

THE IMPACT OF BOARD GOVERNANCE ON
PERFORMANCE OF CONSUMER PRODUCT
SECTOR IN MALAYSIA

BY

CHAN WEI PENG
CHAN WEI YEN
LIM KOH YEW
MELISA CHUA YONG TAI
THAM PEI YU

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DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
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Name of Student:	Student ID:	Signature:
1. Chan Wei Peng	12ABB02520	_____
2. Chan Wei Yen	12ABB02518	_____
3. Lim Koh Yew	11ABB02595	_____
4. Melisa Chua Yong Tai	12ABB02532	_____
5. Tham Pei Yu	13ABB02868	_____

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LIST OF ABBREVIATIONS

ACGA	Asian Corporate Governance Association
BI	Board Independence
BM	Board Meeting
BOD	Board of Director
BPLM	Breusch and Pagon Lagrange Multiple
BS	Board Size
CCG	Code of Corporate Governance
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CGC	Corporate Governance Committee
CLRC	Corporate Law Reform Committee
CLT	Central Limit Theorem
CMDP	Capital Market Development Funds
CMP	Capital Market Master Plan
CMSA	Capital Markets Services Act
CNLRM	Classical Normal Linear Regression Model
COO	Chief Operations Officer
CPG	Consumer Packaged Goods
CSE	Colombo Stock Exchange
CSRC	China Securities Regulatory Commission

DY	Dividend Yield
EBIT	Earnings before Interest and Tax
E-views	Electronic View
F&B	Food and Beverage
FEM	Fixed Effects Model
FL	Firm Liquidity
FP	Firm Profitability
FS	Firm Size
FSMP	Financial Sector Master Plan
GCC	Gulf Cooperation Council
GLS	Generalized Least Squares
HOSE	Ho Chi Minh City Stock Exchange
ISE	Istanbul Stock Exchange
JB	Jarque-Bera
LM	Lagrange Multiple
LSDV	Least Square Dummy Variable
MCCG	Malaysia Code of Corporate Governance
MSWG	Minority Shareholder Watchdog Group
MTBV	Market-to-Book Value
MVA	Market Value Added
NSE	Nigerian Stock Exchange
OLS	Ordinary Least Squares
OTC	Over-the-counter

PDF	Profitability Distribution Function
PM	Profit Margin
REM	Random Effects Model
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
SC	Securities Commission
SET	Stock Exchange of Thailand
SOE	State-Owned Enterprise
SOX	Sarbanes-Oxley Act
SSS	Slower-same sales
TOL	Tolerance
TQ	Tobin's Q
UAE	United Arab Emirates
U.K.	United Kingdom
U.S.	United States
VAIC	Value added intellectual coefficient
VIF	Variance Inflation Factor
WLS	Weighted Least Squares

PREFACE

This research project is submitted in partial fulfillment of Bachelor of Finance (HONS). In this research, the project supervisor is Dr. Zuriawarti Binti Zakaria. This final year project is made solely by the authors however it is based on the researches of others and sources are quoted in references.

There are many of researches and studies conclude their research on the corporate governance but only few of the researchers do the research on investigating the variables that able to affect the corporate governance on firm performance among Malaysia's consumer product of public listed companies. Researcher is interested to have deep understanding and knowledge about the variables that influences the firm performance of corporate governance. Thus, the title chosen is "The Impact of Board Governance on Performance of Consumer Product Sector in Malaysia".

This research had been done successfully due to researchers' curiosity and motivation from many parties. It has been conducted so that researcher can gain more knowledge about the firm performance in consumer product sector in Malaysia. Besides, it will be helpful in future career.

ABSTRACT

This research project objective is to examine the impact of board governance on firm performance in Malaysia consumer product sector from year 2010 to year 2014. This project study the relationship between the board size, board independence and board meeting to the firm performance. Firm size, firm profitability and firm liquidity are the control variables to test the correlation on the effect of the firm performance in consumer product sector in Malaysia. Two models are being form in this research with using two different dependence variables, which are Return on Assets and Tobin's Q.

The findings of this research show that board size and board independence have positive impact on the firm performance which is using the proxy of Return on Assets but insignificant on the Tobin's Q. Meanwhile, board meeting shows an insignificant result towards Return on Assets but significant result towards Tobin's Q. These results contributed to companies, policy makers, shareholders/investors, academicians and future researchers.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This research investigates the impact of board governance on performance of consumer product sector in Malaysia. Firstly, in this chapter, the study will highlight the background of the corporate governance and board governance. Secondly, based on the research background, the study has come out with several problem statements for this research. Research objectives and research questions are identified on how the research will be carried out. Lastly, the significance of study will be discussed in this chapter.

1.1 Background of Research

1.1.1 Overview of Corporate Governance from Foreign Countries

The structure and the relationship which determines the direction and the performance of a corporate is known as corporate governance. The understanding of the purpose of a corporate is at the core of any understanding of the issue raises in the corporate governance dialogue (Mitchell, 2009, p. xii). According to McRitchie (1999), under corporate governance, board of directors (BOD) is the central to corporate governance which have a typical relationship among the shareholders and management of the corporate. Corporate governance framework also relies on the legal, regulatory, institutional and ethical environment of the community. In other way, corporate structure is relating to how shareholders gain in their investment in the corporation. Therefore, corporate governance is very important in order to govern a

corporation and BOD is the key factor on a corporate decision and performance as well as being the middle person between shareholders and managers.

In Hong Kong, shareholders and the creditors get the strongest protection as compared to the other type of legal regime because the firms use the common law in their corporate governance declared in study of La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) which cited from Pan, Lin and Chen (2012). The firms in Hong Kong can be characterized as less diffused ownership structure which means this is a normal situation if chairman of the company also the senior executive director or chief executive officer (CEO). Furthermore, Hong Kong firms require to fulfill a requirement whereby the minimum of three non-executive directors is needed on its board in order to reduce the agency cost for the firms. Thus, a good corporate governance is necessary in every organization because it provides better protection which might enhance the value of the firm.

A group of people as a body have the right and authority to control, manage and direct the companies or organizations is defined as corporate governance stated by Ruin (2011) cited by Mulili and Wong (2011) . According to the Australian Standard (2003) cited by Mulili and Wong (2011) defined a corporate governance is a procedure that implies the leadership, direction and authority to manage the organization. In order to establish a good corporate governance of an organization in Kenya, this is important for the board of directors to understand their roles and responsibilities. Moreover, the transparency of board in directing the organization and established checks and balances are important principles to set up good corporate governance in Kenya.

The corporate governance helps to create the culture of consciousness and maximize the long-term value of company in Korea (Gupta & Sharma, 2014). The norms of corporate governance are very strict and mandatory which only applicable to the public limited companies in India. This is because India model

is based on United States model. In Japan, the main purpose of the corporate governance is to provide an assurance to investors which can give them some returns (Tanaka, 2014).

Rules and regulations on corporate governance have always been an indispensable part of the company. The presence of the laws and regulations has a strong connection with successful economies for a country. The code of corporate governance (CCG) has been more narrowly defined as a set of principles, criteria or best practices that issued by a collective body and aim at providing good corporate governance for the corporations. The criteria listed the recommendations are necessary in order to achieve the objectives that set out in the principles (Weil, Gotshal & Manges, 2002; Corporate Governance Committee [CGC], 2014). The CCG was popularly issued by numerous securities regulators and stock exchanges from around the world during the early 2000s of the global corporate governance crisis (Jiang & Kim, 2014).

In January 2002, China's CCG is released in conjunction with China Securities Regulatory Commission (CSRC) and State Economic and Trade Commission (Jiang & Kim, 2014). There are totally eight chapters consist in China's code by focusing on duties, responsibilities, rules and legal right of directors and shareholders. Sarbanes-Oxley Act (SOX) was formulated in year 2002 which used to mandate the number of variations in the corporate governance for the listed companies in United States. SOX generally used to mandate the variations that will influence the monitoring of board and shareholder. The provisions that related to the shareholder include the variations in the restrictions on regulation of the insider transaction and increased the financial disclosure. SOX required the off-balance-sheet financing with detailed disclosure and the special goal entities that will make it more difficult for the companies in controlling their financial sheets with the method that enhance the current share price (Holmstrom & Kaplan, 2003).

1.1.2 Corporate Governance in Malaysia

The definition of corporate governance in Finance Committee on Corporate Governance in Malaysia is a process and mechanism used to give the directions, methods and guidelines to increase the reputation and efficiency of the organization. This is because the corporate governance is the key role to reach the goal of allocative efficiency (Zulkafli, Abdul Samad & Ismail, 2005). The internal and external perspectives are the aspect of the corporate governance view. Board of directors and equity ownership refer as internal perspective while the action of takeover or market for corporate controls and regulatory system refer as external perspective based on Denis and Mc Connell (2002), Cremers and Naim (2004) cited in Zulkafli et al. (2005). Corporate governance can be improved by modifying the board structure, ownership structure, board activity, director compensation, disclosure, merger and alliance.

Corporate governance plays a vital character in the company is because it helps to control the performance within the business operations (Ponnu, 2008). Therefore, the board of directors or the board governance is the main role in the corporate governance which their main responsibility is to protect the organization's strategies. The company always keeps on finding the ways to strengthen the corporate governance especially after the financial crisis of 1997.

Through the corporate governance, different task is assigned to different individual according to their position (Ponnu, 2008). For example, executive directors have the responsibility to control and arrange the resources and business of the company while independent directors have to bear on issue of strategy, performance and resources by bringing in individual judgement. The organizations use the Malaysian Code on Corporate Governance (MCCG) as guideline and direction of well implementation of corporate governance.

Saad (2010) stated that the company can get the improvement in the financial performance when there are large numbers of direction on board because there will have more expertise within them. Board size is one of the part that create the improvement or success in the company's performance or corporate governance due to the reason that performance of corporate governance is expected to be better when firm size is larger because they have enough resources (Nor, Shafee & Samsuddin, 2014).

The corporate governance framework as well as corporate governance practices in Malaysia is influence by some major laws and regulations. The laws and regulations are designed to provide corporate governance with guidelines on the principles and best practices and highlighted in the following part; MCCG, Minority Shareholder Watchdog Group (MSWG), Companies Act of 1965 amended in 2007, Financial Sector Master Plan (FSMP), Capital Markets Services Act of 2007 (CMSA) and Capital Market Master Plan (CMP) (Zulkafli et al., 2005).

The MCCG was primarily issued in March 2000 and revised later in 2007. It aims to elevate the board in respect of roles and responsibilities. The nature of Blueprint is to accomplish the good corporate governance by strengthening the discipline of market and encourage the good culture of corporate governance. Being ethical and sustainable is essential for a business, a good business should not focuses only on the achievement in their financial sector but also should concentrates on the business ethics (Securities Commission Malaysia [SCM], 2012).

The MCCG (2007) was substituted by the new the MCCG 2012 on March 2012 issued by the Securities Commission (SC) and it effectives from 31 December 2012. Additionally, the first deliverable of the SC's Blueprint 2011 is the MCCG 2012. The new code on corporate governance builds up several principles and recommendations on the company structures and composition

which should be applied by the companies, in order to improve and strengthen the standard or level of corporate governance in Malaysia. There are total 8 principles and 26 recommendations listed in the MCCG 2012, it concentrates on the role of board in respect of their leadership as well as focuses on the enhancement on board effectiveness by elevating its composition and strengthening its independence. Besides that, it also focuses on encouraging in the development of company disclosure policies with the principles of good disclosure. The company is encouraged to respect shareholder rights by establishing public commitment. In additional, the annual reports of all listed companies are compulsory compliance with MCCG 2012 (SCM, 2012).

On 30 August 2000, MSWG was duly organized. There were 4 founders of MSWG which include Board of Pilgrimage, Board of Armed Forces Fund, Organization of Social Security, and Corporation of National Equity. All of these founders played an influential role in development of social economic in Malaysia (Ameer & Rahman, 2009). The MSWG was licensed in the Capital Market and Services Act 2007, it also known as a non-profit organization which subsidized by Capital Market Development Funds (CMDf). MSWG also is playing a vital character in the discipline of market, stimulating the good governance with the purpose of creates the sustainable value. It has been evolved into an independent research of corporate governance and supervising the organizations in capital market over the years of operations. It provides the investors with the independent viewpoints and direction (Minority Shareholder Watchdog Group [MSWG], 2013).

The basic roles of MSWG are to increase the activism of stockholder and conservation of minority interest as a portion to the progression of capital market. It was established to create the consciousness and assuring the minority shareholders are adequately conform to their 3 basic rights include the right to seek information, right to voice the opinion, and right to seek for redress (Sidek, 2008).

The following are the right stated in the research:

- Right to seek information refers to the right to aware the information of price sensitivity of firm, ensure the equitable for all the shareholders and right to maintain full understanding about the situation of firm, the right to check up the Register of directors and members, the right to get the notification about general meetings, and the right to obtain the accounts which have been audited and the annual report of the firms.
- Right to voice the opinion means the right to request and engage in the general meetings, the right to recommend and vote the directors, and the right to receive the dividend of shares.
- Right to seek for redress involve the representative action that under the High Court Rule and the common law derivative action.

As stated in Corporate Law Reform Committee (CLRC) (2008), the Companies Act 1965 sets out the legal basis in terms of the formation, operation and management of the companies as well as sets out the rules for directors and shareholders on how they can exercise their rights and how to account for their powers. The Companies Act 1965 has been updated through variety of amendment practices and the most recent amendment is Companies (Amendment) Act 2007. The Amendment Act is aimed to strengthen the Malaysia' corporate governance framework and the purpose of introducing the amendments is to advance the prosperity of the corporate governance in Malaysia, together with enhance the investor confidence towards Malaysian companies to further advancing the global map for Malaysia (Shahfeezal, 2008).

1.1.3 Board of Governance and Performance

1.1.3.1 Board of Directors

After the 1997 financial crisis, corporate governance becomes an important element of the organization in Malaysia (Nor et al., 2014). Board of director is the most vital mechanisms of corporate governance (Saad, 2010). Board of directors formed by several members who responsibility in govern, oversee and supervise the day-to-day business activities of an institution. Board of director is used to protect interests of shareholders by controlling over the top management (John & Senbet, 1998). Board of director basically elected by shareholders of an organization to act on behalf of their interest. The board of director has the right to make change of company, set the company's goals, recruit or fire employees, determine the dividend paid, issued shares and all activities involved to the organization. The quality of board of directors determined by board size, ability of board of director, number of board meeting, number of independent director, quality of reporting, probity of management, stakeholders participation and other factors (Aggarwal, 2013). According to Abidin, Kamal, and Jusoff (2009), the board should consist of executive directors and non-executive directors which recommended by the MCCG (2000) in order to avoid the decision making is dominated by a certain party.

1.1.3.2 Board Size

The meaning of board size is measured by how many board of director sitting in a board (Nor et al., 2014). Moreover, board size refers as the number of directors involved in the organization (Ghaffar, 2014). There is no specific board size stated in MCCG (2000) yet it should sufficient to encourage directors to participate and efficient to perform their tasks (Nor et al., 2014). The number

of board size is based on the necessary skills sets and competencies, while promoting flexibility, effective participation and cohesion (Corporate Governance Blueprint, 2011). Based on the Survey of Corporate Governance Blueprint (2011), the mean board size of Main Market Company was 7.4 while ACE market was 6.4. Others factors that also affect number of board size are nature of business, the firm size and the board culture.

Germain, Galy and Lee (2014) found that the board size has a sharp increase in year 2002 after MCCG (2000) has released the recommendation of independent directors on the board. However, the board size declined after 2002 until year 2007. Saad (2010) found that after MCCG (2000) has issued, most of the companies have six to ten directors on the board in Malaysia. According to Germain et al. (2014), the board size in United Stated (US) also increased as influenced by SOX.

Table 1.1 below shows the total board size and total number of board independence of these companies and its return on assets (ROA) ratio in year 2014. The formula of ROA is net profit before interest and tax divided by total asset (Vo & Phan, 2013). These companies are the top five consumer products companies in Malaysia which are PPB Group Berhad, British American Tobacco, Nestle Berhad, Fraser & Neave Holdings Berhad and Guinness Anchor Berhad (Top10 Malaysia, 2015).

Table 1.1: Board Size of the Top Five Consumer Products Companies and its
ROA

Company Name	Total Board Size	Total number of board independence	ROA (2014)
PPB Group Berhad	Seven	Three	0.0505
British American Tobacco Berhad	Eight	Three	0.7025
Nestle Berhad	Eight	Six	0.2390
Fraser & Neave Holdings Berhad	Eleven	Four	0.0949
Guinness Anchor Berhad	Nine	Four	0.2825

Sources: Annual Report in Bursa Malaysia, (2014).

Table 1.1 shows the total number of board of directors in these five consumer products companies in Malaysia. These companies fulfilled listing requirement of Bursa Malaysia which the number of board must at least two directors or one-third of the board are independent directors, whichever the number of independent director is higher (Bursa Malaysia, 2013). The results show that Nestle Berhad has the highest number of independent directors and the ROA of the company is 0.2390 which considered high. Moreover, PPB Group Berhad has the lowest number of board size and three independent directors so the ROA of the company only 0.0505.

John and Senbet (1998) study where the number of board size increased, the performance of the directors may inefficient due to poorer communication and time consumes in make a decision. In other hand, the author studies that the

bigger the board size brings the superior performance and efficient of the firm (Tai, 2015). Therefore, there is no best board size among the organizations.

1.1.3.3 Board Independence

Board independence is very important mechanisms of corporate governance (Dalton, Daily, Ellstrand, & Johnson, 1998). Independent board composed by a group of people without any material interests in the company while dependent board elected by shareholders or people with interests in the company (Awan & Khan, 2012). Awan and Khan (2012) also stated that the board independent has no interest relationship with the company so they have no or minimum interest of conflict which to ensure member of the company do not influence by interest. Independent directors should be independent from its shareholders and company as they should be made accountability and treat equally to all shareholders (Li, Naughton & Hovey, n.d.). Wang (2014) stated that an independent director can reduce the probability of collusion between internal board member and manager. Independent directors appointed to the board to develop company's strategy and maximize shareholders' wealth (Germain et al., 2014). Independent directors provide a fair, justice, balanced and independent view to make an independent judgement to the board. In addition, a firm required to comprise at least two or one-third of independent directors based on MCCG (2012). According to Wang (2014), board independence has been adopted by United States as the internal corporate control mechanism since 1970. According to Tai (2015), a firm involved by outside directors has positive impact to the firm performance.

The Table 1.2 below compares the exchange rules or requirements between seven Asian countries which are Singapore, Hong Kong, Indonesia, Japan, Philippines, Taiwan and Thailand.

Table 1.2: Exchange Rules on the Minimum Number of Independent Directors
(INEDs) on the Board in Asian Countries

Country	Exchange Rules: Minimum No. of INEDs
Singapore ^[1]	One-third of the board
Hong Kong ^[2]	One-third of the board
Indonesia ^[3]	Thirty percent of the board
Japan ^[4]	One member of the board
Philippines ^[5]	Two/twenty percent of the Board
Taiwan ^[6]	Two members of the board
Thailand ^[7]	Fifty percent of the board

Sources: ¹ Code of Corporate Governance, 2012

² Director's Handbook, 2015

³ Asian Corporate Governance Association (ACGA), 2010

⁴ Japan Exchange Group, 2015

⁵ ACGA, 2010

⁶ Taiwan Stock Exchange, 2013

⁷ The Stock Exchange of Thailand, n.d.

Table 1.2 shows the rules on the number of independent directors among these seven Asian countries. The overall requirement on minimum number of independent directors is two except Japan. Japan is the only major market that required one independent director on the board. Johari, Saleh, Jaffar and Hassan (2008) found there is not adequate to monitor the firm perform and efficient by a minimum composition of one-third of independent directors.

1.1.3.4 Board Meeting

The board should disclose the number of board meeting and attendance of directors in each meeting held required by Bursa Malaysia (Saad, 2010). Board meetings are advantage to shareholders of the organization (Francis, Hasan & Wu, 2012). Board meeting and its attendance considered very important because it is a way for directors to obtain firm-specific information about the company is running in accountability and liable and fulfil their role (Adams & Ferreira, 2008). The frequency of board meeting is an important element of board operation (Tong, Junarsin and Davidson III, 2013). Adams and Ferreire (2008) stated that the attendance of directors also vital as it is a hallmark of the responsibility of the directors and it is a channel that they obtained the information and carry their task and role. Saad (2010) also found that the number of company that conducted board of meeting is increasing after the MCCG (2000) implemented and those companies conducted 6 to 10 times per year. Table 1.3 shows the number of board meeting should be held in a year and its attendance among the top five consumer products companies in Malaysia.

Table 1.3: The Comparison on Directors' Attendances and ROA of the Company in
Year 2013 and 2014

Company Name	Attendance in year 2014	Attendance in year 2013	ROA (2014)	ROA (2013)
PPB Group Berhad	Six directors: 4/4; One director: 3/4	Full Attendance	0.0505	0.0581
British American Tobacco Berhad	Full Attendance	Full Attendance	0.9428	0.6006

Nestle Berhad	Six directors: 5/5; Two directors: 4/5	Six directors: 4/4; One director: 3/4; One director: no meeting held since he/she was appointed	0.2390	0.2689
Fraser & Neave Holdings Berhad	Nine directors: 10/10; Two directors: 9/10	Seven directors: 8/8; One director: 6/8; One director: 4/4 (appointed on May); One director: 5/5 (appointed on Jan); One director: 4/5 (appointed on Jan)	0.0949	0.0943
Guinness Anchor Berhad	Eight directors: 4/4; One director: 3/4	Three directors: 6/6; One director: 3/3 (appointed on Dec) Two directors: 2/2 (appointed on Mar/Apr); One director: no meeting held since he/she was appointed	0.2825	0.2945

Sources: Annual Report in Bursa Malaysia, (2014) & (2013).

The overall results on attendances of directors are moderate and the ROA of these companies are not much difference in these two years except British American Tobacco Berhad. British American Tobacco Berhad is the company which gets the full attendances in their meetings and the company gets the highest ROA among these companies in year 2013 and year 2014. The most frequent on board meeting is Fraser & Neave Holdings Berhad but its ROA is the second lowest among these companies in these two years.

1.2 Problem Statement

The research of Lipton and Lorsch (1992) cited by Yermack (1996), the authors claim that the larger the board size, the slower the decision making which lead to board to function ineffectively, has smaller variability in the performance (Cheng, 2008 cited from Wang, Tsai & Lin, 2013). On the other hand, Yermack (1996) stated that the board size will not affect the board performance contracts to Coles, Daniel and Naveen (2008), who state that it is able to play a better advisory role in the larger board size as it can minimize the cost of debt (Anderson, Mansi & Reeb, 2004 as cited in Florinita, 2013). Lehn, Patro and Zhao (2003) state that the larger board size in the company is more efficient in the decision making process due to the sharing of information. This is because the members will share the information and reasonable choice making due to their different consideration within the group. A larger board size can actually improve the corporate performance (Pfeffer, 1972; Klein, 1998 cited from Setia-Atmaja, 2008) and able to support and advise firm managements more effectively (Klein, 1998). However, from Table 1.1 it shows that with 11 members on the board, Fraser & Neave Holdings Berhad still among the lowest ROA. Thus, it is important for the study to take factor of board size into account on the performance of company.

According to Chugh, Meador and Kumar (2011), independent directors are able to help the company to lower down the agency costs as well as improve the company financial performance. While according to Masulis, Ruzzier, Xiao and Zhao (2012), a large number of independent directors will provide better corporate governance, protection of shareholders' right, corporate decisions and corporate performance. The redundant of number of independent directors may also cause the firm can't perform well (Chugh et al., 2011). As shown in Table 1.1, Nestle has the large board independence with more than one-third, but the ROA is almost same with Guinness Anchor Berhad. Whereby, this research will identify whether the number of independent directors and the relation with the company performance in consumer products sector. So, it is necessary for the study to investigate and analyze the relationship between company performance and the board independent.

According to the research of Adams and Ferreira (2008), board meeting is significant for directors in respect of information collection, board decision making and management oversight, in order to fulfil their monitoring role. As stated in Ntim and Osei (2011), frequency of board meetings has positive relation with the performance of the company as increase the number of meeting of board tends to expand the company performance in financial sector. Additionally, the boards' capacity in monitoring the management rise as they meet more frequently and therefore improve the corporate financial performance. On the other hand, some researchers argued that increase the number of meetings of board have a worse implication towards the company performance. Evan, Evan and Loh (2002) is cited in the study of Johl, Kaur and Cooper (2015) which stated that increase the number of meetings would increase the expenses, time, and administrative support requirements. Thus, this may affect corporate performance as resources are being channeled towards the activities that are less productive. Hence, there have been inconclusive findings on the board meetings frequency with the company performance (Johl et al., 2015).

1.3 Research Objectives

1.3.1 General Objective

To investigate how the board governance influence the firm performance on consumer product sector in Malaysia.

1.3.2 Specific Objective

- i. To investigate the relationship between board size and company performance (ROA and Tobin's Q).

- ii. To investigate the relationship of board independence toward the company performance (ROA and Tobin's Q).
- iii. To investigate the relationship between number of board meeting and company performance (ROA and Tobin's Q).

1.4 Research Questions

- i. Is there any relationship between board size and company performance (ROA and Tobin's Q)?
- ii. Is there any relationship between board independence and company performance (ROA and Tobin's Q)?
- iii. Is there any relationship between number of board meeting and company performance (ROA and Tobin's Q)?

1.5 Hypothesis of the Study

H_{1a}: There is a relationship between board size and company performance (ROA).

H_{1b}: There is a relationship between board size and company performance (Tobin's Q).

H_{2a}: There is a relationship between board independence and company performance (ROA).

H_{2b}: There is a relationship between board independence and company performance (Tobin's Q).

H_{3a}: There is a relationship between profitability ratio and company performance (ROA).

H_{3b}: There is a relationship between profitability ratio and company performance (Tobin's Q).

1.6 Significant of Study

Corporate governance has important effect on a country development since it brings a direct affection towards the health of country economic growth (Atacik & Jarvis, 2006). Similar to the research of Rogers, Ribeiro and Securato (2008), the authors had proven the country economic growth is appears to be related to the introduction of good practices of corporate governance. This research contributes for companies, policy makers, shareholders or investors and academicians or future researchers by provides these parties with in-depth-knowledge about the corporate governance as well as gain more understanding on the relationship between corporate governance and corporate performance.

1.6.1 Companies

Practice of good corporate governance is important in the companies because it can improve and increase the reputation and reduce the risk from daily operations of the company which will increase the confidence of stakeholder towards the companies (Todorovic, 2013). Investors and the stakeholders will be more willing to invest and work for the companies when they know the corporate governance policies with the reason that they are more understand how the company is going to. With good corporate governance, firm value also will be increased and the agency problems can be reduced or minimized (Al-Haddad, Alzurqan and Al-Sufy, 2011). Hence, it helps to increase the confidence of the lenders towards the company and willing to lend them reasonable money. It is not only increases the reputation of company but also reduce the conflicts and fraud by limiting the potential bad behavior within

companies. Corporate governance which is high level of transparency has gets the trust and the confidence from investors and stakeholders because the information can be asses and understand easily.

1.6.2 Policy Makers

From the viewpoint of policy makers, the good corporate governance is likely to improve the market and company efficiency as well as encourages creativity (Geneva, 2011). This study could contribute Malaysia policy makers (e.g. Malaysian Government) in developing and reforming on new corporate governance policies and regulations which able to help Malaysian firms to achieve better performance and promote economic stability. Good corporate governance conducive in strengthening the economic efficiency as it contributes to the stability in the capital markets enhances the level of transparency. A firm subject to good corporate governance is beneficial by increase in product competition in foreign market and thus stabilize the economics of the country (Amore & Zaldokas, 2015). Moreover, good corporate governance conducive in strengthening the economic efficiency as it contributes to the stability in the capital markets enhances the level of transparency (Rogers et al., 2008). Companies with the adoption of good corporate governance practices are substantially perform better in term of their operational and market result as compared with those companies who without the adoption of the good corporate governance practices.

1.6.3 Shareholders/Investors

The study is able to give an insight to shareholder and individual investor as it can become an investment guidelines to them. Shareholder and individual investor may take into consideration of the board governance because better board governance will affect firm performance (Zulkafli et al., 2005). From

this research will provide a clear and comprehensive view to shareholders and individual investors on how the variables influence the firm performance under consumer products sector in Malaysia.

1.6.4 Academician and Future Researcher

This study also benefit for academician and future researcher as their reference. Moreover, there are very few studies focusing on board governance and firm performance in consumer products sector in Malaysia. Therefore, academician and future researcher can gain knowledge from this research and thus has a better understanding on this topic.

1.7 Chapter Layout

1.7.1 Chapter 1

Corporate governance and the firm performance is the scope of this study. In this chapter, the study will narrow the view from the corporate governance to the board governance and the few variables are taken in order to measure the performance of the Malaysian consumer products public listed firm. The variables selected in this study are firm size, board size, board independence, board meeting, profitability ratio and liquidity ratio. Besides, problem statement, objectives, research question, hypothesis and the significant of study are also covered in this chapter.

1.7.2 Chapter 2

This chapter carry out the literature review that provide the evidence of positive or negative relationship between the independent variables (board size, board independence and board meeting) and the control variables (firm size, firm profitability and firm liquidity) with the firm performance by using Return on Assets (ROA) and Tobin's Q as measurement. In this chapter, this research not only review on the independent variables but also the theoretical or conceptual framework, proposed theoretical models and the hypothesis developments also covered and reviewed in this chapter.

1.7.3 Chapter 3

This chapter focuses on data collection, methodologies, data analysis method and sampling design in this chapter. According to the formulas suggested by the previous researchers, the research proceeds the secondary data collected to the data process.

1.7.4 Chapter 4

Analysis and the explanation have been carried out and discussed based on the results from the research from the Electronic View (E-Views 8). This research also makes the comparison between the two models for the independent variables and the dependent variable.

1.7.5 Chapter 5

In this chapter, a table is provided in order to summarize the regression analysis in the chapter four. At the same time, it shows that whether these findings are consistent with the previous studies and the reason is needed to support each variable's results. The implications and limitations of study and the recommendations for future study is included in the end of this chapter.

1.8 Conclusion

This research has cover the research background, problem statement, research objective, research questions, hypothesis of study and the significant of study. The research questions will be answered in the literature review in the chapter two. Besides, the further elaboration of the relationship between independent variables (board size, board independence and board meeting) and control variables (firm size, firm profitability and firm liquidity) and the dependent variable (firm performance) also will be discussed in the chapter two.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter consisted of the literature review on past studies from previous researchers. All the results came from journals, articles and research papers will discuss clearly and comprehensively as to generate the framework for analyzing in this study. Therefore, the core study in this chapter is to investigate the linkage between the dependent variables (ROA and Tobin's Q) and independent variables (board size, board independence and board meeting) and, control variables (firm size, firm profitability, and firm liquidity), so the theoretical framework, proposed framework, and hypothesis development are necessary.

2.1 Theoretical Framework

2.1.1 Agency Theory

The relationship of agency can be defined as a contract between two parties which are principal and assignee. Assignee will be delegated by the principal to represent him or her and perform the tasks on his or her behalf. Some of the authority on decision making will also be delegated by the principal to the assignee (Jensen & Meckling, 1976). The field of agency theory was extended to management area gradually for determining the collaboration between people in organizations who with different objectives and achieved the objectives consistently (Eisenhardt, 1989). According to Crowther and Jatana (2005), agency theory proposed that the organization management is

undertaken by the shareholders. Thus, the value of organization management can be viewed as the value which only accrues to company's shareholders.

Agency theory is most applicable for the situations that have difficulty on contracting problems. The situations included (1) numerous goal conflicts between assignee and principal, such as managers and owners or managers and employees; (2) adequate outcome uncertainty to cause the risk implications of theory, such as innovating new products; (3) difficult to evaluate the behaviors for the un-programmed jobs. By emphasizing the contents mentioned above, researchers can use the agency theory since it can acts as the most strictly tested (Eisenhardt, 1989). Based on Jensen and Meckling (1976), agency theory predicts that the higher managerial ownership level may reduce the conflict of interest among owners and managers. Thus, it is able to enhance the company performance. When the managers own only a portion of company shares the agency problem will be increase. Managers tend to work less energetically and require more on perquisites since most of the costs are undertaken by the owners (Grigore & Stefan-Duicu, 2013).

Contracts do not costless for written and implemented cause the agency problems happened. It is essential to control the agency problem on the process of decision making especially for the decision managers who enforce the decisions are not the main residual claimants because they have no responsibility on bearing the major share of wealth effects on the decisions they made. Some decisions managers may prefer to take actions that diverge from the interests of residual claimants if there do not have an effective control procedures (Fama & Jensen, 1983).

To solve the problem of conflicts of interest between managers and shareholders, indebtedness was suggested by agency theory. Indebtedness consists of both pros and cons. For pros, agency theory permits shareholders to hold more company's management information as well as to discipline the

managers. There are also 3 types of cons on indebtedness. The types of cons included (1) the investment projects those have positive net present value can be renounced by the shareholders, if the difference between the projects and present value of the amounts required to remunerate is negative; (2) shareholders may choose to invest on the projects those with higher risk due to the instigate of indebtedness; (3) managers adopted the costs of shareholders' investigation over nature of debts. Pros and cons of indebtedness are essential to be taken into consideration when the company value is increased through resolving the conflicts of interests (Grigore & Stefan-Duicu, 2013).

Ownership concentration is prevalent in most of the economies and the major conflict of agency is principal-principal conflict which is a conflict between the minority shareholder and majority shareholder (Faccio & Lang, 2002). Minority shareholders can be defined as the investors whose hold the relatively small number of the total outstanding shares of corporation and usually a small portion the total portfolio of investor. They have only a little power to attempt the control of the board since the minority shareholders only possess small portion of total outstanding shares of the corporation. Majority shareholders may have an adequate stake in corporation in order to justify the time as well as fund needed to supervise the management energetically. The institutional investors or block holders might also be controlled by the majority shareholders. In addition, these majority shareholders are able to lead the corporation access into the transactions which are unfavourable for the corporation but favourable to them such as the majority shareholder may trade the corporation's products and services at the non-market prices which they can take advantages from these transactions (Laux & Markham, n.d.).

The independent directors are represent the minority shareholders' interests as well as considered as non-dependent checking on the exception managerial behaviour (Fama, 1980). In the research of Setia-Atmaja et al. (2011) cited from Habbash, Xiao, Salama and Dixon (2014) which has investigated the

effect of board independence on the earnings management of family controlled companies. The result in this study reveals that the company those consist of higher proportion of non-dependent directors on board able to reduce the issue of earnings management effectively as well as reducing agency problems in the family controlled companies.

The standard regulations of the corporate governance are according to the principle of one vote per share which means that the shareholders who have the enough shares to make the elect decision were effectively dictators (Lamoreaux & Rosenthal, 2006). According to Davies (2000), the independent directors can be operated to protect the minority shareholders against the controllers of firm as much as the independent directors do the shareholders as a class as against the management. The management can be access into the entrenchment and expropriation, all to detriment of shareholders, and the majority shareholders can exploit the minority shareholders, when there has weak corporate governance. Good corporate governance ought to prevent the bad behaviors of majority shareholders as well as enhance on the shareholder returns. The shareholder returns will become suboptimal due to the failures of corporate governance (Laux & Markham, n.d.). According to PwC Russia (2013), limiting on the executive directors' share on board does not in itself assure sufficient protection of the interests of shareholder. Board of directors which consists of independent directors as its members will have an efficient performance. In addition, the independent directors also play an important role on promoting the effective corporate governance as well as new requirement give the minority shareholders a chance to express their thought in the election and promoting the conversation between the firms and shareholders before the new directors' nomination (Deloitte, 2013).

Moreover, according to Gul, Sajid, Razzaq and Afzal (2012), they used the asset utilization to measure agency cost. The authors concluded that a firm with small board size will reduce agency cost because smaller board is more

effective and efficient in decision making and functioning the organization. The result consistent with Florackis and Ozkan (n.d.), the smaller the board size the higher the asset utilization ratio. The large board become inefficient because of free-riding problem as the board is hard to control by the top management (Gul et al., 2012; Boone, Field, Karpoff & Raheja, 2007).

Agency theory can help to reduce the conflict of interest between principal and agencies as well as between minority and majority shareholders. Board independence acts as the monitoring role in board. The independent directors are concerned on the shareholder's interest. Hence, the agency problem in company tends to mitigate through nomination of independent director to board. Agency costs are able to reduce as well as improve the company performance through effective monitoring by the independent directors.

2.1.2 Competency Theory

In this era of globalization, organizations put emphases on more human capital enhancement especially for the organizations which intend to expand their business operation internationally since investing and developing in human capital is one the fundamental requirements for an organization to enter into global marketplace. Therefore, companies are required to come up with some effective planning in aspects of human capital investment in order to achieve higher firm performance, intensify the firm's competitive position and safeguard its long-term viability (Marimuthu, Arokiasamy & Ismail, 2009). Human resources management was found to be a vital tool for improving organizational performance. It has been viewed as the main strategy in reducing the cost of human capital as well as the key factor in improving economic growth of an organization (Hsieh, Lin & Lee, 2012). Researchers in the field of strategic human resource management believed that human resources practices would provide sustainable competitive advantage to an

organization. Additionally, the researchers also stressed that human resources practices contribute to higher firm performance and increase value of the firm (Dunford, Snell & Wright, 2001).

Board members play essential roles in company's decision-making. The boards are responsible for approving major strategic and financial decisions as well as provide unique perspectives on strategic issues. For instance, they have responsibility on company expansion plans, changes in capital structure and corporate restructuring (Ferreira, 2010). Lack of board competency, independence and management share ownership has potential to make resource allocation inefficient (Johari et al., 2008). The presence of competency theory helps to upgrade employee's performance and qualify human resources. Majority of organization require their employees to obtain a new set of job skills, knowledge, and attitudes in order to confront with the complication and diversification of the new business environment, meanwhile increase their sustainability in global market (Hsieh et al., 2012). Application of competency is an effective manner to improve employees' performance in the workplace. Therefore, organizations are required to develop and apply the competency model in order to improve the performance of their employees in achieving company objectives as well as increase employees efficiency in accomplishing the tasks and duties assigned (Silva, Sabino, Lanuza, Adina, Villaverde & Pena, 2014).

Competencies, defined as the abilities or capabilities of a person in performing specified tasks. It can be divided the excellent performance into three broad categories, which are the experience and ability, knowledge and basic cognitive competencies (Boyatzis, 2008; as cited in Yusoff & Amrstrong, 2012). Moreover, competencies can also be described as individual characteristics, including personal abilities, skills and knowledge, intelligence, attitude and qualification of a person, and environment around as well as the mode of thinking which enable any person to have outstanding performance in

his or her roles, jobs, tasks, and situation (Jokinen, 2005; Awan, Bhatti & Bukhari, 2010; Society for Human Resource Management [SHRM], 2012). Different researches showed different definitions of competencies, but in general, the term “competency” focuses on the prospective of one in the workplace and the abilities to utilize and apply his or her skills and knowledge on their work (Yusoff & Amrstrong, 2012).

The concept of competencies is closely linked to firm performance, this findings supported by several studies (e.g., Yusoff & Amrstrong, 2012; Silva et al, 2014). In the study of Silva et al. (2014), the researchers developed a new competency theory named “Silva’s Management Competency Theory”. This theory created by combination of various types of skill and knowledge that are vital for successful management. It is essential for a person to possess right skills and knowledge on the fundamental of jobs, duties and tasks given, such as practical, technical and professional skills. In addition to keeping up with the latest trends is indispensable for business practitioners in order to provide high standard performance outcomes to their clients or customers. Moreover, the person with the knowledge and skills feel more personally responsible in their own works. Similarly, for the people who have higher educational attainment, they tend to emphasize the requirement for proper job skills and experience in the workplace. According to Yusoff and Amrstrong (2012), the authors studied on the competencies of directors towards company performance in perspective of Malaysian companies. Directors’ competencies are getting wider attention in corporate governance. Through the study, the authors reveal that the relevant directors’ competencies are important for the board and corporate effectiveness. There are total eight types of competencies that found to be the most important competencies for the directors in Malaysia companies. The competencies were including financial accounting, internal operations, corporate planning, business forecasting, marketing, human resource, legal, and risk management. Financial competencies were ranked as the first over these eight types of competencies. Each director must have

specific skills, competencies and knowledge that are relevant to the fundamental of their job responsibilities and the nature of their business. Consequently, the right directors of a company should choose the directors with respecting on these competencies. The study suggested that when constructing a model of board effectiveness, the directors' competencies must take into consideration.

Competency theory helps in company's recruitment, assessment and selection, and retains the right person by developing the person in the correct way and linking one competence to organizational performance management. The board is composed by a group of individual with different age, gender, culture, independence, professional background, knowledge, technical skills, education background, judgement and experience. The application of competency theory or competency model can helps the company to deploy and maintain the right people in the right position especially for the organization with large board size. Diversity in the board's composition provides advantageous in board strategic decision making, since the board can practice and share their experience and it is also best way to get more point of views.

2.2 Review of Literature

2.2.1 Independent Variables

2.2.1.1 Board Size and Firm Performance

Ghaffar (2014) stated that board size is one of an important element to establish a good board structure and successful organization. In the same study, the author shown that a significant positive relationship between board size and firm profitability of Islamic banks in Pakistan measured by ROA and ROE. He proved that the increased in board size will increase its profitability because the expertise in the board also increased.

The bigger the board size, the more the diverse knowledge and expertise can be obtained in order to improve corporate performance which measured by ROA (Tai, 2015). This study with samples from GCC (Gulf Cooperation Council) countries has a positive relationship between board size and firm performance. The 6 members of GCC are Bahrain, Saudi Arabia, Qatar, Oman, Kuwait, and the United Arab Emirates (UAE). The author used the secondary data sample of 57 public listed GCC national banks from 2011 to 2013. However, the author also reported inverse relationship between board size and firm performance by using ROE.

There is positive impact between board size and firm performance measured by ROA and Tobin's Q among 616 public listed Taiwanese companies between 2000 and 2004 (Lin & Lee, 2006). The average board size in this study is 7 members. When a company has higher degree of diversification and debt leverage required the greater the board size because the demand of board consultation rose. The more complex operation activities required more

professional skill and expertise to generate high quality decisions and options which a large board may provide. They also argued that a small board may only serve its monitoring function better but failed in consultation function.

For the Malaysia studies (e.g., Nor et al., 2014; Abidin et al., 2009), find that a positive relationship between board size and firm performance. Nor et al. (2014) conclude that there are statistically significant positive impact between board size and firm performance with a sample of 169 Malaysian companies covers the periods of 2009 and 2010 and applying ROA as firm value measurement. The average board size in this study is 7 members. He concluded that a large board size has more resources and ideas in order to help the firm become more competitive in the market. A greater number of board size able to control and manage the operational activities and finance resources more effectively.

Consistent with the previous findings of Abidin et al. (2009) concluded there is positively relationship between board size and firm performance. The authors argued that using a common and short-term indicator to measure firm performance is insufficient. Therefore the authors attempted to use the long-term indicator which included firms' physical and intellectual resources. The authors are using value added intellectual coefficient (VAIC) as methodology to measure the firm's physical intellectual capital. In the same study, a larger board size is more effective for Malaysian firms compared to South Africa, Sweden, and the United Kingdom (U.K.) by examining 75 public listed companies. Abidin et al. (2009) also argued that there is no communication and coordination problem in the large board size which contradicts with previous studies, (e.g., Topak, 2011; Bermig & Frick, 2010; Ghaffar, 2014; John & Senbet, 1998).

In contrast, some researches (e.g., Yermack, 1996; Rashid, De Zoysa, Lodh & Rudkin, 2010; Bulan, Sanyal & Yan, 2009) argued that a smaller board size is more efficient than large board size. Yermack (1996) who is the first author

reached the conclusion that the company with smaller board size has better financial ratio (profitability and operating efficiency), and more effective based on a sample of 452 United States (U.S.) firms from year 1984 to 1991. In addition, CEO will perform better and easier to oversight when the board size is relative small. When the board size increased from small (6) to medium (12), the firm value will decrease due to the raise of incremental cost.

Similar with findings of Yermack (1996) and Rashid et al. (2010) reported that the board size has a significant negative impact on firm performance by using ROA but significant positive by using Tobin's Q among the 274 Bangladeshi firms. Rashid et al. (2010) concluded that the reason may due to asymmetric information between executive director (inside directors) and non-executive director (outside directors).

Earlier study by Bulan et al. (2009) discovered negatively related to firm performance determined by the proxy Tobin's Q with a sample of 1109 U.S. manufacturing firms covers the period of 1996 to 2005. The average board size in this study is 9 members which lower than 12 members for large firms reported by Yermack (1996). The authors revealed that smaller firm size has negative impact on board size because it may due to the firms are more competitive, low free cash flow, and low growth opportunity.

However, study made in year 2011 by Topak revealed that there is no impact between board size and performance by using ROA, ROE, and Tobin's Q. The sample of this study comprises 122 public listed firms in Turkish covers the period of 2004 to 2009. There are difference features of Turkish firms compared to other countries as most of the Turkish firms owned by family and household. Therefore, most of the board members are family members who are involve in the operational. This may be the reason why the outcome is different from previous studies (Lin & Lee, 2006; Abidin et al., 2009; Ghaffar, 2014; Nor et al., 2014; Tai, 2015).

From all the literature review above, most of the results proved that board size has positive effect on firm performance. Therefore, this study expects that Malaysian public listed firms in consumer product sector for board size have a significant positive relationship on firm performance. This shows that the larger the board size will enhance firm value and performance.

2.2.1.2 Board Independence and Firm Performance

Board independence can be indicated as an entrance of the independent directors on corporate board. It also is one of the essential decisive of the effectiveness of board. Member outside the company other than the past or current employees of the organization are ought to be the outside directors and delegate of the interest of shareholder (Hermalin & Weisbach, 1988). It is necessary to include the external members in the corporate board who are able to act as referee when there are disagreements between the internal managers and therefore increase the effectiveness. The study argue that existence of the independent directors in corporate board is able to increase the ability of board to become more efficient in the monitoring of top management and make sure there do not exist any collaboration with the top managers to embezzle the stockholders wealth as they have intention to develop on their own reputations as specialist in the decision-making control (Fama & Jensen, 1983).

The study of Sanda, Garba and Mikailu (2011) examined the relationship between board independence and company performance with a sample of 89 companies listed on Nigerian Stock Exchange (NSE) from year 1996 to 2004. The result showed that the board independence have the positive relationship with the company performance. While the CEO membership of the board of auditors harm the performance of company, the interlocking directorship is tends to assist the small company performance but harm the large company. According to the research of Awan and Khan (2012), board independence has

a positive relationship on the performance of company with a sample of 91 listed companies for the year 2010. The listed companies of Pakistan which consist of independent board members in their board resulting in higher return on asset (ROA), return on equity (ROE) and Tobin's Q as achieved greater company performance.

In the research of Agrawal and Knoeber (1996) stated that many studies have demonstrated that the proportion of outside directors is significantly influence the performance of company. Adams and Mehran (2003) found that there is a positive relationship between board independence and company performance with a sample of 35 bank holding companies from year 1986 to 1996. The study conclude that increase in the proportion of the outside directors tend to increase the performance of company simultaneously as they are considered as the more effective monitors of the managers.

The study of Scholer and Holm (2013) which has studied the relationship between performance of company and board independence in two-tier setting based on Danish dataset that includes all the non-negative equity companies listed on Copenhagen Stock Exchange. The result in this study reveals that board independence has a positive influence on the better company performance. The study suggests that the board independence may cut down agency costs since better control is applied delegate of finance providers. Therefore, higher level of independence is more expected in order to improve the company performance and decrease the capital costs.

Board independence and company performance are positively correlated. Higher ratio of the independent directors represents the better company performance (Weisbach, 1988; Wu, Lin, Lin & Lai, 2009). When the board was presented by independent board's chairman and senior independent director as well as the chief executive officer (CEO), chief financial officer (CFO) and chief operations officer (COO) was not the member of board, the

company performance improved by board independence (Saat, Karbhari, Heravi & Nassir, 2011). Based on Vance (1964) and Pfeffer (1972) cited from Wang (2014), the study investigated the relationship between company value and outsider orientation of boards and found that outsider board members is positively related to corporate performance. Companies that implemented with the recommendation to nominate independent directors to their boards have better performance in operating compared to those did not (Chou & Hamill, 2011). In the study of Fama (1980), outsider directors must be free from the influence of management in order to well perform on their duties. Agency costs able to reduce as well as improve the company performance through effective monitoring by the outsider directors.

In addition, some of the researches (e.g., Agrawal & Knoeber, 1996; Bhagat & Black, 2001) found that board independence has the negative impact on company performance. According to the research of Agrawal and Knoeber (1996), board independence has a negative effect on the performance of company with a sample of 400 large companies in U.S. This may due to the board are expanded for the political reasons and therefore the additional independent directors may reduce the performance of company for the potential constraints of political that lead to their receiving board seats. Therefore, more outsiders on board were significantly and negatively affected the company performance. According to Bhagat and Black (2001), the authors stated that there was a strong correlation between the poor performance and increase subsequently in board independence. Board independence seems to be more affected by the poor performance rather than by the growth opportunities of company.

The effects of board independence on company performance have been addressed in current literature. From the result of literature review mentioned above, most of the studied found a positive relationship between board

independence and company performance. In conclusion, this study expects that board independence has positive influence on the company performance.

2.2.1.3 Board Meeting and Firm Performance

Every public listed company is compulsory to disclose the frequency of board meeting held during the fiscal year and directors' attendances in annual report. It is one of the listing requirement on Bursa Malaysia and also comply with MCCG (MCCG, 2012; Saad, 2010; Apadore & Zainol, 2014).

Brick and Chidambaran (2007) studied the relationship between the firm value and board monitoring activity over 6 years period from 1999 to 2005 with the sample of 4298 observations by using fixed effects model and pooled model. The level of board monitoring in this study is the number of board meeting held per year and the number of director-days involved in monitoring. This study concluded that board meeting has strong determinant of firm performance. Moreover, the increase of board meeting held during a fiscal year is able to enhance company value as the board monitoring and oversight improved.

For the Malaysia studies, Saad (2010) and Salin, Rahman, Omar, Wee, Ismail and Samuel (2010) conducted that board meeting has impact on firm performance. Saad (2010) revealed that there is a big increase of disclose number of meeting after the implementation of MCCG (2000) based on 126 companies between the period 1998 and 2006 which is after financial crisis. As MCCG (2000) have awake public listed companies about the importance of corporate governance. The sample includes 4 industries which are consumer product industry, industrial product industry, trading & service industry and plantation industry. The author found that there is only 56.3% of the companies are willing to disclose the number of board meeting in the annual report

between the year 1998 and 2000 which MCCG (2000) has not implemented yet. The result shown there is a significant growth of the number board meeting after MCCG (2000) implemented to enhance firm performance as well. This result consistent with Hahn and Lasfer (2007) research concluded that high frequency of meeting during financial distress because those companies are facing debt financing.

The board meeting could reflect the performance of board directors in the organization (Salin et al., 2010). According to Salin et al. (2010), they concluded that a high profit of an organization is depending by the internal management. The authors used 100 largest firms listed in the Bursa Malaysia to examine the relationship between board committees meeting and disclosure level in annual report to explore the willingness to enhance corporate governance of companies. The results show that most of the companies scored low marks on the survey of disclosure of board meeting by reviewing their annual reports year end as at 30 June 2006. The result is inconsistent with Saad (2010).

Similarly, and using a sample of 169 South Africa listed company from 2002 to 2007, Ntim and Osei (2011) establish a positive relationship between the frequency of board meetings and firm performance. They also found that there is a non-monotonic relationship between these two variables. Moreover, the result consistent with agency theory which improved on firm value by increased frequency of meeting to have better monitoring and sterner discipline management (Berger & Patti, 2006).

Tong et al. (2013) reported that the private firms have better firm performance and efficient in management compare to China State-Owned Enterprise (SOE). The board meeting frequency of private firms is 9 times per year where higher than SOE which only 8.35 times per year. Therefore, the more often the directors meet the more efficient in firm performance.

According to determinant of board meeting in U.K. study, Hahn and Lasfer (2007) conduct a research based on 150 largest U.K. firms listed on London Stock Exchange included consumer product industry in 1998 to 2004. They revealed that the most significant impact on board meeting frequency is foreign non-executive director. By attracting foreign non-executive directors joined into the board, some selected companies are going to shrink the number of board meeting in order to reduce the travelling cost of foreign non-executive directors. As board diversity is able to provide more comprehensive decision with different experiences, various professional skills and international market views that domestic non-executive directors might be lack from foreign directors in order to enhance firm performance and value (Hahn & Lasfer, 2007; Galia & Zenou, 2013). Therefore, the results contained that companies held more board meeting frequency brought an unfavourable firm performance and low market-to-book ratio. This literature result is contradicted with the earlier findings of Brick and Chidambaran, 2007; Saad, 2010; Salin et al., 2010; Ntim and Osei, 2011; Tong et al., 2013.

Board meeting is one of the important elements that affected the board operation. Therefore, this study is going to examine the relationship between board meeting and firm performance. There are many results that supported favourable board meeting brings superior firm performance by several researchers. Finally, this study expected that the board meeting and firm performance are positively relationship.

2.2.1.4 Firm Size and Firm Performance

According to Dogan (2013), the author analyzed the effect of firm size on company performance based on a sample of 200 companies which listed in Istanbul Stock Exchange (ISE) over the periods from year 2008 to 2011. The

result indicated that firm size show a positive linkage with profitability of company. The firms with larger size are more profitable than the firms with smaller size mainly due to big firms advantageous on the concept of economies of scale and scopes, specialization as well as their stronger bargaining power. Additionally, large firms also have bigger market shares as compared with firms with smaller size. In the research done by Ahmed Sheikh, Wang and Khan (2013), the authors also found a positive relationship between firm size and profitability of company as the large firms are benefitted from the economies of scale.

Consistent with the previous findings of Pervan and Visic (2012), firm size has relatively low positive impact towards the company profitability. Although their relationship is not strong but the firm's profitability increased when the firm size become larger. The theoretical basis that underlying on the argument known as the concept of economies of scale. The traditional neo classical view of the firm is able to find the concept. This concept stated that smaller firms are less favourable compared with bigger firms in respect of the costs of production due to the different in quantity purchase, together with specialization and division of labour. In addition, the bigger firms are able to earn higher profits due to their higher market power so they are able to charge higher prices on their products and services. Thus, firm size is positively related to profitability can be explained.

Moreover, Leung, Meh and Terajima (2008) investigated the relationship between firm size and productivity for both manufacturing and non-manufacturing firms. "Sales per employee" has been used as the measurement of productivity in this study and the result reveals that firm size has positive impact toward labour productivity in both manufacturing and non-manufacturing sectors. Ehi-Oshio, Adeyemi and Enofe (2013) conduct an analysis based on a sample of 40 randomly selected companies over the 5 years period. The study reveals a positive relationship between firm size and

company profitability. By using a sample of 961 Australian firms that are large in firm size to evaluate the determinants of company profitability, cover the period from year 1995 to 2005. Stierwald (2009) found that firm size is positively correlated to company profits.

Based on the study of Babalola (2013), the author found that firm size has a positive influence on company performance. According to the results of the study, the firm with larger size has greater influence on its stakeholders such as shareholders, creditors, employees, suppliers and governments. Furthermore, for both conglomerates and multinational corporations, large in firm size has more impact on the growth of their operation. The result of the study is based on the investigation of the impact of firms size towards corporate performance of manufacturing companies listed in the Nigerian Stock Exchange over ten-years period, which from the year 2000 to year2009.

Corporate size has statistically positive impact on profitability that measured by ROA. This statement is supported by numerous researches (e.g., Archarunroj & Hoshino, 1999; Vinasithamby, 2015; Akbas & Karaduman, 2012). Vinasithamby (2015) which based on 30 listed Sri Lankan companies under hotels and travels sector cover the periods of year 2008 to 2012, the author finds that firm size has positive influence on profitability that measured by ROA. The results above in line with the findings of Akbas and Karaduman (2012), the authors examine the relationship between firm size and profitability of Turkish manufacturing firms that listed in Istanbul Stock Exchange (ISE) over the 5 years period, which from year 2005 to 2011. Company profitability was measured by using return on assets, while both total assets and total sales were used as the proxies of firm size. A positive relationship was found between firm sizes, both in terms of total assets and in terms of total sales and company profitability of Turkish manufacturing firms (Akbas & Karaduman, 2012; as cited in Ehi-Oshio et al., 2013).

However, some researchers have opposite point of views on the relationship between firm size and corporate performance (e.g., Alzharani, Che-Ahmad & Aljaaidi, 2012; Amah, Daminabo-Weje & Dosunmu, 2013; Niresh & Thirunavukkarasu, 2014). They claimed that the effect of firm size on company profitability is controversial. Niresh and Thirunavukkarasu (2014) found that firm size has no indicative relationship with profitability of listed manufacturing firms. The result is based on a sample of 15 Colombo Stock Exchange (CSE) listed companies in Sri Lanka between the years of 2008 to 2012. The reason behind is the ownership and the rights of management have been separated, in the modern corporations. In addition, this effect may change the manager's objective from maximize the company profitability to managerial utility maximization. Furthermore, organization structure, inflexible used in technology and changes in strategic logic of firms also are the reasons that lead the weak relationship between firm size and profitability.

Besides that, Amah et al. (2013) describe organizational effectiveness is closely related to the firm size. Smaller companies are more responsive and flexible in servicing their customers than bigger companies. The authors also suggested that the organization which intend to expand their business scopes and operations should ensure that the expansion with maintaining the characteristic of small organization. According to Alzharani et al. (2012), the authors studied the effect of auditor type, size of company, and leverage on company performance with using two measurements which are ROA and ROE. This study used a data of 392 listed companies which listed in Saudi Stock Exchange during 2007 to 2010. The result indicated that there is a significant negative relationship between size of company and company performance measured by ROA.

Various findings were exhibited in various researches (e.g., Pervan & Visic, 2012; Dogan, 2013; Vinasithamby, 2015), their major findings reveal the fact that increase in firm size may lead to higher company profits due to economies

of scale, specialization, and bargaining power as well as division of labour. From the result of literature review, most of the results show that firm size and company performance is positively correlated. Thus, this study expects firms size has positive influence on the company performance.

2.2.1.5 Firm Profitability and Firm Performance

Firm profitability ratio is a ratio to identify how well a firm' executives operate it (Pugliese, Minichilli & Zattoni, 2014).

According to Srivastava and Laplume (2014) research, the authors took 208 United State semiconductor firms and the research period of 1988 to 2006, the result shows that the firm profitability is positively significant towards the firm performance. A good governed firm should provide a high profitability ratio and better firm performance (Sami, Wang & Zhou 2011).

Firm profitability ratio is negatively significant towards the firm performance (Alves, Couto & Francisco, 2015). The authors state that a profitable firm is less likely to borrow on a long term debt. Therefore a good performance firm with a high long term debt will have a lower firm profitability (Alves et al., 2015).

Based on the study of Chen (2012), the result shows that the firm profitability ratio had a negative impact on the firm performance whereby there is a conflict of interest among the shareholders and the agency. In line with the previous research (Alves et al.), the result of Chen (2012) also shows the negative impact of firm profitability towards a high cost of debt profitable firms.

2.2.1.6 Firm Liquidity and Firm Performance

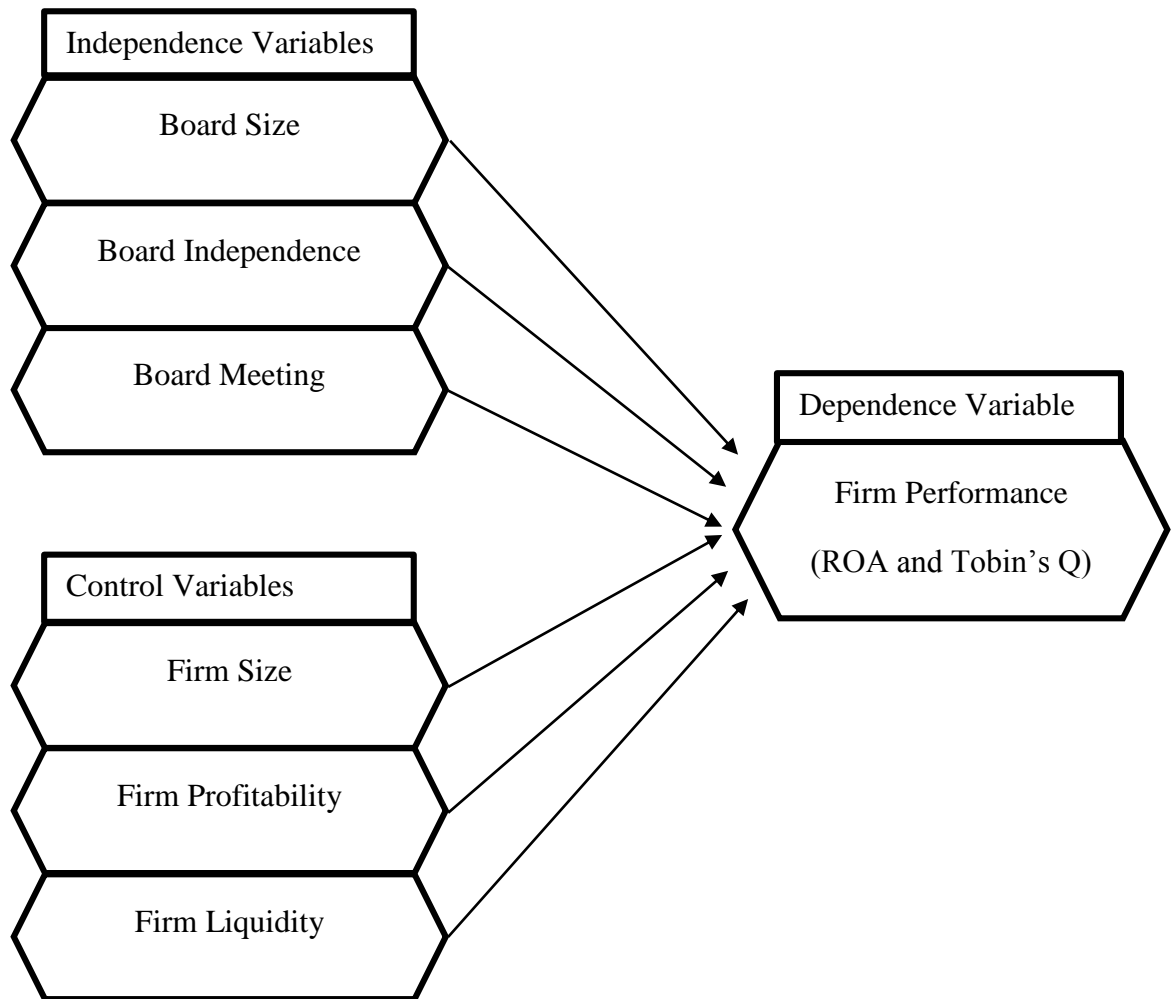
According to Oshoke and Sumaina (2015), the authors state that there is the negative and significant impact between firm liquidity and firm performance of 50 quoted companies in Nigeria Stock Exchange from 2009 to 2013. Firm liquidity ratio can be used to measure the ability of a firm when they face the liabilities.

The liquidity is important because it shows the ability of the firm or the company to meet the obligation on business which included operating and financial expenses (Khidmat & Rehman, 2014). There is positive significance between liquidity and the firm performance of 10 chemical sector companies in Pakistan for the year 2001 to 2009. The stakeholders and suppliers will have the awareness on the liquidity of the companies in order to protect their right and the benefits. At the same time, employees will also concern about the liquidity of the company since they need to identify whether the firm able to meet the obligation which involved the salary and the pension.

Billah, Jakob and McGowan Jr (2015) stated that the liquidity is important for the companies which under consumer product company, industrial product company and trading and services company in order to face and solve the unexpected issue. The company with higher liquidity has more financial flexibility which provides them the benefit to negotiate with the suppliers and financiers. In this study, there are 242 Thai manufacturing companies listed in Stock Exchange of Thailand (SET) from years 2006 to 2010 have been selected (Sinthupundaja & Chiadomrong, 2015). The result showed negatively significance relationship between liquidity and firm performance. This is because there are many assets in the companies but most of them are not fully utilized which will lead the firm to face the problem of low rates of return and negative effect of liquidity on firm financial performance.

2.3 Propose Framework

Figure 2.1: The Effect of Board Governance on Firm Performance for Consumer Product Sector in Malaysia from Year 2010 to Year 2014



The Figure 2.1 is showing the theoretical framework of independent variables (board size, board independence and board meeting) and control variables (firm size, firm profitability and firm liquidity) on the firm performance (ROA and Tobin's Q).

2.4 Hypothesis Development

2.4.1 Board Size and Firm Performance

Most of the studied found that board size has positive effect on the firm performance (Lin & Lee, 2006; Abidin et al., 2009; Ghaffar, 2014). According to Tai (2015), the bigger the board size, the more the diverse knowledge and expertise can be obtained in order to improve corporate performance.

H_{1a}= There is a positive correlation between board size and company performance (ROA) in consumer sector.

H_{1b}= There is a positive correlation between board size and company performance (Tobin's Q) in consumer sector.

2.4.2 Board Independence and Firm Performance

There are much study's result indicated a significant and positive relationship between board independence and company performance (Adams & Mehran, 2003; Sanda et al., 2011; Saat et al., 2011; Awan & Khan, 2012). According to Weisbach (1988) and Wu et al. (2009), higher ratio of the board independent directors represents the better company performance.

H_{2a}= There is a positive correlation between board independence and company performance (ROA) in consumer sector.

H_{2b}= There is a positive correlation between board independence and company performance (Tobin's Q) in consumer sector.

2.4.3 Board Meeting and Firm Performance

In the studies of Berger and Patti (2006), Brick and Chidambaran (2007) and Saad et al. (2010), the results indicate the board meeting and firm performance are positively relationship. Ntim and Osei (2011) also supported that increased frequency of board meeting brings superior company performance.

H_{3a} = There is a positive correlation between board meeting and company performance (ROA) in consumer sector.

H_{3b} = There is a positive correlation between board meeting and company performance (Tobin's Q) in consumer sector.

2.5 Conclusion

This chapter has compared the empirical results of previous researchers on the impact between the dependent variables (firm performance) and independent variable (board size, board independence, board meeting, firm size, firm profitability and firm liquidity). The following chapter will discuss on the methods to conduct this research.

CHAPTER 3: METHODOLOGY

3.0 Introduction

In this chapter will study the methodology applied in this study. Research design, data collection method, sample design, data processing, data analysis, and diagnostic checking which consist of normality test, multicollinearity, heteroscedasticity and autocorrelation are going to discuss in this chapter.

3.1 Research Design

This study is going to investigate the relation on board governance and firm performance. The total number of 108 consumer products companies was chosen from Bursa Malaysia covers the period of 2010 to 2014. Thus, total numbers of observations are 540. Quantitative data in term of secondary data is used in this study where the data is taken from the annual reports of selected companies and Thomson Reuters DataStream. These secondary data used to analyze the relationship between the dependent variable (firm performance) and independent variables (board size, board independence, board meeting, firm size, firm profitability and firm liquidity) which is the purpose of this study.

3.2 Data Collection Method

The purpose of this study is to examine the impact of board governance towards firm performance which focuses on consumer products sector in Malaysia. All data in this study is quantitative data in term of secondary data which collected and compiled by individuals or agencies to seek for another purpose (Johnston, 2014). Quantitative

approach usually used by researchers when the data is numerical data and the methodology of data analysis is mathematical models (Williams, 2007). Moreover, Williams (2007) found that quantitative approach is able to respond the relationship between dependent variable and independent variables.

The sample in this study consists of 108 consumer products public listed companies between 2010 and 2014. Thus, total number of observations is 540. The public listed companies are selected from Bursa Malaysia. The required data are extracted from the annual reports of the selected companies from Bursa Malaysia and Thomson Reuters DataStream. This study comprised of three independent variables (board size, board independence and, board meeting), three control variables (firm size, firm profitability, and firm liquidity) and firm performance as dependent variable which represented ROA and Tobin's Q. The table below shows the summary of variables in this study.

Table 3.1 Variables, Descriptions & Sources

Variable(s)	Proxy	Description	Unit Measurement	Sources
(i) Dependent Variables				
Return on Assets	ROA	An accounting-based measurement reflects past or short-term profitability performance of a company (Klapper & Love, 2002) The earnings before interest and tax (EBIT) divided by total assets.	Ratio (%)	Data Stream

Tobin's Q	TQ	A market-based measurement reflects future or long-term financial performance of a company (Al-Matari, Al-Swidi and Fadzil, 2014; Kapopoulos & Lazaretou, 2007). Market value of ordinary share plus book value of preference share and total liabilities divided by total assets.	Ratio (%)	Data Stream
(ii) Independent Variables				
Board Size	BS	Total number of directors involved in the company (Coles et al., 2008). Nature logarithm of total number of board on the board.	Natural Log	Annual Reports from Bursa Malaysia
Board Independence	BI	Directors who are independent and no interest of the company (Ghaffar, 2014). Total number of independent director divided by total number of director on the board.	Ratio (%)	Annual Reports from Bursa Malaysia
Board Meeting	BM	Total number of meeting held during the financial year of the company (Salin et al., 2010). Total number of meeting held during the financial year.	Time per annual	Annual Reports from Bursa Malaysia

(iii) Control Variables				
Firm Size	FS	Firm size measures the extension of growth of the company (Mehari & Aemiro, 2013). Nature logarithm of total assets.	Natural Log	Data Stream
Firm Profitability	FP	An accounting-based measurement to analyse the ability to generate return to the company's investors represented by return on equity (ROE) (Kania & Bacon, 2005). The net income divided by total equity.	Ratio (%)	Data Stream
Firm Liquidity	FL	An accounting-based measurement to analyse the ability to meet the company's short term liabilities represented by Current Ratio (Kania & Bacon, 2005). Current assets divide by current liabilities.	Ratio (%)	Data Stream

3.3 Sample Design

3.3.1 Target Population

Target population refers to the whole group of individuals which are interested on investigation (Kazerooni, 2001). The target population in this study focused on consumer products sector in Malaysia with the period of 2010 to 2014. There are total 124 consumer products sector companies listed in Bursa Malaysia. After completed the process of filter, only 108 companies have been selected in this study due to there are certain companies' data are missing or incomplete.

Consumer products industry also included Consumer Packaged Goods (CPG), Food and Beverages (F&B), Consumer Durable Goods, and tobacco (Roberts, 2012). In this case, there are some issues and challenges will be faced in the consumer products industry. One of the issues faced by the firms is the keep changing of the consumer demands. This means that the preference of the consumer is changing frequently and firms can get the higher profit if they able to satisfy and address the demand of the consumer. Besides, the firm of the consumer products will face the issue of the shrinking operating margins. This is because they have to cut cost to achieve global price point and ensure the delivery of high quality products at the same time.

From the analyst reports of The Star Online (2013), the result showed that there is a slowdown of the performance in the consumer products industry. The dividend has been compressed to less than 5% from 6% historically. A result of the cool down of the overall consumer sector has been showed in the review of the fourth quarter 2012 although the review had captured the effect of delayed shipment timing for the Chinese New Year period. Retail segment also

report that they have the negative slower-same sales (SSS) growth while the Parkson Holdings Berhad also face a lower SSS with 2.8% for the fourth quarter of 2012.

Nevertheless, Malaysia is known as one of the wealthiest emerging economies in Asia due to the reason that Malaysia gets the third in the rank among ASEAN's economies per capita income of US\$10,000 (Chan, 2014). The retail sector is a main impact on economic development in Malaysia due to the reason that strong purchasing power of upper middle income household in Malaysia. Consumers in Malaysia are more attracted to the international fashion chains which included Uniqlo, Forever 21, Cotton On and Zara. The consumer products industry in Malaysia has opportunities in future since consumers with upper middle income is willing to spend on jewelry, electronic gadgets, watches and personal care goods. Thus, the investigation on the factors that can affect the firm performance among the consumer products industry is important in order to make the improvement for better performance in future. This study is focusing on the internal management instead of the design of the products.

3.3.2 Sampling Technique

E-views 8 is a simple and powerful tool for econometric analysis, forecasting, and statistics. The results allow researchers easily to understand and it able to run data with large sample size. Therefore, E-views 8 software will be applied in this study to run the regression analysis by using the data collected. E-views 8 is able to generate the analysis which consisting of data analysis (e.g., mean, median), diagnostic checking (e.g., autocorrelation, heteroscedasticity, multicollinearity, normality test), panel regression analysis (e.g., pooled OLS,

random effects model, fixed effects model) and empirical results (e.g., R , R^2 , Adjusted R^2).

3.3.3 Sampling Size

Sampling size is an important tool for an empirical study by planning and interpreting research or purpose (Cristofolini & Testoni, 2000). Sampling size refers to the total number of observations drawn from the population. Panel data is referred to as the combination of cross-sectional and time series data and it will be used in this study. It is able to focus on many individuals (e.g., companies, person, and commodities) and very few time periods (Schmidheiny, 2014). The total number of consumer products companies listed in Bursa Malaysia is 124 and the total number of observations is 620. However there are 16 companies will exclude from the sample due to data missing and incomplete, so 108 consumer products firms are to be used in this study. The time periods cover from 2010 to 2014 which is total of 5 years. Therefore, the final observation is 540 (108*5) and will be carried out to determine the relationship between dependent variable and independent variables. Table 3.2 shows the summary of number of observations.

Table 3.2 Summary of Number of Observations

	Number of Firms	Number of Observations
Original Data	124	620 (124 x 5)
Missing Data	16	80 (16 x 5)
After the Filtration Process	108	540 (108 x 5)

According to Table 3.2, there are total 124 listed companies under the consumer products sector are included in this research before the data filtration process is conducted. After undergo the data filtration process, 16 companies are excluded due to the data missing. Eventually, this research includes 108 listed companies with 5 consecutive years, the total research sample size is equal to 540.

3.4 Data Processing

3.4.1 Dependent Variable

There are two main dependent variables included in this research's model which are Return on Assets (ROA) and Tobin's Q (TQ).

Corporate performance

(i) Return on Assets

$$\text{Return on Assets (ROA)} = \frac{\text{Earnings before interest and tax}}{\text{Total Asset}} \quad (3.1)$$

Return on Assets (ROA) acts as the first dependent variable in this research. In line with the research of Vo and Phan (2013) and Niresh and Thirunavukkarasu (2014), corporate performance is measured and represented by the ROA which equivalent with Earnings before Interest and Tax (EBIT) divided by Total Assets. A study conducted by Al-Haddad et al. (2011) defined return on assets (ROA) as the extent of company's ability or efficiency to utilize its assets in generating revenue. It is equal to company's earnings before interest and tax over its total assets and expressed in percentage form. The real performance of

a company can be showed through its earnings and thus earnings before interest and tax are used as denominator in measuring the company's performance (Ponnu, 2008). In addition, according to the research of Klapper and Love (2002) ROA is classified into the accounting-based measurement which reflects past or short term profitability or financial performance of a company. It considers as an effective indicator of the company's profitability as well as provides estimation on the operating and financial performance of the company. Moreover, the main reason that return on assets (ROA) was chose as a measurement to evaluate the corporate performance in this research is because Al-Matari et al. (2014) showed that majority of the studies has used ROA to measure the corporate performance in the study of corporate governance dimensions relation with corporate performance as compared with other accounting-based measurements, such as Return on Equity (ROE), Return on Investment (ROI), Return on Sales (ROS) and Profit Margin (PM).

(ii) Tobin's Q

Tobin's Q =

$$\frac{\text{Market Value of ordinary share} + \text{Total Liabilities} + \text{Book Value of preference share}}{\text{Total Assets}}$$

(3.2)

Tobin's-Q is chosen as the second dependent variable in this research's model. Based on the study of Wolfe and Sauaia (2003), Tobin's-Q can be calculated by using the market value of ordinary share plus book value of preference share and total liabilities divided by total asset of a company. It is an estimator which can be used to estimate the ratio of the market value of assets to the book value of assets (Da Silveira, Leal, Barros & Carvalhal, 2009). According to Kapopoulos and Lazaretou (2007) and Al-Matari et al. (2014), Tobin's Q represents the financial performance of a company in future instead of its past financial performance, it categorized as long term. Higher ratio of Tobin's Q

reflected that a company was successfully deployed its investments to set up a company that is more valuable in terms of its market value than its book value. Besides that, Al-Matari et al. (2014), also pointed out that Tobin's Q is a primary market-based measurements of corporate performance because, it was widely used by the other researchers as compared with other accounting-based measurements for instance, Market Value Added (MVA), Market-to-Book Value (MTBV) and Dividend Yield (DY). The indicator of corporate performance in the study is in line with Yermack (1996), Kiel and Nicholson (2003), and Adams and Mehran (2005).

3.4.2 Independent Variable

There are three independent variables (board size, board independence, and board meeting) and three control variables (firm size, firm profitability, and firm liquidity) are included in this research's model.

(i) Board size

$$\text{Board size} = \text{Natural log of Company's Directors} \quad (3.3)$$

There are two different opinion made by the researchers between the board size and corporate performance which are positive and negative board size-performance effect. In this study, board size of the company is calculated by Natural log of Company's Directors which consistent with the method used in the research of Dang and Nguyen, (2014). This measurement also similar with the method used in the previous studies (eg: Yermack, 1996; Tanna, Pasiouras & Nnadi, 2011; Andres & Lehmann, 2010; Francis et al., 2012).

(ii) Board Independence

$$\text{Board Independence} = \frac{\text{number of independent director}}{\text{number of directors on the board}} \quad (3.4)$$

The method used to calculate board independence in the study is in line with the method used by Kiel and Nicholson (2003), board independence can be measured and represented by the total number of directors who are independent divided by the total number of directors on the board. According to the recommendation by MCCG (2000, Revised 2007) cited in Homayoun and Abdul Rahman (2010), having an equalize membership on board of directors is vital to achieve the objective of enhance the company performance. The independent non-executive directors should account for at least 1/3 of the board membership to ensure that the independent directors are effective enough in the maintenance of good decisions of the company.

(iii) Board Meeting

$$\text{Board Meeting} = \text{Total Number of Board Meeting} \quad (3.5)$$

According to the Malaysian Securities Commission (2007), companies are require to have board meeting regularly for discharging duties and responsibilities. In addition, based on Ntim and Osei (2011) frequency of board meetings is considered to be an important way of expansion of company performance in financial sector, together with the improvement of board effectiveness (Adams & Ferreira, 2009). In this study, meeting of board is represented by the total number of board meeting which consistent with Ntim and Osei (2011) and this measurement also similar with the method used by Francis et al. (2012) and Johl et al. (2015).

3.4.3 Control Variable

(i) Firm Size

$$Firm\ Size = \text{Natural log of total assets} \quad (3.6)$$

This study use Natural logarithm of total asset as a proxy for firm size which in line with the methods used by Guru, Staunton and Shanmugam (2002), Becker-Blease, Kaen, Etebari & Baumann (2010), Pervan and Visic (2012), Swastika (2013), Mehari and Aemiro (2013), Niresh and Thirunavukkarasu (2014), and Johl et al. (2015).

(ii) Firm Profitability

$$Return\ on\ Equity\ (ROE) = \frac{Net\ Income}{Equity} \quad (3.7)$$

Firm profitability can be indicated as an important measure of the successful of a company. The proxy used in the study is line with Kania and Bacon (2005), return on equity (ROE) is used as a proxy for firm profitability which equivalent with net income divided by equity of company. The firms which are better on their corporate governance will have the higher ROE (Brown and Caylor as cited in Sami et al., 2011). Additionally, Dittmar and Mahrt-Smith (2007) suggested that good corporate governance has the significant positive influence on the value of a corporation.

(iii) Firm Liquidity

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad (3.8)$$

A particular level of liquidity is important and indispensable for a company to survive, since the company which is poor in cash control may have the tendency to business failure (Association of Chartered Certified Accountants, 2007). In addition, firm liquidity may have the important influence on the performance of company. The company that possesses the greater liquid asset probably will finance their investments by using these assets since the current assets of the company able to cover all of its current liabilities (Al-Haddad et al., 2011). The indicator of firm liquidity in this research is consistent with Kania and Bacon (2005), the proxy in the measurement of firm liquidity is current ratio which equal to company's current assets divided by its current liabilities. Whether the company is able to attain the short-term debts with its current assets can be measured by current ratio. Higher current ratio is more preferable as compared with the lower one as higher liquidity is the hint for the business to be successful (Ho, n.d.).

3.5 Data Analysis

In this research, the objective is to examine the impact of three board governance variable – board size, board independence and board meeting, and the control variables – firm size (total assets), firm profitability (ROE) and firm liquidity (current ratio) on the performance of a firm during the year 2010 to 2014. This research employs E-Views 8 software to run the estimated panel data regression model and diagnostic checking for econometric problems. This research's full regressions models are as below:

$$\text{Model 1: } ROA = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 FS_{it} + \beta_5 FP_{it} + \beta_6 FL_{it} + \mu_{it} \quad (3.9)$$

$$\text{Model 2: } TQ = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 FS_{it} + \beta_5 FP_{it} + \beta_6 FL_{it} + \mu_{it} \quad (3.10)$$

Where:

ROA = Return on Assets (Firm Performance)

TQ = Tobin's *Q* (Firm Performance)

β_0 = Intercept for regression model

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = Partial regression coefficients

BS = Board Size

BI = Board Independence

BM = Board Meeting

FS = Firm Size

FP = Firm Profitability

FL = Firm Liquidity

μ_{it} = error term

3.5.1 Econometrics Model

3.5.1.1 Panel Data

In the research of Hsiao et al. (1995) cited in Hsiao (2007), the authors state that the panel data is data collection according to the time series observations which combine the cross-sectional dimension and time-series dimension. Due to this reason, panel data bring a benefit of accurate inference of model parameters. This always contains more degree of freedom and sample variability than only the cross-sectional data. Besides, panel data provide greater capacity in capturing the complexity of human behaviour than single cross-section or time series data because panel data conduct more complicated and complex behavioural hypotheses in the testing. Characteristic of panel data that also able to control the omitted variables and uncover the dynamic relationships are the reason lead to it has greater capacity in capturing the complexity of human behaviour. In addition, the computations and statistical inference can be simplified by using panel data through analysis of no stationary inference.

Panel data is the method that studying the study with multiple sites or periodically over the time frame which enable the researchers to undertake the longitudinal analyses in a large variety of fields (Yaffee, 2003). One of the benefits provided by the panel data is controlling for individual heterogeneity which does not conducted in the time series and cross-section studies (Baltagi, 1998). The study of Hsiao et al. (1995) cited in Hsiao (2007) also suggests that the panel data provide more variability. The reason that the researchers prefer use the panel data in the study because it provide more informative data, less co-linearity among the variables and higher efficiency. Panel data also better used for study the dynamics of adjustment. This is because the cross-sectional distributions might hide a multitude of changes. There are different types

included in the panel data which are pooled analysis, fixed effects model and random effects model (Frees, 2004).

3.5.1.2 Fixed Effects Model

Fixed effects model (FEM) is assumed to have one true effect size which shared among all included studies (Borenstein, Hedges & Rothstein, 2007). According to Borenstein et al. (2007), the only error of FEM is the random error within the studies and this can be reduced when the sample size is large enough. The error will tend to zero when then sample size increased.

According on Paul (2011), there are few possibilities on the assumptions on intercept, error term and slope coefficient on FEM. The possibilities are as below:

1. Assume the intercept and slope of coefficients are constant across time and space and the error term captures vary over time and individuals. This approach is to overlook the time dimensions and space of the pooled data and just estimate the usual OLS regression.
2. The slope of coefficients is constant but the intercept varies over individuals.

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it} \quad (3.11)$$

The regression above is known as Least Square Dummy Variable (LSDV) or Fixed effects model (FEM). This can be done by the dummy variable technique, the model is as below:

$$Y_{it} = \alpha_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha_4 D_{4i} + \beta_2 X_{2it} + \beta_3 X_{3it} + \mu_{it} \quad (3.12)$$

$D_{2i} = 1$ if the observation is equal to the test subject 1, 0 otherwise; $D_{3i} = 1$ if the observation is equal to the test subject 2, 0 otherwise; $D_{4i} = 1$ if the observation is equal to the test subject 3, 0 otherwise.

3. The slope of coefficients is constant but the intercept different over individuals and time.
4. All coefficients (the intercept and slope of coefficients) difference over individuals. In this case, the intercepts and the slope of coefficients are different for all individual or cross section units.
5. The intercept and slope of coefficients are different over individuals and time.

3.5.1.3 Random Effects Model

According to the Clark and Linzer (2012), the coefficient of \hat{a}_j are not estimated directly in the random effects model of panel data unlike the fixed effects model. Equation 3.14 which is the random effects estimator is equivalent to Equation 3.13 which is the fixed effects estimator when study assume that $\alpha_j \sim N(\mu_\alpha, \infty)$ rather than $\alpha_j \sim N(\mu_\alpha, \sigma^2 \alpha)$. This means that the random effects specification models the intercepts as arising from a distribution with a finite variance σ_α^2 , while the fixed effects specification assumes the intercepts are distributed with infinite variance.

$$y_i = \sum_{j=1}^j a_j z_j [i] + \beta x_i + \varepsilon_i \quad \varepsilon_i \sim N(0, \sigma^2 y). \quad (3.13)$$

$$y_i = \alpha_j [i] + \beta x_i + \varepsilon_i \quad \alpha_j \sim N(\mu_\alpha, \sigma^2 \alpha) \quad \varepsilon_i \sim N(0, \sigma^2 y). \quad (3.14)$$

The reason that this technique is applied by researchers frequently is because its direct economic interpretability as decision making process of individuals (Gao, Li & Liang, 2015). Besides, one great benefit of the random effects model of panel data is it takes into account the unobserved heterogeneity and variable by taking the difference between different time periods and get fixed effects estimator for linear models easily.

3.5.1.4 Poolability Test

Poolability test is to explain the restricted model and unrestricted model whereby the restricted model is with the same parameter over time and unrestricted model is with different parameter over time (Baltagi, 2005).

Null Hypothesis (H_0): $\beta_i = 0$, where $i = 1, 2, 3, \dots$

Alternative Hypothesis (H_1): At least one $\beta_i \neq 0$, where $i = 1, 2, 3, \dots$

Decision Rule: Reject null hypothesis if the probability value (p-value) is less than 10%, otherwise do not reject null hypothesis.

Test Statistic:
$$F = \frac{(R_{REM}^2 - R_{Pooled}^2) / (k_{REM} - k_{Pooled})}{(1 - R_{REM}^2) / (n - (K_{FEM} + 1))} \quad (3.15)$$

If the null hypothesis is rejected, this indicates that the pooled OLS are no longer applied.

3.5.1.5 Breusch and Pagan Lagrange Multiple Test

Breusch-Pagan Lagrange Multiple (BPLM) Test is to examine whether any random effects exists in the regression (Park, 2011). Lagrange Multiple (LM) statistic is following the chi-square distribution with 1 degree of freedom. If the null hypothesis is rejected, it can be conclude that REM is preferable.

Null Hypothesis (H_0): $\sigma_i^2 = 0$ where $i = 1, 2, 3, \dots$

Alternative Hypothesis (H_1): At least 1 $\sigma_i^2 \neq 0$ where $i = 1, 2, 3, \dots$

Decision Rule: Reject null hypothesis (H_0) if the probability value (p-value) is less than 10%, otherwise do not reject null hypothesis (H_0).

Test Statistic:
$$\lambda = \frac{NT}{2(T-1)} \left(\frac{S_1}{S_2} - 1 \right)^2 \quad (3.16)$$

3.5.1.6 Hausman Test

According to Paul (2011), this researcher mentions that the way to choose between FEM and REM is based on Hausman test and the null hypothesis of this test is both the estimators of FEM and REM do not differ substantially. If the test refuses the null hypothesis, it concluded that the REM is not appropriate while FEM is preferred. This is because of the random effects are probably correlated with other regressors (Gujarati & Porter, 2009).

Null Hypothesis (H₀): REM is consistent and efficient
 Alternative Hypothesis (H₁): REM is inconsistent and inefficient
 Decision Rule: Reject null hypothesis is the probability value (p-value) is less than 10%, otherwise do not reject null hypothesis.

Test Statistic:
$$t = (\beta_{FE,k} - \beta_{RE,k})' \widehat{W}^{-1} (\beta_{FE,k} - \beta_{RE,k}) \sim X^2(k)$$

Where $\widehat{W} = Var[\beta_{FE,k} - \beta_{RE,k}]$
 $= Var(\beta_{FE,k}) - VAR\beta_{RE,k}$

$$t = \frac{\beta_{FE,k} - \beta_{RE,k}}{[se(\beta_{FE,k})^2 - se\beta_{RE,k}^2]^{\frac{1}{2}}} \quad (3.17)$$

Let $\beta_{FE,k}$ = Fixed Effects estimate, $\beta_{RE,k}$ = Random Effects estimate

If the null hypothesis is rejected, this indicates that this research should choose fixed effects model (FEM) rather than random effects modal (REM) as the estimators of REM are inconsistent and inefficient. However, if the null hypothesis is not rejected, this indicates that this research should choose REM as the estimators of REM are consistent and efficient.

3.5.2 Diagnostic Checking

3.5.2.1 Normality Test

Whether a data set can be considered as resembles to the normal distribution, it can be determined by using the normality test. The statistical tests which involved normal distribution and t-distribution can be implemented on data set, if the data set is able to model through the normal distribution. For example, t tests, F tests, Z test and Chi-Square tests (Harmon, 2011). The Classical Normal Linear Regression Model (CNLRM) assumes that error term is normally distributed with zero mean value of the error term, the variance of error term is constant, and the error terms are uncorrelated with each other (Gujarati & Porter, 2009). Jarque-Bera test is a normality test has become very familiar nowadays and it is included in some of the statistical packages. It is a large samples test that on the basis of OLS residuals. The Jarque-Bera test was computes the coefficients of skewness and kurtosis of the random variable such as ordinary least squares (OLS) residuals. Skewness can be defined as a measurement that used to measure the asymmetry of probability distribution function (PDF), while kurtosis is used to measure how flat or tall the PDF in regard to the normal distribution. Skewness is 0 and Kurtosis is 3 for the normally distributed variable. The test statistic of Jarque-Bera test is defined as:

$$JB = n \left[\frac{S^2}{6} + \frac{(k-3)^2}{24} \right] \quad (3.18)$$

Where, n= sample size, S= skewness, K= kurtosis.

Reject the null hypothesis for the normality, if p value is less than the chosen significance level (Gujarati & Porter, 2009). The hypothesis testing of Jarque-Bera test and decision rule are defined as:

Null Hypothesis (H_0): $\chi \sim N(\cdot)$

Alternative Hypothesis (H_1): $\chi \neq N(\cdot)$

Decision rule: Reject H_0 , if p-value is less than the significance level of 0.05, otherwise do not reject H_0 .

3.5.2.2 Multicollinearity

Multicollinearity can be defined as some or all of the independent variables are highly correlated with each other. It usually happen when there is a large number of explanatory variables are contained in the regression model because they may measuring the same phenomena or concepts (Jeeshim & Kucc625, 2002). Multicollinearity will be a big issue for the purpose of understands how the independent variables influence the dependent variable. The first problem is misleading of p value; the p value may be high even for the variable which is important. The next problem is the confidence interval tends to be larger. It can even including zero; this means one cannot even be confident whether the changes in independent variables are related with the change in dependent variable. Besides, the over-defined model, constraints in the population that being sampled, data collection method, and also the model specification can be indicated as the sources of multicollinearity (Paul, 2006).

According to Gujarati and Porter (2009), appears of multicollinearity is because of there is a higher correlation between the dependent variable and independent variables. One of the methods that can be used to figure out which independent variable is highly correlated with another in the regression model is to measure the corresponding r-square. A model suffers from multicollinearity when it has high r^2 , significant F-statistics but insignificant t-ratio. As stated in Bellas (2012), high correlation coefficients (r) between the independent variable can be indicated as the detection of multicollinearity. For the decision rule, there is multicollinearity problem if r is exceeds 0.8; there is

not exist any serious multicollinearity problem when r is not exceeds 0.8 (Gujarati & Porter, 2009).

There is no definite standard to assess the multicollinearity of the linear regression model. However, the judgment can be made by checking for the related statistics such as variance inflation factor (VIF) and tolerance (TOL). VIF and TOL are defined as $1/(1-r^2)$ and $1-r^2$ (Jeeshim & Kucc625, 2002). When VIF tend towards 10, it indicates that the independent variables have serious multicollinearity (Gujarati & Porter, 2009). When TOL is close to zero, it means the multicollinearity may be a menace while there is just a little multicollinearity if TOL is close to one (Williams, 2005).

3.5.2.3 Autocorrelation

Autocorrelation is defined as the error term for any observations is related to the error term of other observations ordered in time or space. In specification, there are higher values of t-statistics and F-statistics due to the reason that the presence of autocorrelation makes the OLS method to underestimate the variances (Gujarati & Porter, 2009). Autocorrelation problem does not occur in cross sectional data, it is because the individual units are not related with one another. However, autocorrelation problem is generally occurs in time series data due to the time-dependent related with inertia in the economic data (Alonso, n.d.). Durbin-Watson test is a test that widely used to detect the first order autocorrelation problem in the regression analysis. This test is able to use for the normal distribution if the sample size is large. Its critical value is relies on the sample size and number of independent variables (Akter, 2014). The hypothesis testing of Durbin-Watson test is defined as:

Null Hypothesis (H_0): $\rho = 0$

Alternative Hypothesis (H_1): $\rho \neq 0$

According to Ayyangar (2007), the decision rule of Durbin-Watson test for autocorrelation is defined as there is no autocorrelation if the Durbin-Watson value is between 1.5 and 2.5.

3.5.2.4 Heteroscedasticity

It can be considered as homoscedasticity when the error term has equal variance. While, when the variance of error term is unequal it is considered as heteroscedasticity. Generally, heteroscedasticity will occur in the cross sectional data rather than in the time series data (Gujarati & Porter, 2009). In reality, the existence of heteroscedasticity will cause the OLS method to undervalue the variances as well as the standard error and thus causes the result of t-test and F-test to become higher as compared with expected. Besides, it will affect the reliability on the hypothesis testing since the null hypothesis will be rejected frequently. The problem of heteroscedasticity happens is due to wrong data conversion, miss-specified the model, outlying of the observation and human behaviours (Gujarati & Porter, 2009).

As stated in Gujarati and Porter (2009), there are several tests which can be used to detect the problem of heteroscedasticity. These tests include Park test, Glejser test, Breusch-Pagan test and White's test. The significance of the auxiliary regression can be indicated as the basis of White's test, which involves an ordinary residuals squared as left hand side variable and the regressors which contains of higher orders and cross-products as the right hand side variables (White, 1980). For the Breusch-Pagan test, an ordinary residuals squared will be used as the left hand side variable and partly or totally of the regressors will be used as the right hand side variables are required to be estimated (Breusch & Pagan, 1979).

Other than that, the problem of heteroscedasticity can be eliminated through the application of Generalized Least Squares (GLS) and Weighted Least Squares (WLS) when the variance of error term is known. The variance of error term of GLS will become constant with value equal to 1 in the end whilst the variance of error term of WLS will become constant, this can be indicated as the major dissimilar between GLS and WLS. With the purpose to solve the heteroscedasticity problem, the effects of miss-specified the model and outlying of the observation can be minimized by increase the sample size. As long as the sample size is large, the explained variable and explanatory variables are tends to be normal and hence error term will be normally distributed (Gujarati & Porter, 2009).

Moreover, White's Heteroscedasticity-consistent Variances and Standard Error can be applied to eliminate the heteroscedasticity problem when variance of error term is unknown through amend the standard error of the OLS estimators and proceed to the inferential statistic according to the standard error (Gujarati & Porter, 2009).

In addition, according to Skoglund and Karlsson (2001), in the econometric analysis on the panel data non-observed heterogeneity normally can be managed through involving the random or fixed effects in the model.

3.6 Conclusion

The board governance variables and the control variables were obtained from Database and company's annual reports. After the filtration, a total of 108 companies of consumer products listed in Bursa Malaysia were being taken into account in this research and the year of this research started from year 2010 to year 2014. There were two models that will be determine in this report and will undergo three empirical tests- the Poolability Test, the Breusch-Pagan Lagrange Multiple Test and the Hausman Test

to estimate the preferable type of panel data model. E-views 8 software will be used to estimate the regression model and diagnostic checking for economic problem. The result will be discussed further in the following chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, the research is focus on data analysis for 108 consumer products listed companies in Bursa Malaysia from 2010 to 2014 which including the explanation of descriptive analysis, diagnostic checking and regression analysis on the results produced by using E-views 8.

4.1 Descriptive Statistic

Table 4.1 below illustrates the summary of descriptive analysis of two dependent variables and six key variables include three control variables. This table reported by using a sample with 108 consumer products companies listed on Bursa Malaysia within the period from 2010 to 2014. The following section is going to interpret each variable by comparing previous results.

Table 4.1: Descriptive Analysis of All Variables (2010 – 2014)

Variables	Obs	Mean	Median	Maximum	Minimum	Standard Std. Dev.
ROA (%)	540	10.3140	7.7811	554.7109	-74.8237	26.8394
TQ (%)	540	55.6327	53.1605	193.2095	7.4625	27.4729
BS	540	7.2352	7.0000	17.0000	3.0000	1.9763
BI	540	0.4452	0.4286	1.0000	0.1667	0.1220
BM	540	4.9333	5.0000	17.0000	1.0000	1.3385
LOGFS	540	5.4441	5.2810	7.2695	4.4446	0.5071
FP (%)	540	11.6382	8.4100	431.1700	-59.2500	28.1507
FL	540	3.2006	2.2750	33.4300	0.0000	3.5449

Notes: ROA (%) = Return on Assets Percentage; TQ (%) = Tobin's Q Percentage; BS = Board Size; BI = Board Independence; BM = Board Meeting; LOGFS = Logarithm Firm Size; FP (%) = Firm Profitability Percentage; FL = Firm Liquidity

4.1.1 ROA

The mean value of ROA in this research is 10.314%. The value is approximate to the average value of 10.79% as reported by Niresh and Thirunavukkarasa (2014) who observes 15 manufacturing listed firms that listed on CSE from 2008 to 2012. The same result from the research of Vo and Phan (2013), the mean value has recorded as 11.8% from the observation of 77 randomly selected firms listed on Ho Chi Minh City Stock Exchange (HOSE) over 6 years period from 2006 to 2011, which is relatively closes with the mean value in this research. The value is comparatively higher than the 5.439% mean value reported in the research of Manawaduge and Zoysa (2013) who observes 157 non-financial Sri Lankan companies that listed on the CSE from 2000 to 2008. Moreover, the mean value in the study of Wu et al. (2009) has recorded as

7.451 % by using the data of all the listed and over-the-counter (OTC) firms in Taiwan from 2001 to 2008 (exception of banking, finance and insurance industries) and the mean value is lower as compare with this study.

4.1.2 Tobin's Q

Tobin's Q is one of the dependent variables in this research. It is calculated as market value of ordinary share plus the total liabilities and book value of preference shares then divided by total assets of a firm. The value of mean and median of Tobin's Q in Malaysia's consumer products sector is 55.6327% and 53.1605% respectively. The range of minimum and maximum for Tobin's Q is recorded at 7.4625% to 193.2095%. The mean value of Tobin's Q in this research is higher than the mean value of 2.184% reported in the research of Kapopoulos and Lazaretou (2007) which using the data for 175 Greek listed firms at Athens Stock Exchange Market for the year 2000. According to Adams and Mehran (2005), reported the mean value of Tobin's Q only 1.05% based on 35 bank holding companies which lower than this research.

4.1.3 Board Size

Board size is calculated by using natural logarithm of company's directors, LOGBS, as log board size is able to minimize skewness problem (Sulong & Nor, 2010). This research shows the average value and median of 7.2352 and 7 members respectively by taking out the natural log. A Bangladeshi study, Rashid et al. (2010) reported the average board size of 7 members by using 90 non-financial firms selected from Dhaka Stock Exchange with the period between 2005 and 2009 where approximate with the result reported in this study. In the same research period (2005-2009), Rehman and Shah (2013) reported a similar result with Rashid et al. (2010), the average board size of 7

members as measured by 80 non-financial firms listed on Karachi Stock Exchange. Furthermore, the value of average board size of 6.75 members reported by Choi, Park and Yoo (2007) cover the period from 1999 to 2002 together with the early researches (Rashid et al., 2010; Rehman & Shah, 2013) are relatively close with the result in this study.

4.1.4 Board Independence

On average, the numbers of independent directors in corporate board for the firms is 44.52% (0.445214). The Malaysian consumer products companies is complied with the requirement of MCCG (2000, Revised 2007) cited in (Homayoun & Abdul Rahman, 2010), which the board consist of at least 1/3 which means 33.33% of the directors on board to be the outside directors. The result of this study also in line with Nor et al. (2014), who report the average number of independent directors is 43.81% by examining 169 Malaysian companies over a period of 2009 and 2010. Rehman and Shah (2013) report a higher average value of independent directors which is 56.10% (0.561039) in a study on the Pakistan market. Furthermore, the median of board independence is 42.86% (0.4286), with the minimum of 16.67% (0.166667) to maximum of 100% (1.000000).

4.1.5 Board Meeting

The average of board meeting held during a fiscal year is 4.9333 times. No firm less than 1 time of meeting and maximum times of meeting is 17 reported by this research. Consistent with the previous Malaysian study of Johl et al. (2015) concluded the average board meeting is 5.3 times which relatively close to the result. In the same study, the minimum and maximum of board meeting are 0 and 24 respectively. On the other hand, the result indicated a low average

value compare to 7.66 times which reported in Horvath and Spirollari (2012) with the sample of 136 U.S. firms in 2005 to 2009 selected from S&P 500 index. The value also lower as compared to the value reported by Brick and Chidambaran (2007) and Tai (2015) which is 7.3 times and 7.16 times respectively. Francis et al. (2012) reported the average board meeting of 8.06 times. It is high compare to this study result with 4.9333 times. It may due to companies are going to meet more frequent to solve the upcoming problems and events during the global financial crisis which is within 2007 to 2009 (Francis et al., 2012).

4.1.6 Firm Size

Firm size, LOG FS, is used as control variable and calculated by using natural logarithm of total asset in this study. The study's result showed that the value of mean, median and standard deviation of firm size are 5.4441, 5.2810 and 0.5071 respectively. The minimum and maximum value of firm size is range from 4.4446 to 7.2695. The mean value showed in this study is relatively close with Vinasithamby (2015). The author revealed that the mean value for firm size is 5.3763 from the observation for 150 listed companies in Sri Lankan hotels and travels sector over the periods from year 2008 to 2012. However, Niresh and Thirunavukkarasu (2014) indicated that the average firm size of 8.97 from the sample of 15 companies listed in CSE over the periods from year 2008 to 2012 and it is higher than the result of this research.

4.1.7 Firm Profitability (Return on Equity)

An approximate of firm profitability, ROE, on average is 11.6382%, which is higher than the 2.36% reported by Sami et al. (2011) using 412 public listed

firms in Shanghai Stock Exchange or Shenzhen Stock Exchange from 2001 to 2003. The median and standard deviation are 8.41% and 28.1507% respectively. Based on the result of Pugliese et al. (2014), the median and standard deviation on ROE are 6.15% and 18.48% from 2000 top Italian companies from year 2001 to 2003.

4.1.8 Firm Liquidity (Current Ratio)

The average of the firm liquidity in this study is 3.2006 times which is higher than the study of Oshoke and Sumaina (2015) which concluded that 1.01 times of liquidity ratio in firm of Nigeria from 2009 to 2013. For the maximum and minimum of the firm liquidity, the results from this research are 33.43 and 0 respectively which is inconsistent with the result of maximum with 23.31 times and minimum with -0.035 times showed in the study of Sinthupundaja and Chiamdamrong (2015). Standard deviation in the research of Khidmat and Rehman (2014) is 151.92 which is higher than the standard deviation in this study (3.5449). The possible reasons that make a big difference between the previous study and current study are different country selected which are Pakistan and Malaysia or the financial year used are different.

4.2 Diagnostic Checking

4.2.1 Normality Test

Table 4.2 Jarque-Bera Test

No. of Firms: 108	Model 1	Model 2
No. of Observation: 540	Return on Assets (ROA)	Tobin's Q (TQ)
Hypothesis	$H_0: \chi \sim N(.)$	$H_1: \chi \neq N(.)$
Jarque-Bera	1.5483	621.3889
P-value	0.0000***	0.0000***
Results	Not normally distributed	Not normally distributed

Notes: * Significant level at 10%, ** Significant level at 5%, *** Significant level at 1%

The result of normality test as show in Table 4.2, the error terms in Model 1 and 2 are not normally distributed. The p-value of the Jarque-Bera test for both Model 1 and 2 are significant at level of 1%. These results conclude that null hypothesis is being rejected as well as indicates the error terms are not normally distributed. However, according to the theory of Central Limit Theorem (CLT), the sample is tend to be normally distributed when the sample of a research is consist of the sample size that exceed 100 observations (Gujarati & Porter, 2009). The Model 1 and 2 are assumed to be normally distributed since the sample size of this research consists of 540 observations and therefore the assumption of CLT has been fulfilled.

4.2.2 Multicollinearity

Table 4.3 Pair-wise Correlation Matrix

Variables	ROA	TQ	LOGBS	BI	BM	LOGFS	FP	FL
ROA	1.000000	-	-	-	-	-	-	-
TQ	-0.170977	1.000000	-	-	-	-	-	-
LOGBS	0.088598	-0.256430	1.000000	-	-	-	-	-
BI	0.077448	0.172209	-0.451126	1.000000	-	-	-	-
BM	0.016904	-0.001767	0.151655	0.045958	1.000000	-	-	-
LOGFS	0.109640	-0.582862	0.250157	-0.069623	0.210705	1.000000	-	-
FP	0.891419	-0.277497	0.130541	0.021663	-0.011730	0.241404	1.000000	-
FL	0.127843	-0.133978	-0.133537	0.097575	-0.070536	-0.064238	0.044352	1.000000

Notes: ROA = Return on Assets; TQ = Tobin's Q; LOGBS = Logarithm Board Size; BI = Board Independence; BM = Board Meeting; LOGFS = Logarithm Firm Size; FP = Firm Profitability; FL = Firm Liquidity

The pair-wise test correlation coefficient has been used in this research for detecting the problem of multicollinearity. According to Gujarati and Porter (2009), the problem of multicollinearity exist when the correlation of pair of independent variables are more than 0.8. The result of the test as show in Table 4.3, return on assets (ROA) and firm profitability (FP) are the pairing which has the highest pair-wise correlation coefficient of 0.891419. The results conclude that there is a serious multicollinearity problem between ROA and FP. Therefore, FP which is an independent variable of this research will be removed in order to solve the problem of multicollinearity. The new equation for the Model 1 (ROA) after removed the FP is show as below:

$$ROA = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BM_{it} + \beta_4 FS_{it} + \beta_5 FL_{it} + \varepsilon_{it} \quad (4.1)$$

Table 4.4 VIF for each Independent Variable

Independent Variables	R²	VIF = $\frac{1}{1 - R^2}$	Conclusion
LOGBS	0.283428	1.395533	No Serious Multicollinearity
BI	0.225657	1.291417	No Serious Multicollinearity
BM	0.077893	1.084472	No Serious Multicollinearity
LOGFS	0.141216	1.164437	No Serious Multicollinearity
FP	0.080449	1.087487	No Serious Multicollinearity
FL	0.027422	1.028195	No Serious Multicollinearity

Notes: ROA = Return on Assets; TQ = Tobin's Q; LOGBS = Logarithm Board Size; BI = Board Independence; BM = Board Meeting; LOGFS = Logarithm Firm Size; FP = Firm Profitability; FL = Firm Liquidity

Based on the result in Table 4.4, the value of VIF for all independent variables are less than 10. This indicates that no serious multicollinearity

problem occurs in this regression model. These estimators are efficient, consistent and unbiased.

4.2.3 Autocorrelation

Table 4.5 Durbin-Watson Test

No. of Firms: 108	Model 1	Model 2
No. of Observation: 540	Return on Asset (ROA)	Tobin's Q (TQ)
Hypothesis	$H_0: \rho = 0$	$H_1: \rho \neq 0$
Durbin-Watson Statistic	1.966669	1.946289
(d)		
Results	No autocorrelation	No autocorrelation

The result of Durbin-Watson test as show in Table 4.5, the Durbin-Watson d-value is 1.966669 for Model 1 and 1.946289 for Model 2. According to Ayyangar (2007), the decision rules for Durbin-Watson test for autocorrelation are defined as there is no autocorrelation if the Durbin-Watson value is between 1.5 and 2.5. Since the Durbin-Watson d-value for both Model 1 and Model 2 are in between 1.5 to 2.5, therefore these results conclude that alternative hypothesis is being rejected as well as conclude the autocorrelation problem do not exist in both models.

4.3 Panel Data Analysis and Hypothesis Testing

4.3.1 Poolability Hypothesis Test

Table 4.6: Poolability Test

No. of Firms: 108	Model 1	Model 2
No. of Observation: 540	Return on Assets (ROA)	Tobin's Q (TQ)
Cross Section F-Statistic	8.970773***	14.115363***
Decision	Proceed to BPLM test	Proceed to BPLM test

Notes: * Significant at 10%, ** Significant at 5%, *** Significant at 1%

Based on the E-views 8 result on Table 4.6, the cross section F-statistic for Model 1 and Model 2 are 8.970773 and 14.115363 respectively. It is significant at level of 1 %. Therefore, this study rejects the null hypothesis whereby the pooled OLS is no longer apply at 1% significant level. The test will proceed to BPLM test for further decision to select REM or Pooled OLS model.

4.3.2 Breusch-Pagan Lagrange Multiple Test

Table 4.7: Breusch-Pagan Lagrange Multiple Test

No. of Firms: 108	Model 1 Return on	Model 2 Tobin's Q (TQ)
No. of Observation: 540	Assets (ROA)	
Breusch-Pagan	21.15183***	529.9980***
Lagrange Multiple Test		
Decision	Proceed to Hausman test	Proceed to Hausman test

Notes: * Significant at 10%, ** Significant at 5%, *** Significant at 1%

Based on the E-views 8 result on Table 4.7 of BPLM test for Model 1 and Model 2 are 21.15183 and 529.9980 respectively and significant at level of 1%. Therefore, this study rejects the null hypothesis whereby the REM is preferable at 1% significant level. The test will be proceed to Hausman Test for further decision to select REM or FEM.

4.3.3 Hausman Test

Table 4.8: Hausman Test

No. of Firms: 108	Model 1 Return on	Model 2 Tobin's Q (TQ)
No. of Observation: 540	Assets (ROA)	
Chi-square Statistic	171.212102***	14.526350**
Decision	Fixed effects model (FEM)	Fixed effects model (FEM)

Notes: * Significant at 10%, ** Significant at 5%, *** Significant at 1%

Based on the result of Chi-square Statistic in Table 4.8, the result shows that the Model 1 is significant at level of 1% and FEM is preferable. Meanwhile, Model 2 is significant at 5% significant level and FEM is preferable. Therefore, as conclusion, null hypothesis is rejected and FEM is more consistent and efficient.

4.4 Regression Analysis

4.4.1 R-Square

Table 4.9: R-Square

No. of Firms: 108	Model 1 Return on	Model 2 Tobin's Q
No. of Observation: 540	Assets (ROA)	(TQ)
R²	0.381845	0.873538
Adjusted- R²	0.219707	0.839993

4.4.1.1 Coefficients of Determination, R-squared

R² indicates the proportion of dependent variable explained by the independent variables jointly. The range of coefficient of determination is between 0 and 1 and R² does not take into account the degree of freedom. From the Table 4.9, Model 1 and Model 2 with R² of 0.381845 and 0.873538 respectively, which means that for Model 1 there are only 38.1845% of the variation in firm performances can be explained by the variation in board size, board independence, board meeting, firm size and firm liquidity. For Model 2, there are 87.3538 % of the total variation in firm performances can be explained by

the variation in board size, board independence, board meeting, firm size, firm profitability and firm liquidity.

4.4.1.2 Coefficients of Determination, Adjusted R-squared

The adjusted R^2 can be referring as modifies R^2 which take into account the degree of freedom. Adjusted R^2 increase in value as the new variable included is important and it value decrease as the new variable is unimportant. From the Table 4.9, Model 1 with adjusted R^2 of 0.219707 which indicates that only 21.97 % of the total variation in firm performances can be explained by the variation in board size, board independence, board meeting, firm size and firm liquidity after the degree of freedom is taken into account. Following with Model 2, the model with adjusted R^2 of 0.839993 indicating that 84 % of the total variation in firm performances can be explained by the variation in board size, board independence, board meeting, firm size, firm profitability and firm liquidity after the degree of freedom is taken into account.

4.4.2 F-Statistics

Table 4.10: F-Statistic

	Hypothesis	Decision Rule	P -value	Decision
Model 1 Return on Assets (ROA)	$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 : At least one of the $\beta_i \neq 0$ where $i= 1, 2, 3, 4, 5$	Reject H_0 , If P-value < 0.10, Otherwise, do not reject H_0 .	0.0000***	Reject H_0
Model 2 Tobin's Q (TQ)	$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$ H_1 : At least one of the $\beta_i \neq 0$ where $i= 1, 2, 3, 4, 5, 6$	Reject H_0 , If P-value < 0.10, Otherwise, do not reject H_0 .	0.0000***	Reject H_0

Notes: (i) * Significant level at 10%, ** Significant level at 5%, *** Significant level at 1%

(ii) Where Model 1: β_1 =Board Size (BS); β_2 = Board Independence (BI); β_3 = Board Meeting (BM); β_4 =Firm Size (FS); β_5 = Firm Liquidity (FL)

(iii) Where Model 2: β_1 =Board Size (BS); β_2 = Board Independence (BI); β_3 = Board Meeting (BM); β_4 =Firm Size (FS); β_5 = Firm Profitability (FP); β_6 = Firm Liquidity (FL)

F-Statistics is used to examine whether a group of variables are jointly significant. Table 4.10 shows that Model 1 and Model 2 have a decision of reject H_0 , since both model with the p –value of 0.000 which is less than 0.01 (significant level at 1%). This indicating at least one of the independent variables in Model 1 (e.g., BS, BI, BM, FS, or FL) is significant to explain the firm performance (ROA) at the significant level of 1%. Similar to Model 2, at least one of the independent variables (e.g., BS, BI, BM, FS, FP, or FL) is significant to explain the firm performance (Tobin's Q) at significant level of 1%.

4.4.3 T-Statistics

Model 1 (ROA)

Table 4.11: T-test (Model 1)

Independent Variables	Hypothesis	Decision Rule	P -value	Decision	Conclusion
Board Size (BS)	$H_0: \beta_1 = 0$ $H_{1a}: \beta_1 \neq 0$	Reject H_0 , If P -value < 0.10, Otherwise, do not reject H_0 .	0.0183**	Reject H_0	Board size does significantly influence the firm performance.
Board Independence (BI)	$H_0: \beta_2 = 0$ $H_{2a}: \beta_2 \neq 0$	Reject H_0 , If P -value < 0.10, Otherwise, do not reject H_0 .	0.0032***	Reject H_0	Board independence does significantly influence the firm performance.
Board Meeting (BM)	$H_0: \beta_3 = 0$ $H_{3a}: \beta_3 \neq 0$	Reject H_0 , If P -value < 0.10, Otherwise, do not reject H_0 .	0.6572	Do not reject H_0	Board meeting does insignificantly influence the firm performance

Notes: * Significant at 10%, ** Significant at 5%, *** Significant at 1%

Model 2 (Tobin's Q)

Table 4.12: T-test (Model 2)

Independent Variables	Hypothesis	Decision Rule	P - value	Decision	Conclusion
Board Size (BS)	$H_0: \beta_1 = 0$ $H_{1b}: \beta_1 \neq 0$	Reject H_0 , If P-value < 0.10, Otherwise, do not reject H_0 .	0.3316	Do not reject H_0	Board size does insignificantly influence the firm performance
Board Independence (BI)	$H_0: \beta_2 = 0$ $H_{2b}: \beta_2 \neq 0$	Reject H_0 , If P-value < 0.10, Otherwise, do not reject H_0 .	0.5944	Do not reject H_0	Board independence does insignificantly influence the firm performance
Board Meeting (BM)	$H_0: \beta_3 = 0$ $H_{3b}: \beta_3 \neq 0$	Reject H_0 , If P-value < 0.10, Otherwise, do not reject H_0 .	0.0868*	Reject H_0	Board meeting does significantly influence the firm performance

Notes: * Significant at 10%, ** Significant at 5%, *** Significant at 1%

T-Statistics is used to examine whether the dependent variable has significant relationship with each independent variable. According to the Table 4.11 (Model 1), the result indicates that the independent variables board size (BS)

and board independence (BI) do significantly influence the firm performance (ROA) respectively. However, the result also shown that the board meeting (BM) is insignificantly influences the firm performance (ROA). Based on the Table in 4.12 (Model 2), board size (BS) and board independence (BI) do insignificantly influence the firm performance (Tobin's Q). Nevertheless, board meeting (BM) will bring significant impact to the firm's performance (Tobin's Q) respectively.

Table 4.13: T statistics for Model 1 and 2

Independent Variables	Model 1 Return on Assets (ROA)	Model 2 Tobin's Q (TQ)
Board Size (BS)	61.5143** (25.9815)	-11.7839 (12.1230)
Board Independence (BI)	59.9671*** (20.2304)	-5.0431 (9.4636)
Board Meeting (BM)	-0.6563 (1.4777)	1.1759* (0.6852)
Firm Size (FS)	-45.7617*** (12.9142)	-45.0547*** (6.0944)
Firm Profitability (FP)		-0.0643** (0.0268)
Firm Liquidity (FL)	2.5146*** (0.6433)	-0.6214** (0.3011)
R-squared	0.381845	0.873538
Adjusted R -squared	0.219707	0.839993
Poolability Statistic	8.970773***	14.115363***
Breusch-Pagan Lagrange Multiple Statistic	21.15183***	529.9980***
Hausman Statistic	171.212102***	14.526350**
Durbin-Watson Statistic	1.9667	1.946289

Notes: * Significant level at 10%, ** Significant level at 5%, *** Significant level at 1%

4.4.3.1 Board Size (BS)

In the Model 1, board size (BS) and firm performance is positive and significant with the coefficient 61.5143. This shows that the increase in the board size of the firm will lead the improvement of the firm performance. As

example, firm performance will increase by 61.5143% if there is 1% increase in the board size, *ceteris paribus*. At the same time, the result shows negative insignificantly relationship with the coefficient of -11.7839 in Model 2. This implies that there will a decline in the firm performance if there is increasing in the board size. Given that there will have a decrease of 11.7839% if there is 1% increase in the board size, *ceteris paribus*, but the board size from Model 2 has no influence on firm performance in this study.

4.4.3.2 Board Independence (BI)

The board independence (BI) and the firm performance show a positive significant correlation with the coefficient of 59.9671 in the Model 1. This indicates that the firm performance will increase following by increase of the board independence. Given that the board independence increased by 1% will lead to 59.9671% increase in the firm performance, *ceteris paribus*. While, in Model 2, there are negative insignificantly with the coefficient of -5.0431. From the result, it reported that the increase in the board independence within the firm will cause the firm performance to decline. As example, the firm performance will drop by 5.0431% if there is 1% increase in the board independence, *ceteris paribus*, but the board independence from Model 2 does not has any impact on firm performance in this study.

4.4.3.3 Board Meeting (BM)

From the Table 4.13, the results show that the board meeting (BM) and the firm performance has a negative insignificant correlation from the result for Model 1. The coefficient of the board independence is -0.6563. This means that the number of the board meeting unable to affect the firm performance. When there are many boards meeting held or carried out within the firm, the

firm performance also cannot be improved. Given that, the firm performance will decrease by 0.6563% if there is 1% increase in the number of board meeting, *ceteris paribus*. In this case, the assumptions cannot be applied since the result show insignificant correlation between board meeting and firm performance. However, there is a positive significant correlation at 10% significant level with the coefficient of 1.1759 in Model 2. Thus, the firm performance will rise by 1.1759% if there is a 1% increase in the number of the board meeting, *ceteris paribus*.

4.4.3.4 Firm Size (FS)

There is a negative and significant relationship found between firm size and the firm performance in the Model 1 for 1% significant level. The coefficient given is -45.7617. This shows that as the firm size increase, the firm performance will decrease. The firm size is including the fixed and current asset such as cash, building and account receivable. As example, 1% increase in the firm size of a company, the firm performance will be decreased by 45.7617%, *ceteris paribus*. Meanwhile, the result shows a negative significantly correlation at 1% significant level from Model 2. The coefficient of the firm size in the Model 2 is -45.0547. This also shows that the larger the firm, the lower the firm performance. Given that firm size increase by 1%, the performance of company and firm assumed to drop by 45.0547%, *ceteris paribus*.

4.4.3.5 Firm Profitability (FP)

From the Table 4.13, the results obtained is negative significant at 5% significant level in Model 2 between the relationship of a firm profitability ratio and firm performance. The coefficient for firm profitability is -0.0643. This

implies that the higher the firm profitability ratio, the lower the firm performance. Given in the Model 2, there is a decline of 0.0643% in the firm performance if there is an increase of 1% in the firm profitability ratio, *ceteris paribus*.

4.4.3.6 Firm Liquidity (FL)

Firm liquidity the firm performance shows a positive significant correlation in Model 1 while negative significant correlation in Model 2. The coefficient in both model for firm liquidity are 2.5146 and -0.6214 respectively. Therefore, in Model 1, the higher the firm liquidity the higher the firm performance. However, in Model 2, the higher the firm liquidity, the lower the firm performance. When there is 1% increase in the firm liquidity, it will lead to an increase of 2.5146% in the firm performance in Model 1, *ceteris paribus*. Given in Model 2, the increase of 1% in the firm liquidity will make the firm performance to decline by 0.6214%, *ceteris paribus*.

4.5 Conclusion

This chapter discovered the relationship between firm performances with the independence variables (board size, board independence, board meeting) and control variables (firm size, firm profitability, firm liquidity) of listed consumer products companies in Malaysia. Test statistic result in Model 1 shows that there is a significant influence on board size and board independence toward firm performance and insignificant on board meeting toward firm performance. While in Model 2, there is a significant correlation between board meeting and firm performance but insignificant correlation on board size and board independence toward firm performance. The following chapter of this research will be discuss about the major findings, implication of study, limitations and recommendations for the future research.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

This chapter is the summarized of the overall conclusion, recommendations, limitations and discussions for this research. The major findings will be discussed in this chapter based on the empirical result in chapter 4. The limitations of the study and recommendations will the discussed to improve the regression analysis in future study.

5.1 Summary

The main objective of this research is to identify the impact of board governance on firm performance of 108 listed companies in consumer products sector within the research period of year 2010 to year 2014. The annual companies' data was collected and tested by using panel data. The total observations in this research are 540. The dependent variables in this research are ROA and Tobin's Q. the independent variables are board size, board independence and board meeting while the control variables are firm size, profitability and liquidity. The regression model was employed by using the FEM to carry out the objective of the study. The summary of the result is in Table 5.1.

Table 5.1 Summary of the Decision of the Hypothesis

Hypotheses of the study	Expectation Sign & Significant	Decision	Regression Result
H_{1a} = There is a positive correlation between board size and company performance (ROA) in consumer products sector.	*Positive & Significant	Reject H_0	Positive & Significant
H_{1b} = There is a positive correlation between board size and company performance (TQ) in consumer products sector.	Proved by Lin and Lee (2006), Abidin et al. (2009), Ghaffar, (2014)	Do not reject H_0	Negative & Insignificant
H_{2a} = There is a positive correlation between board independence and company performance (ROA) in consumer sector.	*Positive & Significant	Reject H_0	Positive & Significant
H_{2b} = There is a positive correlation between board independence and company performance (TQ) in consumer sector.	Proved by Adams and Mehran, (2003), Sanda et al., (2011), Saat et al.(2011), Awan and Khan (2012)	Do not reject H_0	Negative & Insignificant

H_{3a} = There is a positive correlation between board meeting and company performance (ROA) in consumer sector. *Positive & Significant Do not reject H₀ Negative & Insignificant

H_{3b} = There is a positive correlation between board meeting and company performance (TQ) in consumer sector. Proved by Berger and Patti (2006), Brick and Chidambaran (2007), Saad et al. (2010) Reject H₀ Positive & Significant

Notes: ROA = Return on Assets; TQ = Tobin's Q

5.2 Major Findings

There are three independent variables used in the research to identify the relationship between the firm performance and the other independent variables. The independent variables are board size, board independence and board meeting. The following section is the major findings of this research based on the empirical results in chapter 4.

5.2.1 Board Size and Firm Performance

Under Model 1, the result shows that there is positive significant relationship with each other which is consistent with the earlier expectation. While under Model 2, board size and firm performance has negative insignificant relationship which is inconsistent with the earlier expectation of significant and positive relation.

The positively significant relationship under Model 1 is consistent with previous study of Ghaffar (2014), Tai (2015), Lin and Lee (2006) and Nor et al. (2014). According these studies, the larger the board size will affect superior of firm performance as the large board size brings expertise, source of ideas, and knowledge diversification to facilitate the company become more competitive in the market and thus the findings is consistent with competency theory. This finding also indicates that there is good board governance in consumer products sector in Malaysia since increase in board size is able to increase firm performance because total assets are fully utilized under large board size and lead to increasing of net income in companies.

The result reported negatively insignificant relationship under Model 2 indicates that the hypothesis (H_{1b}) regarding this relationship was not supported. Inconsistent with previous findings (Lin & Lee, 2006; Bulan et al.,

2009; Rashid et al. 2010) who report that the board size has a significant impact on firm performance by using Tobin's Q measurement, yet it is consistent with and Topak (2011) who concluded that there is no relationship between board size and firm performance. This might due to the reason that Malaysia firms are mostly owed by families which known as family-controlled companies (Leong, Paramasivam, Sundarassen & Rajagopalan, 2015). Amran and Ahmad (2011) found that the second highest industry that engages in family companies is consumer product based on 189 companies selected from Main board and Second board. Therefore, the board size is heavily comprised of family members that affected on the decision making process and brings irrelevant into decision making process (Amran & Ahmad, 2009; Topak, 2011). According to Amran and Ahmad (2009) also concluded that is insignificant relationship between board size and firm performance when company is family owned.

Moreover, the negative value under Model 2 indicates that the larger the board size brings unfavourable performance of the company. Yermack (1996) revealed that the increasing board size might cause several problems which are communication, coordination and decision making. The finding is consistent with agency theory. This is because large board size may arise free-riding problem and causes the firm become inefficient. According to Bulan et al. (2009), concluded that one of the reasons that board size negatively related to firm performance because of the firm size is small. Therefore, the average firm size in this research is 5.4. Furthermore, Bulan et al. (2009) also found that the negative relationship between board size and firm performance when the firm is low growth opportunity. The growth opportunity of consumer product sector in Malaysia is downward sloping as reported in The Star Online (2013).

5.2.2 Board Independence and Firm Performance

Based on the result of this study, board independence does significantly influence the firm performance. They have a positive significant relationship in the Model 1. The study result indicates that firms' performance will be higher if the firms consist of higher board independence. The result of this study is consistent with some of the researches (e.g., Adams & Mehran, 2003; Sanda et al., 2011; Awan & Khan, 2012) which also found that board independence has positive and significance impact on firm performance. Moreover, the study findings supported by Adams and Mehran (2003) who stated increase in the proportion of the outside directors tend to increase the performance of firm simultaneously as they are considered as the more effective monitors of the managers. In addition, board independence may cut down agency costs since better control is applied delegate of finance providers. Thus, higher level of independence is more expected in order to improve the firm performance and decrease the capital costs (Scholer & Holm, 2013). Therefore, most of consumer products companies in Malaysia consisted high proportion of board independence on the board is able to reduce agency cost (Habbash et al., 2014).

Conversely, the result of this study is inconsistent with some of the researches like (e.g., Agrawal & Knoeber, 1996; Bhagat & Black, 2001) found that board independence has significant negative impact on firm performance. According to Agrawal and Knoeber (1996), board are expanded for the political reasons and therefore the additional independent directors may reduce the performance of firm for the potential constraints of political that lead to their receiving board seats. The result from this study suggests that there is good corporate governance in consumer products sector since higher board independence able to increase the firm performance. Hence, it can be concluded that the Malaysian firms in consumer products sector with higher board independence have better firm performance.

The result of Model 1 is consistent with the agency theory and the findings illustrated that board independence is able to help on reducing the agency problem. According to Setia-Atmaja et al. (2011) cited from Habbash et al. (2014), the independent directors able to reduce the issue of earnings management effectively, the agency problem is tend to mitigate through nomination of independent director to board and therefore improve the firm performance. Furthermore, the result of Model 1 is also consistent with the competency theory since independent director is responsible for approving major strategic and financial decisions as well as offering unique insights on strategic issues (Ferreira, 2010). Hence, the independent directors who have professional business competence tend to make the correct financial decision and therefore improve the firm performance.

In contrast, the result of this study shows that board independence has an insignificant impact on firm performance in the Model 2. The result of this study is consistent with some of the researches (e.g., Johl et al., 2015; Akpan and Amran, 2014) which found that board independence has an insignificant influence on the firm performance. According to Johl et al. (2015), the findings indicate that the firm performance does not influenced by the board independence with a sample of 700 public listed companies in Malaysia. In the study of Akpan and Amran (2014) which has examined the impact of board characteristics on the performance of firm. The result reveals that board independence has no influence on firm performance. It might be due to some of the outside directors may only be nominated to perform the requirement of minimum regulatory while some of them may actually have a relationship with the executives of the particular company who hired them or the profound friendship was established between the top management and outside director during the period they act as the board of directors (Weisbach, 1988). In addition, according to Bhagat and Black (2000), the authors claimed that there is a compromise among incentives and independence. Many of the independent directors on board hold only the trivial amounts of the firm's shares and

therefore have limited incentives on the firm management. Even though the dependent directors are lack of independence but they always devoted to their firm with providing the human capital and financial capital.

The insignificant result between board independence and firm performance in Model 2 in this study is inconsistency with the agency theory. According to Baysinger and Bulter (1985) and Waldo (1985) cited from Gomez and Russell (2005), based on the agency theory, the board independence will be increased as increase in the number of non-executive directors on board. Supervision on managers' actions can be perceived as an important element for the effectiveness of management, the vigilance of board tend to be increased as the number of non-executive directors on board become larger and therefore reduces the agency problem as well as increase the performance of firm (Fauzi & Locke, 2012). Therefore, this insignificant result in Model 2 is inconsistent with the agency theory. Besides, the insignificant result is also inconsistent with competency theory. The concept of this theory is closely linked to the firm performance and the findings supported by several studies (e.g., Yusoff & Amrstrong, 2012; Silva et al, 2014) which the board members play essential roles in company's decision-making (Ferreira, 2010). As stated in Masulis et al. (2012), the researchers stated that independent directors with industry experience have a positive impact on the firm performance. The firm performance will be increased through the better corporate decision made by the outside directors that possess the industry experience. Therefore, this insignificant result in Model 2 is inconsistent with the competency theory.

5.2.3 Board Meeting and Firm Performance

By referring to the Model 2 in Table 4.13, the board meeting is positively significant toward the firm performance of consumer products companies. The expected sign in this research on the relationship between board meeting and

firm performance is positive relationship. In line with the research of Tong et al. (2013), the result shows that there is positive relationship between board meeting and firm performance. According to researchers (Tong et al., 2013), when there are more meeting held by the firms, it will enhanced the firms' financial performance. The board meeting presents a positive significant result on the impact toward the firm performance whereby the frequency of board meeting increase will lead to the performance increase (Ntim & Osei, 2011). Therefore, they suggest that low performance firms should have more board meeting in order to have more communication among the board and the managers.

According to agency theory, agency problem occurs when there are conflict of interest among shareholders and agent. As the shareholders or the board have more chances to meet up with the managers or agents of the corporation, both parties can discuss and make decisions for corporate future and minimize the agency problem inside consumer products companies in Malaysia (Berger & Patti, 2006). Besides, the research from Ntim and Osei (2011) also in line with the agency theory. The findings of their research mention that to increase the ability to effectively advice, discipline management and monitor as well as improve the firm performance, the number of boards to meet up must increase. The result also consistent with competency theory. The board competency can increase the board effectiveness and thus provide excellent strategic planning during board meeting. Therefore, increasing the frequency of board meeting is able to improve firm performance.

Surprisingly the result shows that the board meeting and the firm performance are insignificant in Model 1. The firm performance is not explained by the number of board meeting. The result for this study is consistent with Puni (2015) which is negatively but insignificant in performance measurement using ROA. Therefore, the firm performance of consumer products companies as measured by ROA is not affected by the number of board meeting.

The result of this research and Puni (2015) result are in line with Ilaboya and Obaretin (2015) whereby increase the board meeting will lead to the decrease in board performance of the firm. The board meeting should be decreased so that the unnecessary wasting of quality time and effort are able to be avoided (Ilaboya & Obaretin, 2015). The board meeting is not necessary to reflect the improvement of firm performance, therefore the result shows insignificant relationship between ROA and board meeting (Al-Matari, Fadzil and Al-Swidi, 2014). Besides, when there are more foreign member in the board will lead to the insignificant of the board meeting. According to Al-Matari et al. (2014), the foreign board of director may lack of knowledge on the current environment in dealing with the current market problem. Therefore, they are not able to make an effective and efficient decision making.

5.2.4 Control Variable and Firm Performance

Table 4.13 shows that there is negative relationship between firm performance and size of the firm for both Model 1 and Model 2. This result is consistent with Li, Lu, Mittoo and Zhang (2015) which also having a negative significant between firm size and firm performance. A large and mature firms have a lower growth rate and hardly to have high performance (Li et al., 2015).

The profitability of a firm is negatively significant towards firm performance as shown in Table 4.13 in this research. This indicate that the performance of a firm can be improve when the firm profitability decrease. In line with the research of Alves et al. (2015), which also get the same outcome of negative relationship between firm profitability and firm performance. The operational risk will be increased and the company will more likely to default when there is an increasing in the firm profitability which leads to negatively significant relationship between firm profitability and the firm performance.

The result in chapter 4 also shows that the current ratio is positive significant towards firm performance in Model 1 but negative significant towards firm performance in Model 2. According to the research of Ismail (2016), it shows that the current ratio and the ROA are positive significant. The result of Ismail (2016) is in line with this study on Model 1, whereby the firm performance is measured by ROA. Liquidity ratio is measured current ratio in this research which is also positive significant. Therefore, the result shows that increase in firm liquidity are able to improve the performance of consumer products companies in Malaysia. The author states that firm performance can be increased when the current asset maintained more than optimal level of working capital or current liabilities incurred are less than optimal level of working capital (Nassirzadeh & Rostami, 2010). Meanwhile, the result of Öner Kaya (2015) is similar with the Model 2 of this research. The result of Öner Kaya was significant but negatively influences the relationship between liquidity ratio and firm performance. This also indicates that a high liquidity firm may have a low firm performance for Malaysia consumer products sector. The possible reason for happening of this situation is because the firms might not fully utilize the assets (Sinthupundaja & Chiadamrong, 2015).

5.3 Implication of Study

5.3.1 Companies

This study help Malaysian companies in consumer products sector to better understand the good corporate governance will be affected by which factors and therefore the companies can make the improvements in order to increase the firm performance. Based on the result of this study, it showed that board size, board independence and board meeting have positive and significant

relationship with firm performance. This indicates that large board size, higher board independence and high frequency on board meeting will increase the firm performance. According to Tai (2015), the bigger the board size, the more the diverse knowledge and expertise can be obtained in order to improve firm performance. In the study of Klein (1998) cited from Vo and Phan (2013), the firm management would be supported and advised more effectively by the large boards due to the organizational culture and complexity on the business environment. In addition, according to Scholer and Holm (2013), board independence may cut down agency costs since better control is applied to delegate of finance providers. Therefore, higher level of independence is more expected in order to improve the firm performance. In the study of Lipton and Lorsch (1992) cited from Ntim and Osei (2011), the authors claimed that frequency of board meetings with the non-formal sideline interactions able to consolidate the cohesive bonds among the board of directors and therefore positively influence the firm performance. This study provides a clear direction for the companies on how to improve in the management in order to get better firm performance.

5.3.2 Policy Makers

This research provides policy maker (e.g., Malaysian Government) with in-depth-knowledge about the board governance of Malaysian firms in consumer products sector. It helps policy makers and regulators to evaluate and improve policies, regulations and institutional framework for corporate governance. Policy makers and regulators can use this research as a reference on the development of new corporate governance policies and reformation of existing corporate governance regulations in future. Based on this study, the result showed that board size and board meeting has a positive and significant impact on the firm performance. It indicates the increase in the number of board size

and board meeting will enhance the performance of Malaysian firms in consumer products sector. When the firms have more board members, they are able to obtain more new ideas since more resources are contained in the firms which able to help the firms in controlled and managed the operational activities as well as finance resources more effectively (Nor et al., 2014). Besides, Salin et al. (2010) stated that the board meeting could reflect the performance of board directors in the organization. The increase of board meeting frequency able to enhance the company's value as board monitoring and oversight improved (Brick & Chidambaran, 2007). It demonstrated that good corporate governance generate better firm performance and stabilize the economy as the firms has higher competition advantage in foreign market and result in surplus balance of trade. Therefore, policy makers should take board governance into consideration, to make sure the board policies and regulations imposed are right, suitable and effective enough to improve the performance of consumer products companies as well as the economy of Malaysia. Policy makers also may revise the current corporate governance legislations to strengthen the policies in order to ensure the Malaysian firms perform even better than the past to achieve high company's corporate value and thus contribute to the country.

5.3.3 Shareholders/Investors

The result concludes that the more independent directors will enhance company performance. In general, shareholders or investors are concerning their returns on the invested company. Therefore, shareholders or investors are going to pay close attention to the agency problem. This is due to executive manager (assignee) is a person who monitor and manage the company performance on behalf of shareholders. However, the interest between shareholders and executive manager may conflict as they have different objectives. Thus, this problem will affect shareholders or investors' wealth.

According to the agency theory, a board that consists of higher proportion of non-dependent directors is able to eliminate the problem of earnings management (Habbash et al., 2014). This finding provides a valuable investment guideline to shareholders or investors that consumer products sector in Malaysia has lower agency cost and lead to a higher return. In addition, a large board size might generate a comprehensive decision and proposal because the board gathers of professional skills, expertise and diverse knowledge from directors as a result of the increase of board size might affect company returns to increase. In others words, companies under Malaysia consumer products sector consisted of educated and veteran directors on the board to provide professional advises.

5.3.4 Academician and Future Researcher

Lastly, this study also can contribute to academicians and future researchers. This is due to it provides the comprehensive and sufficient knowledge to academicians and future researchers. Since there are few study focusing on board governance and firm performance in Malaysia consumer products sector. Through the research, academicians and future researchers can gain theoretical and empirical knowledge of the firm performance which specialize in consumer products sector in Malaysia and thus to contribute more details and wider research by examining difference sectors in Malaysia.

5.4 Limitation of Study

There are some limitations and challenges faced in the study. First and foremost, the research only use the balanced panel data since there is some missing data found during the data collection. There is only 108 companies can be used out of 124 companies in

the consumer products industry after the filtration process. This is because the data is incomplete in the annual report such as lack of disclose the details of the board size, number of board meeting and the director's attendance. The using of the balanced panel data might cause the information and the results less reliable or less accurate compared to the study that include the unbalanced panel data since the accuracy of the result can be increased by the increase of the sample size.

Secondly, the issue that faced in the research is collection of the companies' data. The is because different companies were using the different ending financial year for their annual report but this study does not take it into consideration. The study collects the data in the annual report accordingly although it might have different ending financial year used in the annual report for some companies. This might affect the firm performance of the companies since there is inconsistent for data collection of the same financial year for every company.

In addition, this research is main focus on the consumer products industry of Malaysia which might not suitable to be used in other countries such as Singapore, Australia and United States. Besides, this research also might not suitable for other sectors such as technology, properties or trading and services sector. This is because there are different characteristics, pattern, culture in different sectors while different economic conditions, size of the companies, laws and regulations in different countries. Moreover, the information may not enough for some parties like investors because they need to compare the firm performance from different sectors to make a better investment decision. Thus, one of the limitation for this research is only suitable for the consumer products industry in Malaysia but might not suitable for other sector or same sector in different countries.

5.5 Recommendation

According to the limitations of the study, there is some recommendations can be applied for future study. For the first issue, the suggestion given is to include the unbalanced panel data and ignore the problem of the missing data. Hsiao (2007) stated that the process of include the unbalanced panel data can increase the sample size which can increase the accuracy and the reliable of the results and information while the omitted data can be controlled. The increasing of the sample size not only can increase the accuracy but also can reduce or avoid the problem of the heterogeneity. Moreover, the future study also can extend the duration or the period for the data collection which is from 5 years to 10 years in order to increase the sample size of the research.

Future study can control the limitation of financial report with different ending financial year in current research by choosing the financial report which has the same ending financial year. For example, the study chooses only the companies which have the ending financial year at 31 December if they decide to use this ending financial year in the research. It will lead to more accurate and efficient results produced in the study and research since there is consistent and standardize way of data collection used in the research. So, this is important to have the same ending financial year of the annual report used in order to produce more reliable and accurate results.

In addition, the future research is suggested to broaden the sector to technology, properties, trading and services or broaden the study to other countries such as Singapore, Australia and United States. This is because research can make the comparison between the sectors and the research can investigate the more variables and the factors that can affect the firm performance in different sector or same sector in different countries. In this case, the research also can study that whether the same variables can affect the result with the different culture, pattern, rules and regulations in different sector and the different countries. Thus, the future study is recommended to broaden the sector or countries but not only focus the consumer products industry in Malaysia.

5.6 Conclusion

The main purpose of this research is to investigate the impact of board governance on corporate performance. The total 108 listed companies under Malaysia's consumer products sector were taken into account in this research from the period of year 2010 to year 2014.

From the results of this study, it found out that when firm performance is measured by return on asset (ROA), board size and board independence have positively significant impact on the firm performance. However, board meeting has insignificant influence on the firm performance which indicates that the alternative hypothesis regarding with this relationship was not supported. On the other aspect, when firm performance is measured by Tobin's Q, board meeting has positively significant impact on the firm performance. While, board size and board independence have insignificant influence on the firm performance. There are some limitations are discussed in this study with few recommendations for future study.

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APPENDICES

Appendix I: List of 124 Malaysia's Public-listed Consumer Product Companies

1. Acoustech Berhad
2. Ajinomoto (Malaysia) Berhad
3. Amtek Holdings Berhad
4. Apex Healthcare Berhad
5. Apollo Food Holdings Berhad
6. Asia Brands Berhad
7. Asia File Corporation Bhd
8. Bio Osmo Berhad
9. Biosis Group Berhad
10. Bonia Corporation Berhad
11. British American Tobacco (Malaysia) Berhad
12. C.I. Holdings Berhad
13. Cab Cakaran Corporation Berhad
14. Caely Holdings Berhad
15. Carlsberg Brewery Malaysia Berhad
16. CCK Consolidated Holdings Berhad
17. CCM Duopharma Biotech Berhad
18. Chee Wah Corporation Berhad
19. China Ouhua Winery Holdings Limited
20. China Stationery Limited
21. Classic Scenic Berhad

22. Cocoaland Holdings Berhad
23. D.B.E. Gurney Resources Berhad
24. Degem Berhad
25. DPS Resources Berhad
26. Dutch Lady Milk Industries Berhad
27. Eka Noodles Berhad
28. Ekowood International Berhad
29. Emico Holdings Berhad
30. Eng Kah Corporation Berhad
31. Euro Holdings Berhad
32. Eurospan Holdings Berhad
33. Farm's Best Berhad
34. FCW Holdings Berhad
35. Federal Furniture Holdings (M) Berhad
36. Formosa Prosonic Industries Berhad
37. Fraser & Neave Holdings Berhad
38. Goldis Berhad
39. Guan Chong Berhad
40. Guinness Anchor Berhad
41. HB Global Limited
42. Homeritz Corporation Berhad
43. Hong Leong Industries Berhad
44. Hovid Berhad

45. Huat Lai Resources Berhad
46. Hup Seng Industries Berhad
47. Hwa Tai Industries Berhad
48. IQ Group Holdings Berhad
49. Jaycorp Berhad
50. Jerasia Capital Berhad
51. K-Star Sports Limited
52. Karex Berhad
53. Kawan Food Berhad
54. Khee San Berhad
55. Klind Holdings Berhad
56. Kotra Industries Berhad
57. Kuantan Flour Mills Berhad
58. Latitude Tree Holdings Berhad
59. Lay Hong Berhad
60. Lee Swee Kiat Group Berhad
61. Len Cheong Holding Berhad
62. Lii Hen Industries Bhd
63. London Biscuits Berhad
64. LTKM Berhad
65. Magni-Tech Industries Berhad
66. Malayan Flour Mills Berhad
67. Maxwell International Holdings Berhad

68. Milux Corporation Berhad
69. Mintye Industries Berhad
70. MSM Malaysia Holdings Berhad
71. Multi Sports Holding Ltd
72. MWE Holdings Berhad
73. Nestle (Malaysia) Berhad
74. New Hoong Fatt Holdings Berhad
75. Ni Hsin Resources Berhad
76. Niche Capital Emas Holdings Berhad
77. NTPM Holdings Berhad
78. Oriental Food Industries Holdings Berhad
79. Oriental Holdings Berhad
80. Padini Holdings Berhad
81. Pan Malaysia Corporation Berhad
82. Panasonic Manufacturing Malaysia Berhad
83. Paos Holdings Berhad
84. Paragon Union Berhad
85. PCCS Group Berhad
86. Pelangi Publishing Group Bhd.
87. Pelikan International Corporation Berhad
88. Poh Huat Resources Holdings Berhad
89. Poh Kong Holdings Berhad
90. Power Root Berhad

91. PPB Group Berhad
92. Prolexus Berhad
93. PWF Consolidated Berhad
94. QL Resources Berhad
95. Rex Industry Berhad
96. Sasbadi Holdings Berhad
97. Saudee Group Berhad
98. Sern Kou Resources Berhad
99. SHH Resources Holdings Berhad
100. Signature International Berhad
101. Sinotop Holdings Berhad
102. Spring Gallery Berhad
103. Spritzer Bhd
104. SWS Capital Berhad
105. SYF Resources Berhad
106. Tafi Industries Berhad
107. Takaso Resources Berhad
108. Tan Chong Motor Holdings Berhad
109. Tek Seng Holdings Berhad
110. Teo Guan Lee Corporation Berhad
111. Teo Seng Capital Berhad
112. Tomei Consolidated Berhad
113. TPC Plus Berhad

- 114. UMW Holdings Berhad
- 115. UPA Corporation Bhd
- 116. Wang-Zheng Berhad
- 117. Xian Leng Holdings Berhad
- 118. Xidelang Holdings Ltd
- 119. Xingquan International Sports Holdings Limited
- 120. Yee Lee Corporation Bhd
- 121. Yen Global Berhad
- 122. Yoong Onn Corporation Berhad
- 123. Y.S.P. Southeast Asia Holding Berhad
- 124. Zhulian Corporation Berhad

Appendix II: List of Company's Annual Reports

1. Acoustech Berhad). *Annual Report*. Kuala Lumpur, Malaysia.
2. Ajinomoto (Malaysia) Berhad). *Annual Report*. Kuala Lumpur, Malaysia.
3. Amtek Holdings Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
4. Apex Healthcare Berhad. (2010-2014). *Annual Report*. Melaka, Malaysia.
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6. Asia Brands Berhad. (2010-2014). *Annual Report*. Klang, Selangor.
7. Asia File Corporation Bhd. (2010-2014). *Annual Report*. Pulau Pinang, Malaysia.
8. Bio Osmo Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
9. Biosis Group Berhad. (2010-2014). *Annual Report*. Petaling Jaya, Selangor.
10. Bonia Corporation Berhad. (2010-2014). *Annual Report*. Petaling Jaya, Selangor.
11. British American Tobacco (Malaysia) Berhad. (2010-2014). *Annual Report*. Petaling Jaya, Selangor.
12. C.I. Holdings Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
13. Cab Cakaran Corporation Berhad. (2010-2014). *Annual Report*. Penang, Malaysia.
14. Caely Holdings Berhad. (2010-2014). *Annual Report*. Petaling Jaya, Selangor.
15. Carlsberg Brewery Malaysia Berhad. (2010-2014). *Annual Report*. Shah Alam, Selangor.

16. CCK Consolidated Holdings Berhad. (2010-2014). *Annual Report*. Kuching, Sarawak.
17. CCM Duopharma Biotech Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
18. Chee Wah Corporation Berhad. (2010-2014). *Annual Report*. Butterworth, Penang.
19. China Ouhua Winery Holdings Limited. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
20. China Stationery Limited. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
21. Classic Scenic Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
22. Cocoland Holdings Berhad. (2010-2014). *Annual Report*. Kuala Lumpur, Malaysia.
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