longer period should be conducted to have better view of corporate governance in Saudi Arabia.3. A study on the ownership structure and managerial ownership of Saudi Arabia is
Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012a)	Saudi Arabia	 Sample: 136 listed companies in Saudi Arabia Period: 2010 DVs: ROA Measurement of IV: The ratio of independent directors to total number of directors Tests used: Descriptive analysis, 	• Insignificantly negatively related to ROA	Limitation(s):1. Focussed solely on listed non- financial firms listed on Kuwaiti Stock Exchange.2. Only general aspects which lead to board effectiveness were examined.3. This study only focussed on

Pearson correlation. Multiple	accounting-based measure.
linear regression	Recommendation(s):
	1 Financial companies and non-
	listed companies should be
	investigated in order for the
	outcome to be generalise to all
	sectors
	2 Other heard of directors
	characteristics such as board of
	directors frequency meetings
	and experience of board of
	directors should be explored
	3 Other market-based measures
	such as operating cash flows
	should be focussed on
	4 Future researchers should
	employ longer period for their
	studies
	5. Effect of some moderating
	variables such as CEO
	compensation, board size,
	accounting experience, etc. on
	performance should be explored.
	6. Relationships of board
	characteristics and performance
	in different countries should be
	examined intensively to reveal
	the extent of these countries to

				 be affected by differences in business environments, cultures, level of education, etc. 7. Future studies should study on the integration effect of internal and external corporate governance factors on the firms' performance. 8. Future researcher should consider variable regarding some committees under board structure such as risk committee.
Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012b)	Saudi Arabia	 Sample: 146 Saudi companies listed in the Saudi stock exchange Period: 2010 DVs: Tobin's Q Measurement of IV: The proportion of independent non- executive directors to total number of directors on the board Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	 Insignificant relationship with Tobin's Q 	 Limitation(s): The findings cannot be generalized to all sectors because companies in financial sectors were excluded although the rest of the whole population is used in this study. This study only focused on quantitative aspects. Only six characteristics of the board of directors and audit committee were examine in this study This study was theoretically built on the agency theory and institutional theory in relation to

				 internal corporate governance mechanisms and firm performance. <u>Recommendation(s):</u> To include companies from financial sectors in the study. Questionnaire and interviews may be used to reinforce the findings. Future studies could include more audit committee characteristics. To examine other theories which relate to corporate governance mechanisms.
Modum, Ugwoke and Onyeanu (2013)	Nigeria	 Sample: 108 non-financial companies quoted on the Nigerian stock exchange Period: 2006 to 2012 DVs: EPS Measurement of IV: Number of outside directors Tests used: Descriptive analysis, Pearson correlation, ANOVA, Multiple linear regression 	• Significantly and positively related to EPS	The authors did not mention about any limitations or recommendations of their study.

Audit Committee Size	Audit	Con	nmitt	ee	<u>Size</u>
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Author(s)	Country	Methodology	Findings	Limitation(s)/Recommendation(s)
Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012a)	Saudi Arabia	 Sample: 136 listed companies in Saudi Arabia Period: 2010 DVs: ROA Measurement of IV: Number of directors on audit committee Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	 insignificantly and positively related to ROA 	 Limitation(s): Focussed solely on listed non-financial firms listed on Kuwaiti Stock Exchange. Only general aspects which lead to board effectiveness were examined. This study only focussed on accounting-based measure. Recommendation(s): Financial companies and non-listed companies should be investigated in order for the outcome to be generalise to all sectors. Other board of directors characteristics such as board of directors should be explored. Other market-based measures such as operating cash flows should be focussed on.

				studies.
				5. Effect of some moderating
				variables such as CEO
				compensation board size
				accounting experience etc on
				nerformance should be explored
				6 Palationships of board
				o. Relationships of board
				characteristics and performance
				in different countries should be
				examined intensively to reveal
				the extent of these countries to
				be affected by differences in
				business environments, cultures,
				level of education, etc.
				7. Future studies should study on
				the integration effect of internal
				and external corporate
				governance factors on the firms'
				performance.
				8. Future researcher should
				consider variable regarding some
				committees under board
				structure such as risk committee.
Al-Matari, Al-	Saudi	• Sample: 146 Saudi companies	• Significant negative	Limitation(s):
Swidi, Fadzil	Arabia	listed in the Saudi stock	relationship with	1. The findings cannot be
and Al-Matari		exchange	Tobin's O	generalized to all sectors because
(2012b)		Period: 2010		companies in financial sectors
()		 DVa: Tabin'a O 		were excluded although the rest
		• DVS : TODIN S Q		were excluded although the fest

Measurement of IV: Number of		of the whole population is used
directors on audit committee		in this study.
• Tests used: Descriptive analysis,		2. This study only focused on
Pearson correlation, Multiple		quantitative aspects.
linear regression		3. Only six characteristics of the
		board of directors and audit
		committee were examine in this
		study
		4. This study was theoretically built
		on the agency theory and
		institutional theory in relation to
		internal corporate governance
		mechanisms and firm
		performance.
	<u> </u>	Recommendation(s):
		• To include companies from
		financial sectors in the study.
		• Questionnaire and interviews
		may be used to reinforce the
		findings.
		• Future studies could include
		more audit committee
		characteristics.
		• To examine other theories which
		relate to corporate governance
		mechanisms.

Ghabayen (2012)	Saudi Arabia	 Sample: 102 non-financial listed companies Period: 2011 DVs: ROA Measurement of IV: Number of directors on audit committee Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	• no effect on ROA	 Limitation(s): Only examined the post period after Code of Corporate Governance in Saudi Arabia was issued. The period covered is too short. Recommendation(s): A study comparing pre-issuance and post issuance of Code of Corporate Governance in Saudi Arabia should be conducted in order to see the improvement. A study with longer period should be conducted to have better view of corporate governance in Saudi Arabia. A study on the ownership structure and managerial ownership of Saudi Arabia is needed.
Coleman (2007)	Africa	 Sample: 103 listed companies Period: 1997 to 2001 DVs: Tobin's Q, ROA Measurement of IV: Number of directors on audit committee Tests used: Descriptive analysis, Regression analysis 	• positive effect on both Tobin's Q and ROA	Limitation(s):1. Limited variables were examined.2. The period examined is only up to 2001.Recommendation(s):1. Broader spectrums of variables should be examined in future

Hamdan, Sarea and Reyad (2013)	Jordan	 Sample: 106 corporations from the financial sector listed in the Amman Stock Exchange Market Period: 2008 to 2009 DVs: ROE, ROA, EPS Measurement of IV: Number of directors on audit committee Tests used: Descriptive analysis, Regression analysis (Ordinary least square test) 	 significantly and positively related to ROE positively related to ROA significantly and positively related to EPS 	research. <u>Limitation(s):</u> 1. Limited to one sector of economy. Result of one sector cannot be applied to other sectors. <u>Recommendation(s):</u> 1. To investigate the relationship between audit committee characteristics and performance of other sectors. 2. Future research might examine whether other monitoring machanisms can be apploved to
				2. Future research might examine whether other monitoring mechanisms can be employed to test the relationship between audit committee characteristics and firm performance.

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Author(s)	Country	Methodology	Findings	Limitation(s)/Recommendation(s)
Tham and Romuald (2012)	Malaysia	 Sample: 20 public listed companies in Malaysia Period: 2006 to 2010 DV: Earnings Per Share (EPS) Measurement of IV: Proportion of independent non-executive directors on audit committee Tests used: Descriptive analysis, Pearson correlation, Regression analysis 	Insignificant negative relationship with EPS	 Limitation(s): Recommendation(s) Limitation(s): This study only focuses on EPS in determining performance. This study only concentrates on internal process of a company. The sample size is too small. Not all sectors are being investigated. Recommendation(s): There are limitations in using EPS, future researcher should utilise other performance ratio such as ROA, ROE etc. In additions, more proxy should be used in analysing financial performance to make the study stronger. External environment such as law and regulations should be included in future researcher Future researchers should investigate larger sample size to lead to higher generalization. Future researchers should include more sectors in their

				research.
Hussin and Othman (2012)	Malaysia	 Sample: top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 Period: 2007 to 2009 DVs: ROA, ROE Measurement of IV: Percentage of independent non-executive directors on audit committee Tests used: Descriptive analysis, Pearson correlation, Multiple Linear regression 	 Significantly negatively related to ROA and ROE 	Limitation(s): 1. This study only focuses on two proxies of financial performance. 2. This study did not take into account external factors such as inflation. 3. This study only focuses on quantitative aspects. 4. Independent variables which relates to audit committee such as audit committee such as audit committee independence and audit committee meeting are not a significant variables in measuring effectiveness. Recommendation(s): 1. A more robust study which involves more than two proxies of financial performance should be carried out. 2. Future researchers should include external factors in their studies. 3. Qualitative aspects should be investigated.

				financial and industrial competence are important for audit committee to play its monitoring role, number of audit committee with big four experience and industrial competence may be a good measurement for future research.
Babatunde and Olaniran (2009)	Nigeria	 Sample: 62 firms listed on the Nigerian Stock Exchange Period: 2002 to 2006 DVs: Tobin's Q, ROA Measurement of IV: Percentage of independent members of audit committee Tests used: Panel regression 	 Significant positive relationship with Tobin's Q Significant negative relationship with ROA 	 Limitation(s): There are many Romania corporate governance issues remain unresolved. Data on some variables were unavailable. Thus, the samples were determined based on data availability. Recommendation(s): Although the main general trends have been identified in this study, future studies regarding corporate governance in Romania should conduct further work to classify more points which give specificity to policy guidelines.

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Ghabayen (2012)	Saudi Arabia	 Sample: 102 non-financial listed companies Period: 2011 DVs: ROA Measurement of IV: ratio of independent members to the total number of members serving in the AC Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	• No relationship	Limitation(s):1. Only examined the post period after Code of Corporate Governance in Saudi Arabia was issued.2. The period covered is too short.Recommendation(s):1. A study comparing pre-issuance and post issuance of Code of Corporate Governance in Saudi Arabia should be conducted in
Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012a)	Saudi Arabia	 Sample: 136 listed companies in Saudi Arabia Period: 2010 DVs: ROA Measurement of IV: The proportion of independent directors on the audit committee. 	• Insignificantly related to ROA	 Limitation(s): 1. Focussed solely on listed non- financial firms listed on Kuwaiti Stock Exchange. 2. Only general aspects which lead to board effectiveness were examined. 3. This study only focussed on

· · · · · · · · · · · · · · · · · · ·			
•	Tests used: Descriptive		accounting-based measure.
	analysis, Pearson correlation,	Rec	commendation(s):
	Multiple linear regression		1. Non-financial companies and
	1 0		non-listed companies should be
			investigated in order for the
			outcome to be generalise to all
			sectors.
			2 Other board of directors
			characteristics such as board of
			directors frequency meetings
			and experience of board of
			directors should be explored
			3 Other market-based measures
			such as operating cash flows
			should be focussed on
			A Futura researchers should
			4. Future researchers should
			studios
			5 Effect of some mederating
			5. Effect of some moderating
			variables such as CEO
			compensation, board size,
			accounting experience, etc. on
			performance should be
			explored.
			6. Relationships of board
			characteristics and performance
			in different countries should be
			examined intensively to reveal

Al-Matari, Al- Swidi, Fadzil and Al-Matari (2012b) Saudi Arabia	 Sample: 146 Saudi companies listed in the Saudi stock exchange Period: 2010 DVs: Tobin's Q Measurement of IV: The proportion of independent directors on the audit committee. Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	• Insignificant relationship with Tobin's Q	 the extent of these countries to be affected by differences in business environments, cultures, level of education, etc. 7. Future studies should study on the integration effect of internal and external corporate governance factors on the firms' performance. 8. Future researcher should consider variable regarding some committees under board structure such as risk committee. Limitation(s): The findings cannot be generalized to all sectors because companies in financial sectors were excluded although the rest of the whole population is used in this study. This study only focused on quantitative aspects. Only six characteristics of the board of directors and audit committee were examine in this study.
	1 C		study

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				 built on the agency theory and institutional theory in relation to internal corporate governance mechanisms and firm performance. <u>Recommendation(s):</u> To include companies from financial sectors in the study. Questionnaire and interviews may be used to reinforce the findings. Future studies could include more audit committee characteristics. To examine other theories which relate to corporate governance mechanisms.
Coleman (2007)	Africa	 Sample: 103 listed companies Period: 1997 to 2001 DVs: Tobin's Q, ROA Measurement of IV: Ratio of independent non-executive directors out of total directors on audit committee Tests used: Descriptive analysis, Regression 	 Insignificant negative relationship with Tobin's Q Insignificant positive relationship with ROA 	 <u>Limitation(s):</u> Limited variables were examined. The period examined is only up to 2001. <u>Recommendation(s):</u> Broader spectrums of variables should be examined in future research.

		analysis		
Hamdan, Sarea and Reyad (2013)	Jordan	 Sample: 106 corporations from the financial sector listed in the Amman Stock Exchange Market Period: 2008 to 2009 DVs: ROE, ROA, EPS Measurement of IV: Dummy variables: totally comprise non-executive directors = '1', otherwise '0' Tests used: Descriptive analysis, Regression analysis (Ordinary least square test) 	 Significant positive relationship with ROE and ROA Insignificant positive relationship with EPS 	Limitation(s):1. Limited to one sector of economy. Result of one sector cannot be applied to other sectors.Recommendation(s):1. To investigate the relationship between audit committee characteristics and performance of other sectors.2. Future research might examine

Board Meeting

Author(s)	Country	Methodology	Findings	Limitation(s)/ Recommendation(s)
Mohamad, Rashid and Shawtari (2012)	Malaysia	 Sample: 35 listed GLCs firms Period: 2003 (Prior to transformation program) and 2006 (post transformation program) DV: Discretionary accurals Measurement of IV: Number of meetings divided by number of directors Tests used: Pearson correlation, descriptive analysis, paired-sample t-test, Regression analysis 	Board meetings affect EM negatively and the relationship is stronger in post-transformation policy compared to pre-transformation period	Limitation(s): 1. Only publicly available data were used. <u>Recommendation(s):</u> 1. Data from other sources could be helpful.
Vafeas (1999)	US	 Sample: 307 firms listed on the Forbes 1992 Period: 1990 to 1994 DVs: Tobin's Q Measurement of IV: frequency of board meetings Tests used: Descriptive analysis, Correlation analysis, Ordinary Least Square, Two-stage Least Square regression analysis 	• statistically significant and negative association between the frequency of board meetings and Tobin's Q	The authors did not mention about any limitations or recommendations of their study.

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Ntim and Osei (2011)	South Africa	 Sample: 169 listed corporations Period: 2002 to 2007 DVs: Tobin's Q, ROA, Total shareholder return Measurement of IV: Frequency of board meetings Tests used: Descriptive analysis, Pearson correlation, Multivariate regression analysis 	• Significant positive relationship with Tobin's Q, ROA and total shareholder return	The authors did not mention about any limitations or recommendations of their study.
Coleman (2007)	Africa	 Sample: 103 listed companies Period: 1997 to 2001 DVs: Tobin's Q, ROA Measurement of IV: Frequency of board meetings Tests used: Descriptive analysis, Regression analysis 	 Insignificant positive relationship with Tobin's Q Insignificant negative relationship with ROA 	 <u>Limitation(s):</u> Limited variables were examined. The period examined is only up to 2001. <u>Recommendation(s):</u> Broader spectrums of variables should be examined in future research.
Modum, Ugwoke and Onyeanu (2013)	Nigeria	 Sample: 108 non-financial companies quoted on the Nigerian stock exchange Period: 2006 to 2012 DVs: EPS Measurement of IV: Frequency of board meetings Tests used: Descriptive analysis, Pearson correlation, ANOVA, 	• Significantly and positively related to EPS	The authors did not mention about any limitations or recommendations of their study.

	Multiple linear regression	

Leverage

Author(s)	Country	Methodology	Findings	Limitation(s)/ Recommendation(s)
Ibrahim and Abdul Samad (2011)	Malaysia	 Sample: 290 public-listed companies which comprised 125 family firms and 165 non-family firms. Period: 1999 to 2005 Dependent Variables (DV): Tobin's Q and Return on assets (ROA), Return on equity (ROE) Measurement of IV: Book value of total debt/total assets Tests used: Descriptive analysis, Pearson correlation, fixed effect model 	 Family firms: Significantly positively related to Tobin's Q, significantly negatively related to ROA, negatively related to ROE Non-family firms: Significantly positively related to Tobin's Q, significantly negatively related to ROA, positively related to ROE 	The authors did not mention about any limitations or recommendations of their study.
Hussin and Othman (2012)	Malaysia	 Sample: top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 Period: 2007 to 2009 DVs: ROA, ROE 	• Positive and significant relationship with both ROA and ROE	Limitation(s):1. This study only focuses on two proxies of financial performance.2. This study did not take into

• N	leasurement of IV: Long-term		account external factors such as
d	ebt over total assets		inflation.
• T	'ests used: Descriptive analysis.		3. This study only focuses on
P	earson correlation. Linear		quantitative aspects.
re	egression T-test (comparison		4. Independent variables which
b	etween companies with CEO		relate to audit committee such as
b b b b b b b b b b b b b b b b b b b	uality and companies without		audit committee independence
	'EO duality)		and audit committee meeting are
	(10 ddanley)		not significant variables in
			measuring effectiveness.
		R	ecommendation(s):
			1. A more robust study which
			involves more than two proxies
			of financial performance should
			be carried out.
			2. Future researchers should
			include external factors in their
			studies.
			3. Oualitative aspects should be
			investigated.
			4. Since level of accounting.
			financial and industrial
			competence are important for
			audit committee to play its
			monitoring role, number of audit
			committee with big four
			experience and industrial
			competence may be a good

				measurement for future research.
Amran and Che-Ahmad (2011)	Malaysia	 Sample: 189 listed family companies Period: 2003 to 2007 DVs: Tobin's Q, EPS, Operating cash flow Measurement of IV: Book value of long-term debt/total assets Tests used: Descriptive analysis, univariate analysis (correlation matrix), multivariate regression analysis 	 Significantly positively related to Tobin's Q Negatively related to EPS and operating cash flow 	Limitation(s):1. This study only investigated the family-ownership1. This study only investigated the family-ownership1. The three market based and accounting based performance measurements show inconsistent results.Recommendation(s):1. Future consider private family business.
Amran (2011)	Malaysia	 Sample: 424 public listed companies companies (233 family-controlled firms and 191 non-family controlled firms) Period: 2003 to 2007 Dependent Variable: Tobin's Q Measurement of IV: Book value of long-term debt/total assets Tests used: Descriptive analysis, Multivariate regression analysis 	 Family-controlled firms: Debt is positively related to Tobin's Q Non-family controlled firms: Debt is positively related to Tobin's Q 	Limitation(s): 1. Only quantitative aspects are being studied. Recommendation(s): 1. Future researchers should include qualitative aspects for the findings to be more reflective and informative to the readers

	1			
		(Generalized least square method)		
Mohamad, Rashid and Shawtari (2012)	Malaysia	 Sample: 35 listed GLCs firms Period: 2003 (Prior to transformation program) and 2006 (post transformation program) DV: Discretionary accurals Measurement of IV: Total debt to total assets Tests used: Pearson correlation, descriptive analysis, paired-sample t-test, Regression analysis 	 Prior to transformation period: significant negative relationship with discretionary accruals Post-transformation period: Negative relationship with discretionary accruals 	Limitation(s): 1. Only publicly available data were used. <u>Recommendation(s):</u> 1. Data from other sources could be helpful.
Babatunde and Olaniran (2009)	Nigeria	 Sample: 62 firms listed on the Nigerian Stock Exchange Period: 2002 to 2006 DVs: Tobin's Q, ROA Measurement of IV: ratio of debt to share capital Tests used: Panel regression (Fixed effect regression) 	 Positive relationship with Tobin's Q Significant positive relationship with ROA 	 Limitation(s): There are many Romania corporate governance issues remain unresolved. Data on some variables were unavailable. Thus, the samples were determined based on data availability. Recommendation(s): Although the main general trends have been identified in this study, future studies

				regarding corporate governance in Romania should conduct further work to classify more points which give specificity to policy guidelines.
Al-Matari, Al- Swidi, Fadzil & Al-Matari (2012a)	Saudi Arabia	 Sample: 136 listed companies in Saudi Arabia Period: 2010 DVs: ROA Measurement of IV: ratio of total liabilities to total assets Tests used: Descriptive analysis, Pearson correlation, Multiple linear regression 	 Insignificant negative correlated to ROA 	 Limitation(s): Focussed solely on listed non-financial firms listed on Kuwaiti Stock Exchange. Only general aspects which lead to board effectiveness were examined. This study only focussed on accounting-based measure. Recommendation(s): Financial companies and non-listed companies should be investigated in order for the outcome to be generalise to all sectors. Other board of directors characteristics such as board of directors should be explored. Other market-based measures should be explored.

				4. Future researchers should
				employ longer period for their
				studies.
				5. Effect of some moderating
				variables such as CEO
				compensation, board size,
				accounting experience, etc. on
				performance should be explored.
				6. Relationships of board
				characteristics and performance
				in different countries should be
				examined intensively to reveal
				the extent of these countries to
				be affected by differences in
				business environments, cultures,
				level of education, etc.
				7. Future studies should study on
				the integration effect of internal
				and external corporate
				governance factors on the firms'
				performance.
				8. Future researcher should
				consider variable regarding
				some committees under board
				structure such as risk committee.
Al-Matari, Al-	Saudi	• Sample: 146 Saudi companies	 Insignificant 	Limitation(s):
Swidi, Fadzil	Arabia	listed in the Saudi stock	relationship with	1. The findings cannot be
and Al-Matari		exchange	Tobin's Q	generalized to all sectors

	· · · · · · · · · · · · · · · · · · ·	
(2012b)	• Period: 2010	because companies in financial
	DVs: Tobin's Q	sectors were excluded although
	• Measurement of IV: The	the rest of the whole population
	percentage of total liabilities to	is used in this study.
	total assets	2. This study only focused on
	• Tests used: Descriptive analysis.	quantitative aspects.
	Pearson correlation, Multiple	3. Only six characteristics of the
	linear regression	board of directors and audit
		committee were examine in this
		study
		4. This study was theoretically built
		on the agency theory and
		institutional theory in relation to
		internal corporate governance
		mechanisms and firm
		performance.
		<u>Recommendation(s):</u>
		• To include companies from
		financial sectors in the study.
		Questionnaire and interviews
		may be used to reinforce the
		findings.
		• Future studies could include
		more audit committee
		characteristics.
		• To examine other theories which
		relate to corporate governance
		mechanisms.

Hamdan, Sarea and Reyad (2013)	Jordan	 Sample: 106 corporations from the financial sector listed in the Amman Stock Exchange Market Period: 2008 to 2009 DVs: ROE, ROA, EPS Measurement of IV: ratio of total debt to total assets Tests used: Descriptive analysis, Regression analysis (Ordinary least square test) 	 Significant positive relationship with ROE Negative relationship with ROA Positive relationship with EPS 	Limitation(s): 1. Limited to one sector of economy. Result of one sector cannot be applied to other sectors. Recommendation(s): 1. To investigate the relationship between audit committee characteristics and performance of other sectors. 2. Future research might examine whether other monitoring mechanisms can be employed to test the relationship between audit committee characteristics and firm performance.
Bai, Liu, Lu, Song, and Zhang (2004)	China	 Sample: 1004 listed firms Period: 2000 DVs: market valuation (Tobin's Q) Measurement of IV: ratio of book value of debt/total asset Tests used : Regression analysis 	• Significant negative relationship with Tobin's Q	The authors did not mention about any limitations or recommendations of their study.

<u>Firm Size</u>

Author(s)	Country	Methodology	Findings	Limitation(s)/ Recommendation(s)
Ibrahim and Abdul Samad (2011)	Malaysia	 Sample: 290 public-listed family ownership companies Period: 1999 to 2005 Dependent Variables (DV): Tobin's Q and Return on assets (ROA), Return on equity (ROE) Measurement of IV: Book value of total debt/total assets Tests used: Descriptive analysis, Pearson correlation, fixed effect model 	 Family firms: Significantly negatively related to Tobin's Q, negatively related to ROA, significantly negatively related to ROE Non-family firms: Significantly negatively related to Tobin's Q, positively related to ROA, significantly negatively related to ROE 	The authors did not mention about any limitations or recommendations of their study.
Hussin and Othman (2012)	Malaysia	 Sample: top 100 constituent firms which comprised the FTSE Bursa Malaysia Index as of 2009 Period: 2007 to 2009 DVs: ROA, ROE Measurement of IV: natural log of total assets Tests used: Descriptive analysis, 	• Significantly negatively related to both ROA and ROE	 Limitation(s): This study only focuses on two proxies of financial performance. This study did not take into account external factors such as inflation. This study only focuses on quantitative aspects. Independent variables which

		Pearson correlation, Linear		relate to audit committee such as
		regression, T-test (comparison		audit committee independence
		between companies with CEO		and audit committee meeting are
		duality and companies without		not significant variables in
		CEO duality)		measuring effectiveness.
				Recommendation(s):
				1. A more robust study which
				involves more than two proxies
				of financial performance should
				be carried out.
				2. Future researchers should
				include external factors in their
				studies.
				3. Qualitative aspects should be
				investigated.
				4. Since level of accounting,
				financial and industrial
				competence are important for
				audit committee to play its
				monitoring role, number of audit
				committee with big four
				experience and industrial
				competence may be a good
				measurement for future research.
Amran and	Malaysia	• Sample: 189 listed family	Significantly	Limitation(s):
Che-Ahmad		companies	negatively related to	1. This study only investigated the
(2011)		• Period: 2003 to 2007	Tobin's Q	family-ownership listed
		• DVs: Tobin's Q, EPS, Operating	• Positively related to	companies.

		 cash flow Measurement of IV: Natural log of the book value of total assets Tests used: Descriptive analysis, univariate analysis (correlation matrix), multivariate regression analysis 	EPSSignificantly positively related to operating cash flow	 2. The three market based and accounting based performance measurements show inconsistent results. <u>Recommendation(s):</u> Future researchers should consider private family business.
Amran (2011)	Malaysia	 Sample: 424 public listed companies companies (233 family-controlled firms and 191 non-family controlled firms) Period: 2003 to 2007 Dependent Variable: Tobin's Q Measurement of IV: Natural log of the book value of total assets Tests used: Descriptive analysis, Multivariate regression analysis (Generalized least square method) 	 Family-controlled firms: Firm size is significantly negatively related to Tobin's Q Non-family controlled firms: Firm size is significantly negatively related to Tobin's Q 	The authors did not mention about any limitations or recommendations of their study.
Mohamad, Rashid and Shawtari (2012)	Malaysia	 Sample: 35 listed GLCs firms Period: 2003 (Prior to transformation program) and 2006 (post transformation 	• Prior to transformation period: significant positive	Limitation(s):1. Only publicly available data were used.Recommendation(s):1. Data from other sources could be helpful.

		 program) DV: Discretionary accurals Measurement of IV: Total assets Tests used: Pearson correlation, descriptive analysis, paired-sample t-test, Regression analysis 	 relationship with discretionary accruals Post-transformation period: Significant positive relationship with discretionary accruals 	
Babatunde and Olaniran (2009)	Nigeria	 Sample: 62 firms listed on the Nigerian Stock Exchange Period: 2002 to 2006 DVs: Tobin's Q, ROA Measurement of IV: Total Assets owned Tests used: Panel regression (Fixed effect regression) 	• Significant negative relationship with both Tobin's Q and ROA	 <u>Limitation(s):</u> There are many Romania corporate governance issues remain unresolved. Data on some variables were unavailable. Thus, the samples were determined based on data availability. <u>Recommendation(s):</u> Although the main general trends have been identified in this study, future studies regarding corporate governance in Romania should conduct further work to classify more points which give specificity to policy guidelines.

Al-Matari, Al-	Saudi	• Sample: 136 listed	 Significant 	Limitation(s):
Swidi, Fadzil	Arabia	companies in Saudi Arabia	negative	1. Focussed solely on listed non-
& Al-Matari		• Period: 2010	correlated	to financial firms listed on Kuwaiti
(2012a)		• DVs: ROA	ROA	Stock Exchange.
		• Measurement of IV: natural		2. Only general aspects which lead
		log of total assets		to board effectiveness were
		• Tests used: Descriptive		examined.
		analysis Pearson correlation		3. This study only focussed on
		Multiple linear regression		accounting-based measure.
		Wuttple medi regression		Recommendation(s):
				1. Financial companies and non-
				listed companies should be
				investigated in order for the
				outcome to be generalise to all
				sectors.
				2. Other board of directors
				characteristics such as board of
				directors frequency meetings and
				experience of board of directors
				should be explored.
				3. Other market-based measures
				such as operating cash flows
				should be focussed on.
				4. Future researchers should
				employ longer period for their
				studies.
				5. Effect of some moderating
				variables such as CEO
				 compensation, board size, accounting experience, etc. on performance should be explored. 6. Relationships of board characteristics and performance in different countries should be examined intensively to reveal the extent of these countries to
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				be affected by differences in business environments, cultures,
				level of education, etc.
				7. Future studies should study on
				the integration effect of internal
				and external corporate
				governance factors on the firms'
				8 Future researcher should
				consider variable regarding some
				committees under board
				structure such as risk committee.
Al-Matari, Al-	Saudi	• Sample: 146 Saudi companies	Insignificant	Limitation(s):
Swidi, Fadzil	Arabia	listed in the Saudi stock	relationship with	5. The findings cannot be
and Al-Matari		exchange	Tobin's Q	generalized to all sectors
(2012b)		• Period: 2010		because companies in financial
		• DVs: Tobin's Q		the rest of the whole population
		• Measurement of IV: The book		is used in this study.
		company		6. This study only focused on
		E ··· J		

		• Tests used: Descriptive analysis,		quantitative aspects.
		Pearson correlation, Multiple		7. Only six characteristics of the
		linear regression		board of directors and audit
				committee were examine in this
				study
				8. This study was theoretically built
				on the agency theory and
				institutional theory in relation to
				internal corporate governance
				mechanisms and firm
				performance.
				Recommendation(s):
				• To include companies from
				financial sectors in the study.
				• Questionnaire and interviews
				may be used to reinforce the
				findings.
				• Future studies could include
				more audit committee
				characteristics.
				• To examine other theories which
				relate to corporate governance
				mecnanisms.
Hamdan	Iordan	• Sample: 106 corrections	Nogativo	Limitation(s):
Sarea and	3010an	from the financial sector	• Intractive relationship with	1 Limited to one sector of
Revad (2013)		listed in the Amman Stock	ROF	economy. Result of one sector
100900 (2013)		Exchange Market	Significant	cannot be applied to other
			• Significant	cannot be applied to other

		 Period: 2008 to 2009 DVs: ROE, ROA, EPS Measurement of IV: Natural log of total assets Tests used: Descriptive analysis, Regression analysis (Ordinary least square test) 	positive relationship with ROA and EPS	 sectors. <u>Recommendation(s):</u> To investigate the relationship between audit committee characteristics and performance of other sectors. Future research might examine whether other monitoring mechanisms can be employed to test the relationship between audit committee characteristics and firm performance.
Bai, Liu, Lu, Song, and Zhang (2004)	China	 Sample: 1004 listed firms Period: 2000 DVs: market valuation (Tobin's Q Measurement of IV: natural logarithm of main operation income Tests used : Regression analysis 	• Significant negative relationship with Tobin's Q	The authors did not mention about any limitations or recommendations of their study.
Bhagat and Black (2000)	US	 Sample: 928 large companies in US Period:1988-1993 (1985-1987 as the retrospective period, 1988-1990 as the prospective period) DVs: Tobin's Q, ROA, Market 	 Retrospective period: Insignificant positive relationship with performance Prospective period: Insignificant positive relationship with 	The authors did not mention about any limitations or recommendations of their study.

adju	sted stock price returns,	performance	
Ratio	o of sales to assets		
• Mea	surement of IV: log(sales)		
• Test	s used: regression		

APPENDIX III: LIST OF LISTED GLCs AS AT 13 MARCH 2009

PUTRAJAYA COMMITTEE ON GLC HIGH PERFORMANCE (PCG)

List of listed GLCs as at 13 March 2009

No	Government-Linked Companies (GLC)
•	
1	Malaysia Building Society Berhad
2	Malaysian Resources Corporation Berhad
3	Bumiputra Commerce Holdings Berhad
4	Malaysia Airports Holdings Berhad
5	Malaysian Airline System Bhd
6	POS Malaysia Bhd
7	Proton Holdings Bhd
8	Telekom Malaysia Bhd
9	Axiata Group Bhd
10	Tenaga Nasional Bhd
11	Time dotcom Bhd
12	Time Engineering Bhd
13	PLUS Expressway Bhd
14	Pharmaniaga Bhd
15	UEM Land Bhd
16	Faber Group Bhd
17	Affin Holdings Bhd
18	Boustead Holdings Bhd
19	UAC Berhad
20	BIMB Holdings Bhd
21	Lityan Holdings Bhd
22	Syarikat Takaful Malaysia Bhd
23	TH Plantations Bhd
24	Chemical Company of Malaysia Bhd
25	CCM Duopharma Biotech Bhd
26	Malayan Banking Bhd

27	MNRB Holdings Bhd
28	NCB Holdings Bhd
29	Sime Darby Bhd
30	UMW Holdings Bhd
31	Petronas Dagangan Bhd
32	Petronas Gas Bhd
33	Malaysia International Shipping Corporation Bhd

Source: http://www.pcg.gov.my/PDF/GLCs%20(Mar%2013%202009).pdf

APPENDIX IV: LIST OF G20 COMPANIES AS AT 28 FEBRUARY

<u>2013</u>

PUTRAJAYA COMMITTEE ON GLC HIGH PERFORMANCE (PCG)

List of GLCs within immediate scope of GLC Transformation Programme (GLCT) - as at 28 Feb 2013

No.	Government-Linked Companies (GLC)
1	Affin Holdings Bhd
2	Axiata Group Berhad
3	BIMB Holdings Bhd
4	Boustead Holdings Bhd
5	Chemical Company of Malaysia Bhd
6	CIMB Group Bhd
7	Malayan Banking Bhd
8	Malaysia Airports Holdings Bhd
9	Malaysia Building Society Bhd
10	Malaysian Airline System Bhd
11	Malaysian Resources Corp Bhd
12	Sime Darby Bhd
13	Telekom Malaysia Bhd
14	Tenaga Nasional Bhd
15	TH Plantations Bhd
16	UEM Group Bhd *
17	UMW Holdings Bhd

The G20 - currently consists of only 17 GLCs following mergers, demergers, divestments and other corporate exercises.

* Unlisted

Source:http://www.pcg.gov.my/PDF/List%20of%20G20%20GLCs%20as%

 $20 at \% \, 2028 \% \, 20 February \% \, 202013. pdf$

APPENDIX V: LIST of GLCS (AFTER EXCLUDING UNLISTED

GLCS)

No.	Government-Linked Companies (GLC)
1	Affin Holdings Bhd
2	Axiata Group Berhad
3	BIMB Holdings Bhd
4	Boustead Holdings Bhd
5	Chemical Company of Malaysia Bhd
6	CIMB Group Bhd
7	Malayan Banking Bhd
8	Malaysia Airports Holdings Bhd
9	Malaysia Building Society Bhd
10	Malaysian Airline System Bhd
11	Malaysian Resources Corp Bhd
12	Sime Darby Bhd
13	Telekom Malaysia Bhd
14	Tenaga Nasional Bhd
15	TH Plantations Bhd
16	UMW Holdings Bhd

Source: Developed for the research

APPENDIX VI: OUTPUTS ON SPSS AND EVIEWS

Descriptive Statistics						
	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance
BS2007	16	6	12	9.19	1.559	2.429
BS2008	16	6	12	9.00	1.549	2.400
BS2009	16	6	13	9.44	1.825	3.329
BS2010	16	6	15	9.69	2.301	5.296
BS2011	16	6	13	9.37	1.996	3.983
BS2012	16	6	12	8.94	1.948	3.796
Valid N (listwise)	16					

Descriptive Statistics

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance
BI2007	16	.3000	.7500	.484125	.1113869	.012
BI2008	16	.2860	.7780	.483125	.1181479	.014
BI2009	16	.3000	.7780	.492375	.1189251	.014
BI2010	16	.2730	.7780	.510375	.1248577	.016
BI2011	16	.3000	.7780	.503813	.1364367	.019
BI2012	16	.3000	.7780	.559250	.1363918	.019
Valid N (listwise)	16					

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance
ACS2007	16	3	5	3.69	.704	.496
ACS2008	16	3	5	3.56	.629	.396
ACS2009	16	3	5	3.44	.629	.396
ACS2010	16	3	5	3.44	.629	.396
ACS2011	16	3	5	3.50	.632	.400
ACS2012	16	3	4	3.44	.512	.262
Valid N (listwise)	16					

Descriptive Statistics							
	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance	
ACI2007	16	.6000	1.0000	.773000	.1447048	.021	
ACI2008	16	.6670	1.0000	.831313	.1396136	.019	
ACI2009	16	.6670	1.0000	.862563	.1461602	.021	
ACI2010	16	.6670	1.0000	.846938	.1438325	.021	
ACI2011	16	.6000	1.0000	.808438	.1585993	.025	
ACI2012	16	.6670	1.0000	.854250	.1535506	.024	
Valid N (listwise)	16						

Descriptive Statistics													
	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance							
BM2007	16	4	17	10.56	4.211	17.729							
BM2008	16	4	15	10.00	3.286	10.800							
BM2009	16	4	24	10.13	4.938	24.383							
BM2010	16	5	21	10.75	4.171	17.400							
BM2011	16	4	22	10.56	5.006	25.062							
BM2012	16	4	18	10.56	3.558	12.663							
Valid N (listwise)	16												

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance
LEV2007	16	.3214	.9287	.621060	.2087073	.044
LEV2008	16	.3625	.9301	.660275	.2107762	.044
LEV2009	16	.3531	.9406	.666699	.2265416	.051
LEV2010	16	.3847	.9688	.653919	.2066200	.043
LEV2011	16	.3433	.9349	.678873	.2090244	.044
LEV2012	16	.3208	.9432	.671830	.2150456	.046
Valid N (listwise)	16					

Descriptive Statistics

	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance
FS2007	16	8.5213	11.4094	10.137713	.7644300	.584
FS2008	16	8.9603	11.4299	10.201800	.6860590	.471
FS2009	16	8.9744	11.4924	10.222706	.6977085	.487
FS2010	16	9.0451	11.5272	10.284563	.6822231	.465
FS2011	16	9.0957	11.6547	10.337419	.6902349	.476
FS2012	16	9.3122	11.6945	10.408069	.6601485	.436
Valid N (listwise)	16					

Descriptive Statistics													
	Ν	Minimum	Maximum	Mean	Std. Deviation	Variance							
CF2007	16	7.5688	10.5752	9.261175	.8415098	.708							
CF2008	16	7.7571	10.4416	9.209738	.8469149	.717							
CF2009	16	7.2580	10.4290	9.206244	.8343478	.696							
CF2010	16	8.1104	10.4665	9.352844	.6870373	.472							
CF2011	16	8.2214	10.6251	9.349500	.7153630	.512							
CF2012	16	8.0926	10.7078	9.385869	.7057055	.498							
Valid N (listwise)	16												

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
SPR2007	16	0113	.1223	.027478	.0364688	.001
SPR2008	16	0898	.0493	039229	.0321846	.001
SPR2009	16	0292	.1775	.033864	.0469107	.002
SPR2010	16	0188	.0455	.018938	.0218879	.000
SPR2011	16	0341	.0478	.007538	.0216750	.000
SPR2012	16	0427	.0498	.007474	.0251437	.001
Valid N (listwise)	16					

	Correlations													
			BS2007	BI2007	ACS2007	ACI2007	BM2007	LEV2007	FS2007	CF2007	SP2007			
		Correlation Coefficient	1.000	.023	.730**	147	.683**	105	.424	.457	562*			
	BS2007	Sig. (2-tailed)		.934	.001	.587	.004	.699	.102	.075	.023			
		Ν	16	16	16	16	16	16	16	16	16			
		Correlation Coefficient	.023	1.000	.199	.335	094	.217	.245	.064	388			
	BI2007	Sig. (2-tailed)	.934		.460	.205	.730	.420	.361	.814	.138			
		Ν	16	16	16	16	16	16	16	16	16			
	ACS2007	Correlation Coefficient	.730***	.199	1.000	259	.692**	050	.433	.259	402			
		Sig. (2-tailed)	.001	.460		.333	.003	.854	.094	.332	.123			
		Ν	16	16	16	16	16	16	16	16	16			
Spaarman's rho	ACI2007	Correlation Coefficient	147	.335	259	1.000	388	.172	012	200	126			
Spearman's mo		Sig. (2-tailed)	.587	.205	.333		.138	.524	.964	.459	.642			
		Ν	16	16	16	16	16	16	16	16	16			
		Correlation Coefficient	.683**	094	.692**	388	1.000	.159	.592*	.567*	328			
	BM2007	Sig. (2-tailed)	.004	.730	.003	.138		.556	.016	.022	.215			
		Ν	16	16	16	16	16	16	16	16	16			
		Correlation Coefficient	105	.217	050	.172	.159	1.000	.553*	.471	081			
	LEV2007	Sig. (2-tailed)	.699	.420	.854	.524	.556		.026	.066	.766			
		Ν	16	16	16	16	16	16	16	16	16			
	ES2007	Correlation Coefficient	.424	.245	.433	012	$.592^{*}$.553*	1.000	.885**	369			
	FS2007	Sig. (2-tailed)	.102	.361	.094	.964	.016	.026		.000	.159			

										_
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	.457	.064	.259	200	$.567^{*}$.471	.885**	1.000	250
CF2007	Sig. (2-tailed)	.075	.814	.332	.459	.022	.066	.000		.350
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	562*	388	402	126	328	081	369	250	1.000
SP2007	Sig. (2-tailed)	.023	.138	.123	.642	.215	.766	.159	.350	
	Ν	16	16	16	16	16	16	16	16	16

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations												
			BS2008	BI2008	ACS2008	ACI2008	BM2008	LEV2008	FS2008	CF2008	SP2008	
		Correlation Coefficient	1.000	.132	.520*	.520*	.714**	279	.410	.496	210	
	BS2008	Sig. (2-tailed)		.627	.039	.039	.002	.296	.115	.051	.434	
		Ν	16	16	16	16	16	16	16	16	16	
	BI2008	Correlation Coefficient	.132	1.000	.007	.035	.192	.037	.118	132	.021	
		Sig. (2-tailed)	.627		.980	.898	.475	.891	.663	.627	.939	
		Ν	16	16	16	16	16	16	16	16	16	
	ACS2008	Correlation Coefficient	$.520^{*}$.007	1.000	123	.537*	358	.281	.418	016	
		Sig. (2-tailed)	.039	.980	•	.649	.032	.173	.293	.108	.954	
Spaarman's rho		Ν	16	16	16	16	16	16	16	16	16	
Spearman's mo		Correlation Coefficient	.520*	.035	123	1.000	.227	051	.349	.394	146	
	ACI2008	Sig. (2-tailed)	.039	.898	.649		.398	.850	.185	.131	.590	
		Ν	16	16	16	16	16	16	16	16	16	
		Correlation Coefficient	.714**	.192	$.537^{*}$.227	1.000	.018	.572*	.546*	276	
	BM2008	Sig. (2-tailed)	.002	.475	.032	.398		.948	.021	.029	.300	
		Ν	16	16	16	16	16	16	16	16	16	
		Correlation Coefficient	279	.037	358	051	.018	1.000	.435	.371	244	
	LEV2008	Sig. (2-tailed)	.296	.891	.173	.850	.948		.092	.158	.361	
	-	Ν	16	16	16	16	16	16	16	16	16	

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	Correlation Coefficient	.410	.118	.281	.349	.572*	.435	1.000	.915**	533*
FS2008	Sig. (2-tailed)	.115	.663	.293	.185	.021	.092		.000	.033
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	.496	132	.418	.394	$.546^{*}$.371	.915**	1.000	468
CF2008	Sig. (2-tailed)	.051	.627	.108	.131	.029	.158	.000		.067
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	210	.021	016	146	276	244	533*	468	1.000
SP2008	Sig. (2-tailed)	.434	.939	.954	.590	.300	.361	.033	.067	•
	Ν	16	16	16	16	16	16	16	16	16

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations													
			BS2009	BI2009	ACS2009	ACI2009	BM2009	LEV2009	FS2009	CF2009	SP2009		
		Correlation Coefficient	1.000	.300	.437	036	.545*	.045	.221	.380	.483		
	BS2009	Sig. (2-tailed)		.259	.091	.895	.029	.868	.410	.147	.058		
		Ν	16	16	16	16	16	16	16	16	16		
		Correlation Coefficient	.300	1.000	.023	079	.257	.223	.245	.259	335		
	BI2009	Sig. (2-tailed)	.259		.931	.771	.336	.406	.360	.333	.205		
		Ν	16	16	16	16	16	16	16	16	16		
	ACS2009	Correlation Coefficient	.437	.023	1.000	243	.187	393	026	.041	.189		
		Sig. (2-tailed)	.091	.931		.364	.489	.132	.924	.879	.484		
		Ν	16	16	16	16	16	16	16	16	16		
Smaarman's rho		Correlation Coefficient	036	079	243	1.000	311	250	286	194	162		
Spearman's mo	ACI2009	Sig. (2-tailed)	.895	.771	.364		.241	.351	.283	.472	.548		
		Ν	16	16	16	16	16	16	16	16	16		
		Correlation Coefficient	.545*	.257	.187	311	1.000	.055	.288	.264	.135		
	BM2009	Sig. (2-tailed)	.029	.336	.489	.241		.841	.280	.323	.618		
		Ν	16	16	16	16	16	16	16	16	16		
		Correlation Coefficient	.045	.223	393	250	.055	1.000	.400	.544*	.202		
	LEV2009	Sig. (2-tailed)	.868	.406	.132	.351	.841		.125	.029	.454		
		Ν	16	16	16	16	16	16	16	16	16		
	E\$2000	Correlation Coefficient	.221	.245	026	286	.288	.400	1.000	.900**	.369		
	FS2009	Sig. (2-tailed)	.410	.360	.924	.283	.280	.125		.000	.159		

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	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	.380	.259	.041	194	.264	.544*	.900**	1.000	.446
CF2009	Sig. (2-tailed)	.147	.333	.879	.472	.323	.029	.000		.083
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	.483	335	.189	162	.135	.202	.369	.446	1.000
SP2009	Sig. (2-tailed)	.058	.205	.484	.548	.618	.454	.159	.083	
	Ν	16	16	16	16	16	16	16	16	16

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations													
			BS2010	BI2010	ACS2010	ACI2010	BM2010	LEV2010	FS2010	CF2010	SP2010		
		Correlation Coefficient	1.000	.313	.659**	.212	.328	.061	.548*	.566*	353		
	BS2010	Sig. (2-tailed)		.237	.006	.430	.215	.821	.028	.022	.180		
		Ν	16	16	16	16	16	16	16	16	16		
	BI2010	Correlation Coefficient	.313	1.000	005	.469	098	068	.314	.264	.107		
		Sig. (2-tailed)	.237		.985	.067	.718	.802	.236	.323	.694		
		Ν	16	16	16	16	16	16	16	16	16		
	ACS2010	Correlation Coefficient	.659**	005	1.000	325	.357	057	.362	.388	.010		
		Sig. (2-tailed)	.006	.985		.220	.175	.834	.168	.138	.970		
		Ν	16	16	16	16	16	16	16	16	16		
Spaarman's rho		Correlation Coefficient	.212	.469	325	1.000	137	.207	.169	.147	.061		
Spearman's mo	ACI2010	Sig. (2-tailed)	.430	.067	.220		.612	.443	.531	.587	.822		
		Ν	16	16	16	16	16	16	16	16	16		
		Correlation Coefficient	.328	098	.357	137	1.000	.252	.052	.061	157		
	BM2010	Sig. (2-tailed)	.215	.718	.175	.612		.346	.849	.823	.561		
		Ν	16	16	16	16	16	16	16	16	16		
		Correlation Coefficient	.061	068	057	.207	.252	1.000	.476	.382	356		
	LEV2010	Sig. (2-tailed)	.821	.802	.834	.443	.346		.062	.144	.176		
		Ν	16	16	16	16	16	16	16	16	16		
	ES2010	Correlation Coefficient	.548*	.314	.362	.169	.052	.476	1.000	.968**	355		
	FS2010	Sig. (2-tailed)	.028	.236	.168	.531	.849	.062		.000	.178		

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	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	.566*	.264	.388	.147	.061	.382	.968**	1.000	364
CF2010	Sig. (2-tailed)	.022	.323	.138	.587	.823	.144	.000		.166
	Ν	16	16	16	16	16	16	16	16	16
	Correlation Coefficient	353	.107	.010	.061	157	356	355	364	1.000
SP2010	Sig. (2-tailed)	.180	.694	.970	.822	.561	.176	.178	.166	
	Ν	16	16	16	16	16	16	16	16	16

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

	Correlations										
			BS2011	BI2011	ACS2011	ACI2011	BM2011	LEV2011	FS2011	CF2011	SP2011
		Correlation Coefficient	1.000	.084	.431	.427	.531*	.022	.403	.368	405
	BS2011	Sig. (2-tailed)		.757	.095	.099	.035	.934	.122	.160	.119
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.084	1.000	.348	.307	214	049	.246	.177	.164
	BI2011	Sig. (2-tailed)	.757		.186	.248	.426	.858	.358	.512	.545
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.431	.348	1.000	026	.335	216	.268	.241	.017
	ACS2011	Sig. (2-tailed)	.095	.186		.923	.205	.422	.316	.369	.951
		Ν	16	16	16	16	16	16	16	16	16
Smaarman's rho		Correlation Coefficient	.427	.307	026	1.000	058	.176	.104	019	435
Spearman's mo	ACI2011	Sig. (2-tailed)	.099	.248	.923		.830	.514	.703	.946	.092
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.531*	214	.335	058	1.000	.245	.217	.152	397
	BM2011	Sig. (2-tailed)	.035	.426	.205	.830		.360	.419	.573	.128
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.022	049	216	.176	.245	1.000	.418	.379	.099
	LEV2011	Sig. (2-tailed)	.934	.858	.422	.514	.360		.107	.147	.716
		Ν	16	16	16	16	16	16	16	16	16
	ES2011	Correlation Coefficient	.403	.246	.268	.104	.217	.418	1.000	.918**	088
	F52011	Sig. (2-tailed)	.122	.358	.316	.703	.419	.107		.000	.745

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	Ν	16	16	16	16	16	16	16	16	16	
	Correlation Coefficient	.368	.177	.241	019	.152	.379	.918**	1.000	013	
CF2011	Sig. (2-tailed)	.160	.512	.369	.946	.573	.147	.000		.961	
	Ν	16	16	16	16	16	16	16	16	16	
	Correlation Coefficient	405	.164	.017	435	397	.099	088	013	1.000	
SP2011	Sig. (2-tailed)	.119	.545	.951	.092	.128	.716	.745	.961		
	Ν	16	16	16	16	16	16	16	16	16	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

	Correlations										
	BS2012 BI2012 ACS2012 ACI2012 BM2012 LEV2012 FS2012 CF2012 SP20										
		Correlation Coefficient	1.000	.054	.642**	.375	.224	212	.446	.548*	140
	BS2012	Sig. (2-tailed)		.844	.007	.152	.405	.431	.083	.028	.606
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.054	1.000	.192	.465	.237	.162	.192	.151	.058
	BI2012	Sig. (2-tailed)	.844		.476	.069	.376	.548	.476	.578	.832
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.642**	.192	1.000	.119	.385	314	.205	.342	014
	ACS2012	Sig. (2-tailed)	.007	.476		.661	.141	.236	.446	.195	.960
		Ν	16	16	16	16	16	16	16	16	16
Spaarman's rho		Correlation Coefficient	.375	.465	.119	1.000	.013	.307	.415	.352	259
Spearman's mo	ACI2012	Sig. (2-tailed)	.152	.069	.661		.962	.248	.110	.182	.333
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	.224	.237	.385	.013	1.000	.077	.167	.278	039
	BM2012	Sig. (2-tailed)	.405	.376	.141	.962		.777	.536	.297	.885
		Ν	16	16	16	16	16	16	16	16	16
		Correlation Coefficient	212	.162	314	.307	.077	1.000	.435	.238	.056
	LEV2012	Sig. (2-tailed)	.431	.548	.236	.248	.777		.092	.374	.837
		Ν	16	16	16	16	16	16	16	16	16
	E\$2012	Correlation Coefficient	.446	.192	.205	.415	.167	.435	1.000	.935**	.365
	FS2012	Sig. (2-tailed)	.083	.476	.446	.110	.536	.092		.000	.165

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	Ν	16	16	16	16	16	16	16	16	16	
	Correlation Coefficient	.548*	.151	.342	.352	.278	.238	.935**	1.000	.396	
CF2012	Sig. (2-tailed)	.028	.578	.195	.182	.297	.374	.000		.129	
	Ν	16	16	16	16	16	16	16	16	16	
	Correlation Coefficient	140	.058	014	259	039	.056	.365	.396	1.000	
SP2012	Sig. (2-tailed)	.606	.832	.960	.333	.885	.837	.165	.129		
	Ν	16	16	16	16	16	16	16	16	16	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Multiple Linear Regression (SPR)

	Model Summary										
Model	R	R Square	Adjusted R	Std. Error of the							
			Square	Estimate							
1	.702 ^a	.493	.050	.0355431							

a. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

ANOVA ^a	
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Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.010	7	.001	1.113	.437 ^b
1	Residual	.010	8	.001		
	Total	.020	15			

a. Dependent Variable: SPR2007

b. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

			Coefficients ^a				
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinea Statisti	rity cs
	В	Std. Error	Beta			Tolerance	VIF
(Constant)	.203	.186		1.090	.307		
BS2007	010	.009	409	- 1.065	.318	.429	2.331
BI2007	166	.099	506	- 1.674	.133	.694	1.441
¹ ACS2007	.005	.022	.094	.225	.827	.362	2.765
ACI2007	.037	.078	.145	.470	.651	.667	1.499
BM2007	002	.004	230	488	.638	.287	3.490
LEV2007	.012	.070	.070	.174	.867	.392	2.549
FS2007	004	.022	082	182	.860	.307	3.254

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the
			Square	Estimate
1	.511 ^a	.261	385	.0378827

a. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.004	7	.001	.404	.875 ^b
1	Residual	.011	8	.001		
	Total	.016	15			

a. Dependent Variable: SPR2008

b. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

	Coefficients ^a										
Model	Unstanda Coeffic	rdized ients	Standardized Coefficients	t	Sig.	Collinea Statisti	rity cs				
	В	Std. Error	Beta			Tolerance	VIF				
(Constant)	.041	.184		.222	.830						
BS2008	014	.014	689	- 1.018	.338	.202	4.962				
BI2008	.000	.087	.000	001	.999	.910	1.098				
1 ACS2008	.034	.034	.656	.979	.356	.205	4.868				
ACI2008	.092	.122	.399	.754	.472	.331	3.025				
BM2008	2.911E-005	.005	.003	.006	.995	.376	2.663				
LEV2008	023	.077	149	296	.774	.364	2.749				
FS2008	013	.026	277	495	.634	.296	3.384				

Model Summary

			V		
Model	R	R Square	Adjusted R	Std. Error of the	
			Square	Estimate	
1	.607 ^a	.369	184	.0510443	

a. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.012	7	.002	.667	.697 ^b
1	Residual	.021	8	.003		
	Total	.033	15			

a. Dependent Variable: SPR2009

b. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

	Coefficients ^a										
Model	Unst	andardized	Standardized	t	Sig.	Collinea	rity				
	Coefficients		Coefficients			Statisti	cs				
	В	Std. Error	Beta			Tolerance	VIF				
(Constant)	.064	.317		.202	.845						
BS2009	.017	.014	.670	1.249	.247	.274	3.647				
BI2009	120	.114	304	- 1.053	.323	.949	1.054				
1 ACS2009	011	.039	145	277	.789	.285	3.504				
ACI2009	120	.135	373	889	.400	.449	2.226				
BM2009	004	.004	379	823	.435	.373	2.683				
LEV2009	.014	.085	.068	.166	.872	.467	2.139				
FS2009	.003	.025	.049	.130	.900	.551	1.816				

Model Summary

Model	R	R R Square Adjusted R		Std. Error of the
			Square	Estimate
1	.865 ^a	.749	.529	.0150138

a. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.005	7	.001	3.411	.053 ^b
1	Residual	.002	8	.000		
	Total	.007	15			

a. Dependent Variable: SPR2010

b. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

Coefficients ^a										
Model	Unst	andardized	Standardized	t	Sig.	Collinea	.rity			
	Cor	efficients	Coefficients			Statisti	cs			
	В	Std. Error	Beta			Tolerance	VIF			
(Constant)	168	.090		- 1.867	.099					
BS2010	016	.004	-1.631	- 4.335	.002	.221	4.515			
BI2010	.013	.039	.076	.339	.743	.623	1.605			
1 ACS2010	.053	.013	1.530	4.138	.003	.230	4.356			
ACI2010	.143	.046	.938	3.076	.015	.337	2.967			
BM2010	.001	.001	.152	.707	.499	.677	1.476			
LEV2010	046	.030	438	- 1.538	.163	.386	2.588			
FS2010	.005	.009	.147	.529	.611	.407	2.458			

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the
			Square	Estimate
1	.836 ^a	.698	.434	.0163006

a. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.005	7	.001	2.646	.098 ^b
1	Residual	.002	8	.000		
	Total	.007	15			

a. Dependent Variable: SPR2011

b. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

Coefficients									
Model	Unsta Coe	andardized	Standardized Coefficients	t	Sig.	Collinea Statisti	rity cs		
	В	Std. Error	Beta			Tolerance	VIF		
(Constant)	.139	.077		1.809	.108				
BS2011	.004	.003	.402	1.287	.234	.386	2.592		
BI2011	.076	.039	.480	1.950	.087	.621	1.610		
ACS2011	.000	.009	.007	.026	.980	.550	1.817		
ACI2011	138	.037	-1.010	- 3.750	.006	.520	1.924		
BM2011	003	.001	587	- 2.070	.072	.469	2.133		
LEV2011	.077	.032	.746	2.457	.040	.408	2.448		
FS2011	012	.009	389	- 1.298	.231	.420	2.381		

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the	
			Square	Estimate	
1	.667 ^a	.446	040	.0256377	

a. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012,

ACI2012, LEV2012, BS2012

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.004	7	.001	.918	.538 ^b
1	Residual	.005	8	.001		
	Total	.009	15			

a. Dependent Variable: SPR2012

b. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012, ACI2012, LEV2012, BS2012

	Coefficients ^a									
Model	Unsta Cor	andardized efficients	Standardized Coefficients	t	Sig.	Collinea Statisti	rity cs			
	В	Std. Error	Beta			Tolerance	VIF			
(Constant)	206	.120		1.715	.125					
BS2012	002	.005	189	475	.647	.438	2.283			
BI2012	.039	.059	.210	.652	.533	.671	1.490			
ACS2012	007	.019	135	345	.739	.454	2.204			
ACI2012	058	.059	356	981	.355	.525	1.904			
BM2012	001	.002	134	444	.669	.759	1.317			
LEV2012	050	.045	424	- 1.100	.303	.467	2.140			
FS2012	.032	.014	.833	2.260	.054	.511	1.958			

Multiple Linear Regression (CF)

Model Summary ^b							
Model	R	R Square	Adjusted R	Std. Error of the			
			Square	Estimate			
1	.967 ^a	.935	.879	.2930761			

a. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007,

ACS2007, LEV2007, BM2007

b. Dependent Variable: CF2007

ANOVA"							
Model		Sum of Squares	df	Mean Square	F	Sig.	
	Regression	9.935	7	1.419	16.524	.000 ^b	
1	Residual	.687	8	.086			
	Total	10.622	15				

a. Dependent Variable: CF2007

b. Predictors: (Constant), FS2007, BI2007, BS2007, ACI2007, ACS2007, LEV2007, BM2007

			Coefficients ^a			
Model		Unstandardize	d Coefficients	Standardized	t	Sig.
				Coefficients		
		В	Std. Error	Beta		
	(Constant)	929	1.533		606	.561
	BS2007	.109	.074	.201	1.465	.181
	BI2007	161	.815	021	197	.848
1	ACS2007	340	.179	284	-1.902	.094
1	ACI2007	577	.640	099	901	.394
	BM2007	.006	.034	.033	.194	.851
	LEV2007	435	.579	108	751	.474
	FS2007	1.102	.179	1.001	6.171	.000

Model Summary^b

1.20001 Summary								
Model	R	R Square	Adjusted R	Std. Error of the				
			Square	Estimate				
1	.958 ^a	.918	.846	.3322913				

a. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008,

BM2008, LEV2008, BS2008

b. Dependent Variable: CF2008

ANOVA ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.876	7	1.411	12.777	.001 ^b
1	Residual	.883	8	.110		
	Total	10.759	15			

a. Dependent Variable: CF2008

b. Predictors: (Constant), FS2008, BI2008, ACS2008, ACI2008, BM2008, LEV2008, BS2008

	Coefficients ^a							
Model		Unstandardize	d Coefficients	Standardized	t	Sig.		
				Coefficients				
		В	Std. Error	Beta				
	(Constant)	-2.955	1.613		-1.832	.104		
	BS2008	.098	.123	.178	.791	.452		
	BI2008	-1.135	.761	158	-1.491	.174		
1	ACS2008	.270	.301	.201	.899	.395		
1	ACI2008	.538	1.069	.089	.504	.628		
	BM2008	049	.043	189	-1.144	.286		
	LEV2008	.060	.675	.015	.088	.932		
	FS2008	1.066	.230	.863	4.633	.002		

Model Summary^b

niouti Summing							
Model	R	R Square	Adjusted R	Std. Error of the			
			Square	Estimate			
1	.966 ^a	.934	.876	.2932650			

a. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009,

BM2009, LEV2009, BS2009

b. Dependent Variable: CF2009

ANOVA ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	9.754	7	1.393	16.202	.000 ^b
1	Residual	.688	8	.086		
	Total	10.442	15			

a. Dependent Variable: CF2009

b. Predictors: (Constant), FS2009, ACS2009, BI2009, ACI2009, BM2009, LEV2009, BS2009

	Coefficients ^a							
Model		Unstandardize	d Coefficients	Standardized	t	Sig.		
				Coefficients				
		В	Std. Error	Beta				
	(Constant)	-2.713	1.820		-1.491	.174		
	BS2009	025	.079	054	313	.762		
	BI2009	947	.654	135	-1.449	.185		
1	ACS2009	.190	.225	.143	.842	.424		
1	ACI2009	.656	.773	.115	.849	.421		
	BM2009	.007	.025	.043	.291	.779		
	LEV2009	.943	.489	.256	1.929	.090		
	FS2009	1.047	.146	.875	7.156	.000		

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the	
			Square	Estimate	
1	.978 ^a	.956	.918	.1970732	

a. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	6.770	7	.967	24.901	.000 ^b
1	Residual	.311	8	.039		
	Total	7.080	15			

a. Dependent Variable: CF2010

b. Predictors: (Constant), FS2010, ACI2010, BM2010, BI2010, BS2010, LEV2010, ACS2010

	Coefficients ^a								
Model		Unstandardized Coefficients		Standardized	t	Sig.			
				Coefficients					
		В	Std. Error	Beta					
	(Constant)	-1.482	1.182		-1.253	.245			
	BS2010	.016	.047	.055	.346	.738			
	BI2010	862	.516	157	-1.669	.134			
1	ACS2010	035	.169	032	207	.841			
1	ACI2010	.762	.609	.160	1.251	.246			
	BM2010	.009	.015	.053	.586	.574			
	LEV2010	665	.396	200	-1.679	.132			
	FS2010	1.063	.117	1.056	9.091	.000			

Model Summary

Model	R	R R Square Adjusted R		Std. Error of the	
		*	Square	Estimate	
1	.971 ^a	.944	.895	.2322596	

a. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.245	7	1.035	19.185	.000 ^b
1	Residual	.432	8	.054		
	Total	7.676	15			

a. Dependent Variable: CF2011

b. Predictors: (Constant), FS2011, ACI2011, ACS2011, BM2011, BI2011, LEV2011, BS2011

	Coefficients ^a							
Model		Unstandardize	d Coefficients	Standardized	t	Sig.		
				Coefficients				
		В	Std. Error	Beta				
	(Constant)	568	1.098		518	.619		
	BS2011	.071	.048	.199	1.475	.178		
	BI2011	.198	.558	.038	.354	.732		
1	ACS2011	040	.128	035	312	.763		
1	ACI2011	735	.524	163	-1.401	.199		
	BM2011	026	.017	184	-1.505	.171		
	LEV2011	.148	.449	.043	.330	.750		
	FS2011	.973	.134	.939	7.259	.000		

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the	
			Square	Estimate	
1	.970 ^a	.941	.890	.2337259	

a. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012, ACI2012, LEV2012, BS2012

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	7.033	7	1.005	18.393	.000 ^b
1	Residual	.437	8	.055		
	Total	7.470	15			

a. Dependent Variable: CF2012

b. Predictors: (Constant), FS2012, BI2012, ACS2012, BM2012, ACI2012, LEV2012, BS2012

Coefficients ^a								
Model		Unstandardize	d Coefficients	Standardized	t	Sig.		
				Coefficients				
		В	Std. Error	Beta				
	(Constant)	-1.094	1.098		996	.348		
	BS2012	.040	.047	.109	.846	.422		
	BI2012	275	.540	053	509	.624		
1	ACS2012	071	.175	052	406	.695		
1	ACI2012	214	.542	047	395	.703		
	BM2012	.015	.019	.076	.775	.461		
	LEV2012	258	.411	078	627	.548		
	FS2012	1.030	.128	.964	8.052	.000		

Mann-Whitney Test (BSize)

Ranks						
	Bsize2007	Ν	Mean Rank	Sum of Ranks		
	.00	7	11.00	77.00		
CF2007	1.00	9	6.56	59.00		
	Total	16				
	.00	7	6.43	45.00		
SPR2007	1.00	9	10.11	91.00		
	Total	16				

Test Statistics ^a					
	CF2007	SPR2007			
Mann-Whitney U	14.000	17.000			
Wilcoxon W	59.000	45.000			
Z	-1.852	-1.536			
Asymp. Sig. (2-tailed)	.064	.125			
Exact Sig. [2*(1-tailed Sig.)]	.071 ^b	.142 ^b			

a. Grouping Variable: Bsize2007

b. Not corrected for ties.

Ranks						
	Bsize2008	Ν	Mean Rank	Sum of Ranks		
	.00	6	11.33	68.00		
CF2008	1.00	10	6.80	68.00		
	Total	16				
	.00	6	6.92	41.50		
SPR2008	1.00	10	9.45	94.50		
	Total	16				
Test	Statistics ^a					
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	CF2008	SPR2008
Mann-Whitney U	13.000	20.500
Wilcoxon W	68.000	41.500
Z	-1.844	-1.032
Asymp. Sig. (2-tailed)	.065	.302
Exact Sig. [2*(1-tailed	073 ^b	313 ^b
Sig.)]	.075	.515

b. Not corrected for ties.

Ranks				
	Bsize2009	Ν	Mean Rank	Sum of Ranks
	.00	6	10.83	65.00
CF2009	1.00	10	7.10	71.00
	Total	16		
	.00	6	11.17	67.00
SPR2009	1.00	10	6.90	69.00
	Total	16		

Test Statistics ^a		
	CF2009	SPR2009
Mann-Whitney U	16.000	14.000
Wilcoxon W	71.000	69.000
Z	-1.519	-1.737
Asymp. Sig. (2-tailed)	.129	.082
Exact Sig. [2*(1-tailed Sig.)]	.147 ^b	.093 ^b

a. Grouping Variable: Bsize2009

-	R	anks		
	Bsize2010	Ν	Mean Rank	Sum of Ranks
	.00	7	11.14	78.00
CF2010	1.00	9	6.44	58.00
	Total	16		
	.00	7	6.86	48.00
SPR2010	1.00	9	9.78	88.00
	Total	16		

Test Statistics^a

	CF2010	SPR2010
Mann-Whitney U	13.000	20.000
Wilcoxon W	58.000	48.000
Z	-1.958	-1.218
Asymp. Sig. (2-tailed)	.050	.223
Exact Sig. [2*(1-tailed	.055 ^b	.252 ^b
S1g.)]		

a. Grouping Variable: Bsize2010

Ranks				
	Bsize2011	Ν	Mean Rank	Sum of Ranks
	.00	7	10.29	72.00
CF2011	1.00	9	7.11	64.00
	Total	16		
	.00	7	5.71	40.00
SPR2011	1.00	9	10.67	96.00
	Total	16		

Test Statistics ^a			
	CF2011	SPR2011	
Mann-Whitney U	19.000	12.000	
Wilcoxon W	64.000	40.000	
Z	-1.323	-2.066	
Asymp. Sig. (2-tailed)	.186	.039	
Exact Sig. [2*(1-tailed Sig.)]	.210 ^b	.042 ^b	

b. Not corrected for ties.

Ranks				
	Bsize2012	Ν	Mean Rank	Sum of Ranks
	.00	5	11.20	56.00
CF2012	1.00	11	7.27	80.00
	Total	16		
	.00	5	8.40	42.00
SPR2012	1.00	11	8.55	94.00
	Total	16		

Test Statistics^a

	CF2012	SPR2012
Mann-Whitney U	14.000	27.000
Wilcoxon W	80.000	42.000
Z	-1.529	057
Asymp. Sig. (2-tailed)	.126	.955
Exact Sig. [2*(1-tailed Sig.)]	.145 ^b	1.000 ^b

a. Grouping Variable: Bsize2012

Mann-Whitney Test (ACSize)

Ranks				
	ACSize2007	Ν	Mean Rank	Sum of Ranks
	.00	14	8.50	119.00
CF2007	1.00	2	8.50	17.00
	Total	16		
	.00	14	8.54	119.50
SP2007	1.00	2	8.25	16.50
	Total	16		

Test Statistics ^a			
	CF2007	SP2007	
Mann-Whitney U	14.000	13.500	
Wilcoxon W	17.000	16.500	
Z	.000	079	
Asymp. Sig. (2-tailed)	1.000	.937	
Exact Sig. [2*(1-tailed Sig.)]	1.000 ^b	.933 ^b	

a. Grouping Variable: ACSize2007

Ranks					
	ACSzie2008	Ν	Mean Rank	Sum of Ranks	
	.00	15	8.27	124.00	
CF2008	1.00	1	12.00	12.00	
	Total	16			
	.00	15	8.77	131.50	
SPR2008	1.00	1	4.50	4.50	
	Total	16			

Test Statistics ^a				
	CF2008	SPR2008		
Mann-Whitney U	4.000	3.500		
Wilcoxon W	124.000	4.500		
Z	759	869		
Asymp. Sig. (2-tailed)	.448	.385		
Exact Sig. [2*(1-tailed Sig.)]	.625 ^b	.500 ^b		

a. Grouping Variable: ACSzie2008

b. Not corrected for ties.

Ranks					
	ACSize2009	Ν	Mean Rank	Sum of Ranks	
	.00	15	8.40	126.00	
CF2009	1.00	1	10.00	10.00	
	Total	16			
	.00	15	8.37	125.50	
SPR2009	1.00	1	10.50	10.50	
	Total	16			

Test Statistics ^a				
	CF2009	SPR2009		
Mann-Whitney U	6.000	5.500		
Wilcoxon W	126.000	125.500		
Z	325	434		
Asymp. Sig. (2-tailed)	.745	.664		
Exact Sig. [2*(1-tailed Sig.)]	.875 ^b	.750 ^b		

a. Grouping Variable: ACSize2009

Ranks					
	ACSize2010	Ν	Mean Rank	Sum of Ranks	
	.00	15	8.33	125.00	
CF2010	1.00	1	11.00	11.00	
	Total	16			
	.00	15	8.43	126.50	
SPR2010	1.00	1	9.50	9.50	
	Total	16			

Test Statistics ^a				
	CF2010	SPR2010		
Mann-Whitney U	5.000	6.500		
Wilcoxon W	125.000	126.500		
Z	542	217		
Asymp. Sig. (2-tailed)	.588	.828		
Exact Sig. [2*(1-tailed Sig.)]	.750 ^b	.875 ^b		

a. Grouping Variable: ACSize2010

Ranks					
	ACSize2011	Ν	Mean Rank	Sum of Ranks	
	.00	15	8.20	123.00	
CF2011	1.00	1	13.00	13.00	
	Total	16			
	.00	15	8.33	125.00	
SPR2011	1.00	1	11.00	11.00	
	Total	16			

Test Statistics ^a				
	CF2011	SPR2011		
Mann-Whitney U	3.000	5.000		
Wilcoxon W	123.000	125.000		
Z	976	543		
Asymp. Sig. (2-tailed)	.329	.587		
Exact Sig. [2*(1-tailed Sig.)]	.500 ^b	.750 ^b		

a. Grouping Variable: ACSize2011

b. Not corrected for ties.

Ranks					
	ACSize2012	Ν	Mean Rank	Sum of Ranks	
	.00	16	8.50	136.00	
CF2012	1.00	0^{a}	.00	.00	
	Total	16			
	.00	16	8.50	136.00	
SPR2012	1.00	0^{a}	.00	.00	
	Total	16			

a. Mann-Whitney Test cannot be performed on empty groups.

Mann-Whitney Test (BM6)

Ranks					
	BM62007	Ν	Mean Rank	Sum of Ranks	
	.00	2	4.50	9.00	
CF2007	1.00	14	9.07	127.00	
	Total	16			
	.00	2	9.00	18.00	
SPR2007	1.00	14	8.43	118.00	
	Total	16			

Test Statistics ^a				
	CF2007	SPR2007		
Mann-Whitney U	6.000	13.000		
Wilcoxon W	9.000	118.000		
Z	-1.270	159		
Asymp. Sig. (2-tailed)	.204	.874		
Exact Sig. [2*(1-tailed Sig.)]	.267 ^b	.933 ^b		

a. Grouping Variable: BM62007

Ranks					
	BM62008	Ν	Mean Rank	Sum of Ranks	
	.00	2	9.00	18.00	
CF2008	1.00	14	8.43	118.00	
	Total	16			
	.00	2	8.50	17.00	
SPR2008	1.00	14	8.50	119.00	
	Total	16			

Test Statistics ^a				
	CF2008	SPR2008		
Mann-Whitney U	13.000	14.000		
Wilcoxon W	118.000	119.000		
Z	159	.000		
Asymp. Sig. (2-tailed)	.874	1.000		
Exact Sig. [2*(1-tailed Sig.)]	.933 ^b	1.000 ^b		

b. Not corrected for ties.

Ranks				
	BM62009	Ν	Mean Rank	Sum of Ranks
	.00	3	6.33	19.00
CF2009	1.00	13	9.00	117.00
	Total	16		
	.00	3	5.67	17.00
SPR2009	1.00	13	9.15	119.00
	Total	16		

Test Statistics ^a				
	CF2009	SPR2009		
Mann-Whitney U	13.000	11.000		
Wilcoxon W	19.000	17.000		
Z	874	-1.144		
Asymp. Sig. (2-tailed)	.382	.252		
Exact Sig. [2*(1-tailed Sig.)]	.439 ^b	.296 ^b		

a. Grouping Variable: BM62009

Ranks				
	BM62010	Ν	Mean Rank	Sum of Ranks
	.00	3	6.00	18.00
CF2010	1.00	13	9.08	118.00
	Total	16		
	.00	3	12.67	38.00
SPR2010	1.00	13	7.54	98.00
	Total	16		

Test Statistics ^a				
	CF2010	SPR2010		
Mann-Whitney U	12.000	7.000		
Wilcoxon W	18.000	98.000		
Z	-1.009	-1.683		
Asymp. Sig. (2-tailed)	.313	.092		
Exact Sig. [2*(1-tailed Sig.)]	.364 ^b	.111 ^b		

Ranks				
	BM62011	Ν	Mean Rank	Sum of Ranks
	.00	3	6.33	19.00
CF2011	1.00	13	9.00	117.00
	Total	16		
	.00	3	10.67	32.00
SPR2011	1.00	13	8.00	104.00
	Total	16		

Test Statistics ^a				
	CF2011	SPR2011		
Mann-Whitney U	13.000	13.000		
Wilcoxon W	19.000	104.000		
Z	874	875		
Asymp. Sig. (2-tailed)	.382	.382		
Exact Sig. [2*(1-tailed Sig.)]	.439 ^b	.439 ^b		

b. Not corrected for ties.

Ranks				
	BM62012	Ν	Mean Rank	Sum of Ranks
	.00	1	4.00	4.00
CF2012	1.00	15	8.80	132.00
	Total	16		
	.00	1	9.00	9.00
SPR2012	1.00	15	8.47	127.00
	Total	16		

Test Statistics ^a				
	CF2012	SPR2012		
Mann-Whitney U	3.000	7.000		
Wilcoxon W	4.000	127.000		
Z	976	109		
Asymp. Sig. (2-tailed)	.329	.914		
Exact Sig. [2*(1-tailed Sig.)]	.500 ^b	1.000 ^b		

a. Grouping Variable: BM62012

Mann-Whitney Test (BM8)

Ranks				
	BM82007	Ν	Mean Rank	Sum of Ranks
	.00	5	6.40	32.00
CF2007	1.00	11	9.45	104.00
	Total	16		
	.00	5	9.20	46.00
SPR2007	1.00	11	8.18	90.00
	Total	16		

Test Statistics ^a				
	CF2007	SPR2007		
Mann-Whitney U	17.000	24.000		
Wilcoxon W	32.000	90.000		
Z	-1.190	397		
Asymp. Sig. (2-tailed)	.234	.692		
Exact Sig. [2*(1-tailed Sig.)]	.267 ^b	.743 ^b		

a. Grouping Variable: BM82007

Ranks					
	BM82008	Ν	Mean Rank	Sum of Ranks	
	.00	3	6.33	19.00	
CF2008	1.00	13	9.00	117.00	
	Total	16			
	.00	3	9.50	28.50	
SPR2008	1.00	13	8.27	107.50	
	Total	16			

Test Statistics ^a				
	CF2008	SPR2008		
Mann-Whitney U	13.000	16.500		
Wilcoxon W	19.000	107.500		
Z	874	404		
Asymp. Sig. (2-tailed)	.382	.686		
Exact Sig. [2*(1-tailed Sig.)]	.439 ^b	.704 ^b		

b. Not corrected for ties.

Ranks					
	BM82009	Ν	Mean Rank	Sum of Ranks	
	.00	5	7.00	35.00	
CF2009	1.00	11	9.18	101.00	
	Total	16			
	.00	5	6.20	31.00	
SPR2009	1.00	11	9.55	105.00	
	Total	16			

Test Statistics ^a			
	CF2009	SPR2009	
Mann-Whitney U	20.000	16.000	
Wilcoxon W	35.000	31.000	
Z	850	-1.304	
Asymp. Sig. (2-tailed)	.396	.192	
Exact Sig. [2*(1-tailed Sig.)]	.441 ^b	.221 ^b	

a. Grouping Variable: BM82009

Ranks					
	BM82010	Ν	Mean Rank	Sum of Ranks	
	.00	3	6.00	18.00	
CF2010	1.00	13	9.08	118.00	
	Total	16			
	.00	3	12.67	38.00	
SPR2010	1.00	13	7.54	98.00	
	Total	16			

Test Statistics ^a				
	CF2010	SPR2010		
Mann-Whitney U	12.000	7.000		
Wilcoxon W	18.000	98.000		
Z	-1.009	-1.683		
Asymp. Sig. (2-tailed)	.313	.092		
Exact Sig. [2*(1-tailed Sig.)]	.364 ^b	.111 ^b		

Ranks					
	BM82011	Ν	Mean Rank	Sum of Ranks	
	.00	5	6.80	34.00	
CF2011	1.00	11	9.27	102.00	
	Total	16			
	.00	5	11.80	59.00	
SPR2011	1.00	11	7.00	77.00	
	Total	16			

Test Statistics ^a				
	CF2011	SPR2011		
Mann-Whitney U	19.000	11.000		
Wilcoxon W	34.000	77.000		
Z	963	-1.871		
Asymp. Sig. (2-tailed)	.336	.061		
Exact Sig. [2*(1-tailed Sig.)]	.377 ^b	.069 ^b		

b. Not corrected for ties.

Ranks					
	BM82012	Ν	Mean Rank	Sum of Ranks	
	.00	3	8.33	25.00	
CF2012	1.00	13	8.54	111.00	
	Total	16			
	.00	3	11.33	34.00	
SPR2012	1.00	13	7.85	102.00	
	Total	16			

Test Statistics ^a			
	CF2012	SPR2012	
Mann-Whitney U	19.000	11.000	
Wilcoxon W	25.000	102.000	
Z	067	-1.144	
Asymp. Sig. (2-tailed)	.946	.252	
Exact Sig. [2*(1-tailed Sig.)]	1.000 ^b	.296 ^b	

a. Grouping Variable: BM82012

EViews Output (SPR)

Prob(F-statistic)

Dependent Variable: SPR Method: Panel Least Squares Date: 04/01/14 Time: 02:13 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96

	Coefficient	Std. Error	t-Statistic	Prob.		
С	0.090427	0.373048	0.242400	0.8091		
BS	0.013233	0.004969	2.663223	0.0095		
BI	0.030256	0.070062	0.431840	0.6671		
ACS	-0.007422	0.011696	-0.634547	0.5277		
ACI	0.000547	0.039388	0.013882	0.9890		
BM	0.001967	0.002191	0.897715	0.3723		
LEV	-0.111341	0.074079	-1.503015	0.1371		
FS	-0.013712	0.036943	-0.371182	0.7116		
Effects Specification						
Cross-section fixed (dur	nmy variables)					
R-squared	0.254664	Mean depender	nt var	0.009344		
Adjusted R-squared	0.030042	S.D. dependent	var	0.039259		
S.E. of regression	0.038665	Akaike info cri	terion	-3.462478		
Sum squared resid	0.109135	Schwarz criteri	on	-2.848103		
Log likelihood	189.1989	Hannan-Quinn	criter.	-3.214137		
F-statistic	1.133744	Durbin-Watsor	ı stat	3.073233		

0.334144

Dependent Variable: SPR Method: Panel EGLS (Cross-section random effects) Date: 04/01/14 Time: 02:16 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96 Swamy and Arora estimator of component variances

	Coefficient	Std. Error	t-Statistic	Prob.
С	0.036858	0.072336	0.509548	0.6116
BS	0.001921	0.003100	0.619834	0.5370
BI	-0.005009	0.034316	-0.145976	0.8843
ACS	-0.006760	0.009212	-0.733898	0.4650
ACI	-0.044452	0.032925	-1.350117	0.1804
BM	-0.001391	0.001218	-1.141721	0.2567
LEV	-0.010128	0.026045	-0.388882	0.6983
FS	0.003810	0.008347	0.456462	0.6492
	Effects Sp	ecification		
	Ĩ		S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.038665	1.0000
	Weighted	l Statistics		
R-squared	0.033713	Mean depender	nt var	0.009344
Adjusted R-squared	-0.043151	S.D. dependent	var	0.039259
S.E. of regression	0.040097	Sum squared re	esid	0.141487
F-statistic	0.438610	Durbin-Watsor	n stat	2.616117
Prob(F-statistic)	0.875342			
	Unweighte	ed Statistics		
R-squared	0.033713	Mean depender	nt var	0.009344
Sum squared resid	0.141487	Durbin-Watsor	n stat	2.616117

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.099240	7	0.0494

** Warning: estimated cross-section random effects variance is zero.

Cross-section	random effects	test comparisons:
		rear in the second seco

Variable	Fixed	Random	Var(Diff.)	Prob.
BS	0.013233	0.001921	0.000015	0.0036
BI	0.030256	-0.005009	0.003731	0.5637
ACS	-0.007422	-0.006760	0.000052	0.9269
ACI	0.000547	-0.044452	0.000467	0.0374
BM	0.001967	-0.001391	0.000003	0.0653
LEV	-0.111341	-0.010128	0.004809	0.1444
FS	-0.013712	0.003810	0.001295	0.6263

Cross-section random effects test equation: Dependent Variable: SPR Method: Panel Least Squares Date: 04/01/14 Time: 02:33 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96

	Coefficient	Std. Error	t-Statistic	Prob.
С	0.090427	0.373048	0.242400	0.8091
BS	0.013233	0.004969	2.663223	0.0095
BI	0.030256	0.070062	0.431840	0.6671
ACS	-0.007422	0.011696	-0.634547	0.5277
ACI	0.000547	0.039388	0.013882	0.9890
BM	0.001967	0.002191	0.897715	0.3723
LEV	-0.111341	0.074079	-1.503015	0.1371
FS	-0.013712	0.036943	-0.371182	0.7116

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.254664	Mean dependent var	0.009344
Adjusted R-squared	0.030042	S.D. dependent var	0.039259
S.E. of regression	0.038665	Akaike info criterion	-3.462478
Sum squared resid	0.109135	Schwarz criterion	-2.848103
Log likelihood	189.1989	Hannan-Quinn criter.	-3.214137
F-statistic	1.133744	Durbin-Watson stat	3.073233

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.044767	0.366195	0.122250	0.9030
C(2)	0.013233	0.004969	2.663223	0.0095
C(3)	0.030256	0.070062	0.431840	0.6671
C(4)	-0.007422	0.011696	-0.634547	0.5277
C(5)	0.000547	0.039388	0.013882	0.9890
C(6)	0.001967	0.002191	0.897715	0.3723
C(7)	-0.111341	0.074079	-1.503015	0.1371
C(8)	-0.013712	0.036943	-0.371182	0.7116
C(9)	-0.064447	0.034729	-1.855705	0.0675
C(10)	0.012384	0.022486	0.550738	0.5835
C(11)	-0.062231	0.048623	-1.279867	0.2046
C(12)	0.043277	0.034255	1.263377	0.2105
C(13)	0.018101	0.042814	0.422791	0.6737
C(14)	0.004000	0.052742	0.075836	0.9398
C(15)	-0.010429	0.038839	-0.268524	0.7891
C(16)	0.094499	0.030435	3.104926	0.0027
C(17)	-0.011667	0.004514	-2.584409	0.0118
C(18)	0.083945	0.034517	2.432016	0.0175
C(19)	-0.000212	0.049248	-0.004295	0.9966
C(20)	0.082489	0.038302	2.153634	0.0346
C(21)	0.065082	0.053198	1.223397	0.2251
C(22)	0.052953	0.058368	0.907234	0.3673
C(23)	0.131141	0.053670	2.443481	0.0170
R-squared	0.254664	Mean depender	nt var	0.009344
Adjusted R-squared	0.030042	S.D. dependent var		0.039259
S.E. of regression	0.038665	Akaike info criterion		-3.462478
Sum squared resid	0.109135	Schwarz criterion		-2.848103
Log likelihood	189.1989	Hannan-Quinn	criter.	-3.214137
F-statistic	1.133744	Durbin-Watson	ı stat	3.073233
Prob(F-statistic)	0.334144			

Wald Test: Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	1.442695	(15, 73)	0.1510
Chi-square	21.64042	15	0.1176

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(9)	-0.064447	0.034729
C(10)	0.012384	0.022486
C(11)	-0.062231	0.048623
C(12)	0.043277	0.034255
C(13)	0.018101	0.042814
C(14)	0.004000	0.052742
C(15)	-0.010429	0.038839
C(16)	0.094499	0.030435
C(17)	-0.011667	0.004514
C(18)	0.083945	0.034517
C(19)	-0.000212	0.049248
C(20)	0.082489	0.038302
C(21)	0.065082	0.053198
C(22)	0.052953	0.058368
C(23)	0.131141	0.053670

Dependent Variable: SPR? Method: Pooled Least Squares Date: 04/04/14 Time: 00:53 Sample: 2007 2012 Included observations: 96 Cross-sections included: 16 Total pool (unbalanced) observations: 96

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	0.036858	0.075015	0.491347	0.6244
BS?	0.001921	0.003215	0.597693	0.5516
BI?	-0.005009	0.035587	-0.140762	0.8884
ACS?	-0.006760	0.009553	-0.707682	0.4810
ACI?	-0.044452	0.034145	-1.301891	0.1964
BM?	-0.001391	0.001263	-1.100939	0.2739
LEV?	-0.010128	0.027010	-0.374991	0.7086
FS?	0.003810	0.008656	0.440157	0.6609
R-squared	0.033713	Mean depender	nt var	0.009344
Adjusted R-squared	-0.043151	S.D. dependent	var	0.039259
S.E. of regression	0.040097	Akaike info criterion		-3.515353
Sum squared resid	0.141487	Schwarz criterion		-3.301657
Log likelihood	176.7369	Hannan-Quinn criter.		-3.428973
F-statistic	0.438610	Durbin-Watson	stat	2.616117
Prob(F-statistic)	0.875342			

EViews Output (CF)

Dependent Variable: CF Method: Panel Least Squares Date: 04/01/14 Time: 12:56 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96

	Coefficient	Std. Error	t-Statistic	Prob.	
С	1.291713	1.886894	0.684571	0.4958	
BS	0.023585	0.025133	0.938421	0.3511	
BI	0.129126	0.354376	0.364375	0.7166	
ACS	0.014588	0.059160	0.246578	0.8059	
ACI	-0.180937	0.199227	-0.908195	0.3668	
BM	0.012915	0.011084	1.165168	0.2477	
LEV	-0.517332	0.374692	-1.380686	0.1716	
FS	0.781653	0.186858	4.183144	0.0001	
Effects Specification					
Cross-section fixed (dum	my variables)				
R-squared	0.948811	Mean depender	nt var	9.294221	
Adjusted R-squared	0.933384	S.D. dependent	var	0.757726	
S.E. of regression	0.195570	Akaike info cri	terion	-0.220519	
Sum squared resid	2.792075	Schwarz criteri	on	0.393856	
Log likelihood	33.58492	Hannan-Quinn criter.		0.027821	
F-statistic	61.50360	Durbin-Watson	n stat	2.085878	
Prob(F-statistic)	0.000000				

Dependent Variable: CF Method: Panel EGLS (Cross-section random effects) Date: 04/01/14 Time: 12:57 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96 Swamy and Arora estimator of component variances

	Coefficient	Std. Error	t-Statistic	Prob.
С	-1.058000	0.681072	-1.553433	0.1239
BS	0.024900	0.020057	1.241463	0.2177
BI	-0.215514	0.263688	-0.817306	0.4160
ACS	0.013074	0.052960	0.246866	0.8056
ACI	-0.185958	0.186619	-0.996458	0.3218
BM	0.002865	0.008706	0.329134	0.7428
LEV	-0.198784	0.226060	-0.879343	0.3816
FS	1.017023	0.077489	13.12480	0.0000
	Effects Sp	ecification		
			S.D.	Rho
Cross-section random			0.155439	0.3871
Idiosyncratic random			0.195570	0.6129
	Weighted	Statistics		
R-squared	0.750755	Mean depender	nt var	4.246541
Adjusted R-squared	0.730928	S.D. dependent	tvar	0.389565
S.E. of regression	0.202076	Sum squared re	esid	3.593451
F-statistic	37.86652	Durbin-Watsor	n stat	1.586883
Prob(F-statistic)	0.000000			
	Unweighte	ed Statistics		
R-squared	0.889603	Mean depender	nt var	9.294221
Sum squared resid	6.021529	Durbin-Watsor	n stat	0.947000

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.952294	7	0.0733

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
BS	0.023585	0.024900	0.000229	0.9308
BI	0.129126	-0.215514	0.056051	0.1455
ACS	0.014588	0.013074	0.000695	0.9542
ACI	-0.180937	-0.185958	0.004864	0.9426
BM	0.012915	0.002865	0.000047	0.1430
LEV	-0.517332	-0.198784	0.089291	0.2864
FS	0.781653	1.017023	0.028911	0.1663

Cross-section random effects test equation: Dependent Variable: CF Method: Panel Least Squares Date: 04/01/14 Time: 12:58 Sample: 2007 2012 Periods included: 6 Cross-sections included: 16 Total panel (balanced) observations: 96

Coefficient	Std. Error	t-Statistic	Prob.
1.291713	1.886894	0.684571	0.4958
0.023585	0.025133	0.938421	0.3511
0.129126	0.354376	0.364375	0.7166
0.014588	0.059160	0.246578	0.8059
-0.180937	0.199227	-0.908195	0.3668
0.012915	0.011084	1.165168	0.2477
-0.517332	0.374692	-1.380686	0.1716
0.781653	0.186858	4.183144	0.0001
	Coefficient 1.291713 0.023585 0.129126 0.014588 -0.180937 0.012915 -0.517332 0.781653	CoefficientStd. Error1.2917131.8868940.0235850.0251330.1291260.3543760.0145880.059160-0.1809370.1992270.0129150.011084-0.5173320.3746920.7816530.186858	CoefficientStd. Errort-Statistic1.2917131.8868940.6845710.0235850.0251330.9384210.1291260.3543760.3643750.0145880.0591600.246578-0.1809370.199227-0.9081950.0129150.0110841.165168-0.5173320.374692-1.3806860.7816530.1868584.183144

Effects Specification

Cross-section fixed (dummy variables)

R-squared Adjusted R-squared S.E. of regression Sum squared resid	0.948811 0.933384 0.195570 2.792075	Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion	9.294221 0.757726 -0.220519 0.393856
Log likelihood	33.58492	Hannan-Quinn criter.	0.027821
F-statistic	61.50360	Durbin-Watson stat	2.085878

Prob(F-statistic)

0.000000