ANALYSING BOARD CHARACTERISTICS WITH FIRM PERFORMANCE AMONG MALAYSIA AND SINGAPORE SHARIAH PLCs

BY

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DECLARATION

We hereby declare that:

(1) This undergraduate FYP 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 FYP 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 FYP.

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LIST OF ABBREVIATIONS

BoD	Board of directors
BS	Board Size
CEOT	CEO Tenure
CG	Corporate Governance
CGC	Corporate Governance Committee
FD	Foreign director
IC	Independent Chairman
NOID	Number of independent directors
NOW	Number of women directors
PLC	Public Listed Company
RDT	Resource Dependency Theory
ROA	Return on Assets
ROE	Return on Equity

PREFACE

This research project unit UKMZ3016 Research Project was done by students of Bachelor of International Business (HONS) in order to complete the undergraduate program. The tittle of the thesis is Analysing Board Characteristics with Firm Performance among Malaysia and Singapore *Shariah* PLCs. It is also a project that assembles the intellectual interest and critical thinking of the students. This enhances the integration of capabilities and abilities of the undergraduates in the application of theoretical elements.

The main purpose of this research project is to investigate the independents variable that affect the firm performance among *Shariah* PLCs in Malaysia and Singapore. Throughout this project, there are six variables has been identified which are number of independent directors (NOID), independent chairman (IC), CEO tenure (CEOT), board size (BS), number of women directors (NOW) and foreign directors (FD).

ABTRACT

The purpose of this research is to determine if corporate governance mechanisms are more significant between *Shariah* PLCs in Malaysia or Singapore. Corporate governance mechanisms that adopted in this research are number of independent directors, independent chairman, CEO tenure, board size, number of women directors and foreign director. These mechanisms are applied to examine its relationship towards firm performance. The firm performance is measured by return on assets (ROA), return on equity (ROE) and Tobin's Q. The samples used in this research are 25 Malaysian *Shariah* PLCs and 25 Singaporean *Shariah* PLCs in the period of 2013 to 2017. This research applied Panel Data Analysis to examine the overall 5 years results. There are 2 types of panel estimator approaches that can be implemented which are fixed effect and random effect. This research is also employed Multiple Linear Regression with the aim to examine the year to year relationship between corporate governance mechanisms, Malaysian and Singaporean *Shariah* PLCs' performance.

The results shown that independent chairman, CEO tenure and foreign director have no impact towards both countries. However, the other 3 independent variables are statically affecting the Singaporean *Shariah* PLCs' performance. Number of independent directors has a significant and negative impact on ROA and ROE in Singapore and has no impact in Malaysia. Besides, board size only has positive and significant impact on ROA, ROE and Tobin's Q in Singapore. While, number of women directors has significantly negatively impact on ROE and Tobin's Q in Singapore.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This study examined the relationship between board characteristics and firm performance of *Shariah* PLC among Malaysia and Singapore which listed in Bursa Malaysia and Singapore Exchange. Six board characteristics were employed as explanatory variables which were the number of independent directors, independent chairman, CEO tenure, board size, number of women on board and foreign directors on board. This chapter consisted of introduction, research background, problem statement, research objectives, research questions, significance of study and chapter layout.

1.1 Research Background

1.1.1 Corporate Governance and *Shariah* Corporate Governance

Corporate governance (CG) is the expansive term that described the procedures, customs, policies, laws and systems that guided organizations and companies about the management, the acting ways and controlled over how they operate. It was committed to accomplish the corporate's goal successful and manage the relationships between stakeholders which involving the board of directors and shareholders (Khan, 2011). CG is also a way for a firm's financial suppliers to ensure a return on their investment. Likewise, the CG

structure involved with the procedures and rules for the decision making of corporate affairs. CG provided a structure through which corporate goals could be set and their performance of these objectives could be monitored and achieved. Hence, CG is a set of rules and regulations designed to protect the values of firm and interests of shareholders (Samaduzzaman, Zaman & Quazi, 2015).

In the past two decades, CG had became a crucial issue with the rise of global privatization and a series of global company failures and scandals. The frequent corporate failures caused by neglecting of CG had brought pressure on global public sector organizations to effectively and successfully implement first-rate CG practices. This issue had been investigated by researchers and practitioners in several industrialized nations and they started to put more concerns on CG (Sinha & Singhal, 2012).

Good Corporate Governance (GCG) not only a circumstance but also a valuable system which had a vital impact in the increasing of company value. Some people believed that the economic crisis in Southeast Asia and other countries was not mainly caused by macroeconomic factors. Unfortunately, the weakness in CG was the core reason of the economic crisis. Therefore, this phenomenon had forced companies adopted and implemented GCG in order to achieve corporate goals. The companies believed that the implementation of GCG was another form of business ethics and work ethics, which had been a commitment of companies. According to Halimatusadiah, Sofianty & Ermaya (2015), the implementation of GCG was closely related to the companies' image building. Tarraf (2010) claimed that a good CG required an appropriate incentive from managers to work on behalf of the shareholders whereas an appropriate understanding about the managers' decisions by shareholders. Hence, it allowed for a balance between managers' and shareholders' desires.

Unfortunately, none of the code advocating best practices seems to provide a test to determine when good governance was implemented. Empirical evidence accumulated that even the company deemed to be full compliance with governance rules but a business failure could still happened

unexpectedly. The share price of a listed company was often used as a proxy for good governance. However, this proxy ignored other economic issues, such as the ability of a corporate to be flexible in managing known risks, identifying and managing unknown risks. Moreover, this proxy also ignored non-economic aspects of governance like accountability for investors, stakeholders and the wider community, or concerns about ethics, stakeholders and environmental hazards. The classification of directors as independent may not be relevant to the decisions made. The board conflicts of interest could not be prevented by delegating them to subcommittees. No matter how directors were classified, a unitary board is inherently conflicted. The more the independent directors from their colleagues, business and its industry, the lesser the information and powers of a director could performed their core fiduciary responsibilities of supervision and direct management without depending on the management reports with their inbuilt self-service motivation. There is no reason to worship independence blindly. This also means that current best practices are uncompetitive and unethical (Turnbull, 2011).

However, there was a different between *Shariah* CG and CG. In order to show that CG is *Shariah* in nature, the whole system of the company must be guided and controlled in accordance with *Shariah*, where the goals that the company wanted to achieve must be valid according to *Shariah* and even the rights and interests must follow the principles of *Shariah*. Therefore, the entire activities of the company must conform to the values as agreed and accepted by the *Shariah*. As a result, *Shariah* CG was not only considered as a mode of business-making, but also a profit-generated consideration. But the most importantly, religious orientation is worth considering and paying attention to (Zain, Zulkarnian & Hassan, 2015).

1.1.2 Importance of Board

Board of directors was regarded as the most crucial corporate governance mechanism, which supervised and advised the top management to fulfill their responsibility to protect shareholders' interest. Board structure had great influenced on CG practices in both developed and emerging markets. Previous studies shown that the importance of board structure not only arises from managerial scandals and corporate failure, but also from the impact of board structure on a company's financial performance (Almadi, 2016).

According to Puni (2014), it was suggested that in order for the board to exercise its strategy and oversight responsibilities effectively, a strictly constituted board committee must be in place to support the board's ability to carry out those basic responsibilities. Kesner (1988) stated that since most of the board's decisions were made at the committee level, its effectiveness was enhanced through type and composition of board committees.

Boards were frequently subdivided into smaller committees in order to effectively oversee the execution of management and perform other tasks involving serious agency issues, such as determining executive compensation, engaging with external auditors as well as recruiting and dismissal CEO. Usually, the board of directors had three fundamental board committees that support the works of board, which included audit, compensation and nominations committee (Puni, 2014).

1.2 Problem Statement

After the outbreak of financial crises in the Asian countries, a great attention was paid to improve the CG practices. Some studies had also been conducted to explain the impact of CG on the *Shariah* PLCs' performance (Sadiq Shahid, Rizwan, Hassan & Khalil, 2016). The majority of the past studies focused on the impact of firm performance in Non-*Shariah* PLCs but not *Shariah* PLCs (Albaity

& Ahmad, 2011; Abu Bakar & Ali, 2014; Farooq & Alahkam, 2016). However, merely a little attention was drawn to the effect of firm performance towards CG mechanism among *Shariah* PLCs. There was lack of research on the impact of CG on *Shariah* PLCs. There were only little studies that focused on how CG affects the performance of *Shariah* PLCs. Among the studies were Dali Nuradli Ridzwan Shah Bin, Hamdi Hakeim & Hamid Suhaila (2008) and Elsidding Ahmed (2017).

Moreover, there were also certain studies that investigated the impact of CG towards *Shariah* PLCs within the country. For instances, Elsidding Ahmed (2017), Endraswati (2013), Norman, Haron & Hassan (2016), Al-Matari, Al-Swidi, Fadzil & Al-Matari (2012), Shittu, Ahmad & Ishak (2016), Sadiq Shahid, Rizwan, Hassan & Khalil (2016). Apart from that, the contradistinctions of CG among two or more countries were also carried out in the previous studies. They were Farooq & Alahkam (2016), Habib & Ul Islam (2014). Unfortunately, the comparative CG on *Shariah* PLCs of Malaysia and Singapore was seemed to be less in previous studies. Hence, the motivation to conduct this study was mainly to examine the impact of CG practices on *Shariah* PLCs in Malaysia and Singapore.

1.3 Research Objective

1.3.1 General Objective

The primary objective of this research was to determine if CG mechanisms are more significant between *Shariah* PLCs in Malaysia or Singapore. The performance of *Shariah* compliant companies in Malaysia and Singapore were measured by ROA, ROE and Tobin's Q.

1.3.2 Specific Objectives

The specific objectives derived from general objectives were as follows:

i. To determine the relationship between the number of independent directors and firm performance among *Shariah* PLCs in Malaysia and Singapore.

ii. To investigate the relationship between independent chairman and firm performance among *Shariah* PLCs in Malaysia and Singapore.

iii. To examine the relationship between CEO tenure and firm performance among *Shariah* PLCs in Malaysia and Singapore.

iv. To identify the relationship between board size and firm performance among *Shariah* PLCs in Malaysia and Singapore.

v. To inquiry the relationship between the proportion of women on board and firm performance.

vi. To examine the relationship between the presented of foreign director on board and firm performance among *Shariah* PLCs in Malaysia and Singapore.

1.4 Research Questions

1.4.1 General Question

Are CG best practices more significant between Malaysian and Singaporean *Shariah* PLCs?

1.4.2 Specific Questions

i. Does there any negative impact between the numbers of independent directors with Malaysian or Singaporean *Shariah* PLCs' performance?

ii. Does independent chairman positively associated to Malaysian or Singaporean *Shariah* PLCs' performance?

iii. Does CEO Tenure have negative relationship with Malaysian or Singaporean *Shariah* PLCs' performance?

iv. Does there a positive relationship between board sizes with Malaysian or Singaporean *Shariah* PLCs' performance?

v. Does the number of women on board negatively affect with Malaysian or Singaporean *Shariah* PLCs' performance?

vi. Has foreign director a significant positive relationship with Malaysian or Singaporean *Shariah* PLCs' performance?

1.5 Significance of the Study

The findings of this research will provide a comprehensive and thorough examination of CG practices in countries where the companies' ownership is concentrated. The outcome from this study thus benefits researchers because it provided empirical evidence towards Malaysia and Singapore *Shariah* PLCs performance. Most of the previous studies focused on capital structure, financial performance and risk disclosures. However, little emphasis was given to *Shariah* PLCs in Malaysia and Singapore, most of the studies focused on PLCs and non-*Shariah* PLCs.

Moreover, this study was also able to provide a contrast about the impact of CG on *Shariah* PLCs between developing (Malaysia) and developed countries (Singapore). According to the outcome of this research, it showed that a major direct relationship on Malaysia and Singapore CG practices by improving future code of CG. This is due to the outcomes of the research's findings was able to act as a guideline or reference for *Shariah* PLCs to develop better CG practices that will effectively improve the firm performance of Malaysia and Singapore *Shariah* PLCs.

Besides, the results of research's finding highlighted the lack of CG practices used among Malaysia and Singapore *Shariah* PLCs as the firm was able to enhance an overall comprehension on the board characteristics with company performance. Furthermore, the findings of research were able to bring benefits and contribute to all future researches, potential investors, regulators such as government and bank. This will let these several parties to enjoy the finding results, due to this research was to analyzing the board characteristics with firm performance among Malaysia and Singapore *Shariah* PLCs. Overall, this research study also emphasized the importance of board characteristics in CG practices to all related stakeholders.

This research's finding will enhance the board characteristics with firm performance among Malaysia and Singapore *Shariah* PLCs. The analysis data had been used in the finding was able to provide the evidence and support to others related studies.

1.6 Chapter Layout

This study comprised of five chapters. The first chapter is about the research overview which consisted of the background of the study, problem statement, research question, research objective and lastly the significance of the study. Chapter two presented a comprehensive literature review where related analyses of journals and theses. Besides, the resource dependency theory, agency theory,

stakeholder theory, stewardship theory were described in this chapter to make a comprehension about the topic. Research framework will also be formulated. This chapter will explain all relationships between the variables. Furthermore, chapter three explained the Research Methods that are involved in this study. Chapter four presented the descriptive analysis and panel data analysis from the conducted research. Last but not least, chapter five summarized the finalized report and the findings and limitation of study as well as suggesting recommendations for future research.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter will be the literature review of the study. The information in this chapter was being through from the secondary sources such as journals, articles, e-books, reports and theses. It consisted of section 2.1 literature of *Shariah* PLCs; section 2.2 corporate governance in Malaysia and Singapore; section 2.3 theoretical models; section 2.4 literature reviews of all the dependent variable and the independent variable besides section 2.5 research framework. The objective to conduct literature review was to explain the hypothesis expansion will affect the relationships between the 6 independent variable whereby number of independent director, independent chairman, CEO tenure, board size, number of women on board, foreign director on board and 3 dependent variables which are ROA, ROE and Tobin's Q.

2.1 *Shariah* PLCs

The term '*Shariah'* is commonly known as Islamic Law, in English. '*Shariah*' which denotes 'the path to the origins of life'. Technically, the term '*Shariah*' is referring to Prophet Muhammad who knew the entire Islamic system. It has been mentioned in the Quran and also embodies the traditional lifestyle of the Prophet, which called 'Sunnah' (Kasi & Muhammad, 2016).

An increasing number of *Shariah* PLCs have attracted our attention due to their unique characteristics which distinguishing them from the conventional companies. More and more Muslims which represented nearly 20% of the world's population with the increasing market demand for investment products complied with *Shariah* law, which offered stable and lower risk had fascinated more listed

companies to choose for *Shariah* compliant status via the screening process of exclusion and inclusion exercise (Kasi et al., 2016). *Shariah* compliance led firms to follow certain guidelines which included maintaining a restricted level of debt in the capital structure and a certain level of liquid assets in the company's portfolio (K Katper, Shaikh, Anand & Ali, 2018). *Shariah* PLCs emphasized their business operation and activities that complied with the principles of *Shariah*, which is the Islamic law that governs every aspect of each Muslim's life, observance of Islamic ethics and corporate standards. Islam also emphasized the role of justice, selflessness, and integrity in a principle-agent relation. Therefore, the researcher suggested that the Islamic economic system stresses that markets should work with justice, compassion and solidarity (K Katper et al., 2018).

According to *Shariah* Advisory Council (SAC) developed standard criteria to review the companies' activities. The following core activities which the principles of *Shariah* do not permit are listed below:

(a) Financial services based on *riba* (interest)

(b) Gaming and gambling;

(c) Sale or manufacture of non-*halal* products or related product

(d) Conventional insurance; since the primary factor of the conventional insurance is *gharar* (uncertainty) which is forbidden in Islam.

(e) Entertainment activities that are non-permissible as indicated by *Shariah*;

(f) Sale or manufacturer of tobacco-based products or related products;

(g) Share trading or stockbroking in *Shariah* non-compliant securities; and

(h) Other activities deemed non-permissible as indicated by *Shariah*.

As a consequence, companies engaged in the core activities listed above were considered to be *Shariah* non-compliant (Abu Bakar et al., 2014).

According to Farooq et al. (2016), both of the researchers argued that *Shariah* PLCs inherent certain financial characteristics that may disadvantageously affect firm performance. For instance, there was a requirement for companies to be

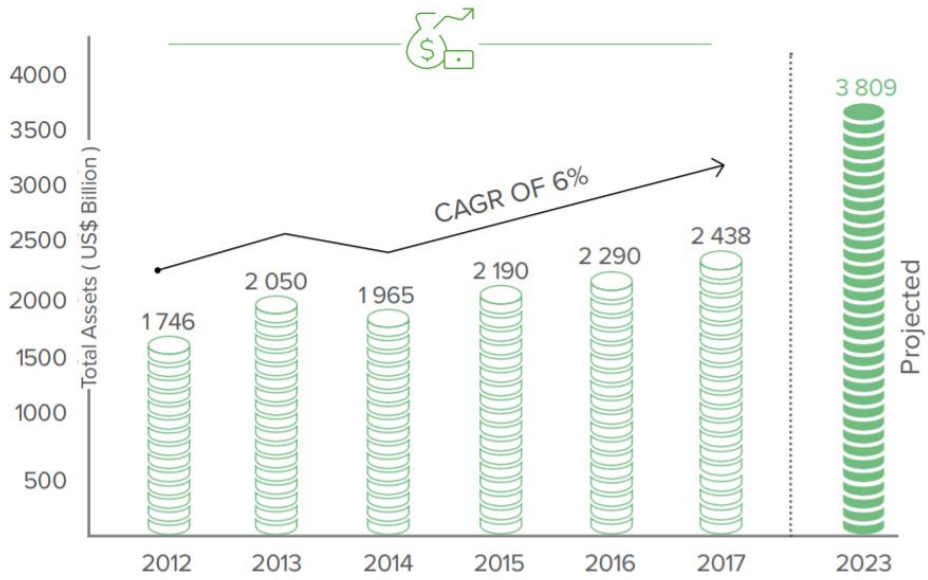
Shariah compliant which is to have low leverage. Grossman & Hart (1982) and Williams (1987) stated that companies with low leverage face higher agency problems. They disputed that low leverage reduced the threats of liquidation and thus increased the agency problem. They pointed out that liquidations were crucial because it could affected managers' salaries, reputations and benefits at personal cost to them. Hence, whenever encountered with increased threat of liquidation, managers reacted to it by assuring that liquidation does not occur, consequently working in the optative interest of shareholders and enhancing firm performance. In another relevant study, Jensen (1986) argued that leverage could enhanced firm performance by reducing free cash flow available to managers. Since high leverage resulted in high interest payments, it brought about reduction in cash available for managers to commandeer. According to Margaritis & Psillaki (2010), they stated that less expropriation ultimately led to better performance.

Other than that, low amount of account receivable also the requirement for companies to be *Shariah* compliant. Previous literature showed that account receivables are an essential mechanism for companies to establish long-term relationship with their customers. Researchers believed that high intensity accounts receivable could indicated that the buyer had received credit guarantees from companies and expected to buy more from these companies. Therefore, companies with high amount of account receivable should performed better than similar companies with low amount of account receivables (Farooq et al, 2016). Luo and Chen (1997) reported that companies with high account receivables had better performance, in term of sales growth. According to Farooq et al. (2016), they argued that *Shariah* PLCs were unable to establish and maintain their business networks in the same way as Non-*Shariah* compliant companies because of the low amount of account receivables. As a result, their performance should be lower than those companies which do not comply with *Shariah* principles.

The other essential features of *Shariah* PLCs were interest bearing securities and low amount of cash. Previous literature had shown that companies with high amount of cash in hand were able finance large capital expenditure. Hence, these particular firms outperform among their counterparts. In line with Farooq et al. (2016) of opinions, Mikkelson and Partch (2003) proved that operating performance of high cash firms would be much better than low cash firms.

Besides, the researchers also pointed out that high cash holdings were accompanied by endearing investment, especially in R&D and superior growth in assets. Vijayakumaran & Atchyuthan (2017), they found that there was a positive correlation between cash holdings and firm performance on their study by using sample of firms listed in Colombo Stock Exchange (CSE) over the period 2011-2015.

Figure 2.1: Global Islamic finance assets forecasted for year 2012 to 2023 and onwards.



Source: Islamic Finance Department Report 2018

In Singapore, even though the market for Islamic products is small, however, the demand from the country's minority Muslim population was growing every year (Gerrad & Barton Cunningham, 1997). According to Khan & Bashar (2008), this country was a relatively new market player in the field Islamic finance. They required *Shariah* compliant products that would met their financial plans and livelihood needs without *riba* (interest), *gharar* (uncertainty and lack of transparency), as well as *masyir* (gambling). As the market grew, a wide variety of asset classes and products had been introduced. In term of investment portfolios, for instance, Singaporean Muslims were able to invest in the asset classes which

including the global equity fund (Templeton *Shariah* Global Equity); the Asian equity fund (Templeton *Shariah* Asian Equity); the global *sukuk* fund (Templeton Global *Sukuk*); the global commodity fund (Deutsche Noor Precious Metals); Singapore REITS (Sabana REITS); and SGX stocks that were selected by ideal ratings software. In conclusion, with the increasing demand for *Shariah* compliant products, Islamic finance will maintain its economic hot spot in the coming decades (Hassan, 2017).

Regionally, Malaysia is a leader in Islamic finance (Khan & Bashar, 2008). In Malaysia, *Shariah* Index launched by the Bursa Malaysia on April 17, 1999. As the securities to be *Shariah* compliant, they need the approval from *Shariah* Advisory Council (SAC) of the Securities Commission of Malaysia (SCM) (Kasi & Muhammad, 2016). Abdullah, Hamid & Kamis (2015) believed that the larger the size of BoD, the greater the risk and the greater the difficult of decision making therefore led to inconsistency in direction due to the divergence of opinions among board members on the study for Malaysian *Shariah* compliant listed companies with 250 sample companies for the year 2007 to 2010. Malaysia's Securities Commission and leading index providers like *Shariah* Board, DOW Jones Islamic Market Index (DJIM) and FTSE Global Islamic Index Series had created devoted Islamic indices to sieve selected companies and their stocks for *Shariah* PLCs. However, companies will be removed from the lists when it fails to comply with the financial ratio screens and business activities. As a result, the lists of Islamic equity indexes accessible in the industry are Kuala Lumpur *Shariah* Index, Dow Jones Islamic Market Indexes, FTSE Global Islamic Indexes, Global GCC Islamic Index and MSCI Islamic Index Series.

2.2 Corporate Governance

2.2.1 Corporate Governance in Malaysia

In Malaysia, government had established CG codes and mandatory all local public listed company (PLCs) to implement with the rules and regulations according to the Malaysian Code on Corporate Governance (MCCG 2000, 2007, 2012 and 2017) (Bhatt, 2016). After the Asian financial crisis of 1997, most Asian countries including Malaysia were trying to reinforce their CG, transparency and disclosure levels (Ho & Wong, 2001). Therefore, MCCG first issued on March 2000 and incorporated in Bursa Malaysia's Listing Requirement in January 2001. The objective is to facilitate disclosure by providing investors more accurate information such as assessment of companies' performance for the investment decisions. Besides, MCCG also serve as a clarify duties and responsibilities guideline to all the member of the BOD (Rahman & Salim, 2010).

After the MCCG 2000 and MCCG 2007 issued, CG enhance the firm ability and leads to increase the performance (Bhatt, 2016). The MCCG has made some changes on October 2007, and revised to MCCG 2007. There was only a small changed from MCCG 2000, such as strengthening the BOD and audit committees to assure they fulfill their roles and responsibilities effectively. Thus, by increased the frequent of meetings and training was able to enhance the effectiveness of audit committee. However, to enhance the effectiveness of PLCs, executive directors were unable become a member of the audit committee (Rahman & Salim, 2010).

In July 2011, the Securities Commission Malaysia (SCM) had established Corporate Governance Blueprint 2011 to strengthen self and market discipline and attain good CG cultures. Besides, blueprint states that good business is being ethical and sustainable not just about to accomplish the demand financial bottom line by being competitive. Thus, MCCG 2012 was

introduced to emphasis on enhancing the board structure and composition. BOD has the responsibilities to be effective stewards of the firm, by assuring the firm compliance with laws and ethical value to ensure the risk management and internal control levels (Securities Commission Malaysia, 2012).

In order to adapt the new changes, latest version MCCG 2017 has introduced by adding new approach which is the Comprehend, Apply and Report method (CARE approach). Thus, in MCCG 2017 encourage non-listed companies such as licensed intermediaries, state-owned companies and small and medium enterprises (SMEs) to adopt on the CG rules and regulations to increase the sustainability, transparency and accountability of the firm (Securities Commission Malaysia, 2017). There were some studies revealed that MCCG have a direct relationship with the firm performance (Leng, 2004). While, there were also some research uncover that there was no direct relation among CG and firm performance (Ponnu, 2008).

2.2.2 Singapore Code of Corporate Governance

After Asian Financial Crisis in 1997-1998, CG practices had been concerned issue by numerous Asian nations. However, Singapore was less badly affected by the AFC than its Southeast Asian neighbors. The drop in economic growth from 7.8 percent in 1997 to 1.5 percent in 1998, the rise in the unemployment rate from 1.7 percent in 1997 to 4.5 percent in 1998, as well as sharp declined in stocks, real estate and currency, all proved that Singapore's economy still suffered from a severe blow. Due to the crisis, Singapore government has taken a series of actions to fortify its financial sector and improved the competitiveness of its economy (Thompson & Agnes, 2002).

According to Mak & Chng (2000), Singapore has been moving steadily from a merit-based system. The quality of companies to be listed will be judged by the securities regulators to a disclosure-based system. According to the recommendations of the Corporate Finance Committee, the market evaluated companies based on more comprehensive information. The move not just changes the role of regulators. It also calls for major changes to the legitimate and administrative structure, codes of best practice, accounting and auditing standards as well as the role of third-party oversight bodies, for instance, the news media and investors' associations. In view of this, the Treasury, along with the Attorney General's Chambers and Monetary Authority of Singapore (MAS, has led a complete review of corporate governance and regulation. As a component of this exercise, the government built up three private-sector-led committees in December 1999, one of which was the Corporate Governance Committee (CGC), so as to study and provide details on practices in CG in order to make essential recommendations.

In 2000, CG developed rapidly in practice and philosophy toward the standards promulgated by the Organization for Economic Cooperation and Development (OECD). The CGC examined international best practices benchmarks to develop CG principles and suggested appropriate changes in CG practice adapt to the local environment. The CGC had completed its review final report was submitted. The Code of Corporate Governance (the "Code") was then first issued on 21st March 2001 (Thompson et al., 2002). Under the Singapore Exchange's (SGX) listing rules, all of the listed firms were required to disclose of its CG practices and an explanation of any breaches from the Code in their annual reports with effect from January 2003. The "comply or explain" principle could be found in the Code of Corporate Governance in Singapore (Monetary Authority of Singapore, n.d.). As had been stated, the Code is not obligatory but emphasizes on self-regulation. According to Koh & Yip (n.d.), they stated that Singapore was considered one of the best CG countries among Asia and the world. It makes nearly 70 best practice recommendations within four areas: Board Affairs, Remuneration Affairs, Accountability and Audit as well as Communication with Shareholder.

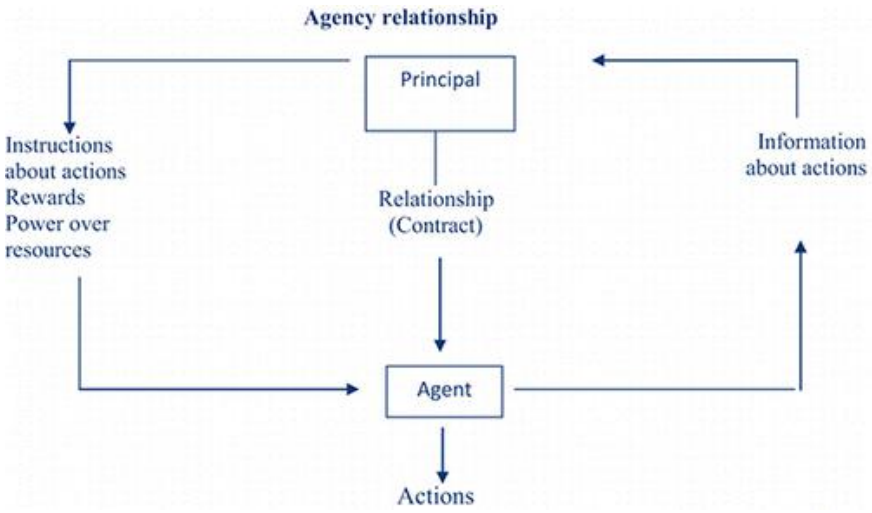
The Code had been revised on 14 July 2005 and again on 2 May 2012. The MAS issued that the purpose to revise the Code in May 2012 was to addresss the issues which triggered the 2008 Global Financial Crisis. This financial crisis could be traced to the American sub-prime home mortgages sector, with raising mortgage default or delinquency rates resulting in a rapid devaluation of mortgage-related financial instruments. In particular, Singapore experienced a recession, with a decline in GDP growth rates across two consecutive quarters driven by a global credit crunch as well as an overall decline in global demand. Major changes related to many crucial features of CG. For instance, the composition of BoD of listed firms in Singapore, the role of independent directors was increasingly prominent and holding not more than 10 percent of shares. Independent directors must make up for half the board instead one-third standard if there was a CEO Duality which means the Chairman and the CEO were not separated (Singapore Management University, 2014). Further, according to the Code (2005) stated that the BoDs should be responsible for considering the appropriate board size of the BoDs based on the nature and scope of the firm's operation in order to conduct an effective decision making process (Monetary Authority of Singapore, n.d.).

The CGC was established to conduct a comprehensive review of the Code on 28 February 2017. MAS accepted all the recommendations that submitted by the committees, and led to the issuance a revised Code ("2018 Code") and accompanying Practice Guidance on 6 August 2018. The 2018 Code supersedes and replaces the Code that was issued in May 2012. The 2018 Code applies to annual report covering fiscal year beginning from 1st January 2019 (Monetary Authority of Singapore, n.d.).

2.3 Theoretical Model

2.3.1 Agency Theory

Figure 2.3.1: Diagram of Agency Theory



Source: Gray, Owen & Adams (1996)

Agency theory was originating from the contractual theory. This theory described that the separation the relationship of ownership and management between one or more principal (owner) and the agent (CEO and management team), which called agency relationship. It depicted that the principle who supply the capital to the firm hires an agent to administrate the firm which delegate some decision making right to the agent. Thus, agency theory able to leads powerful agency theory (Jensen & Meckling, 1976).

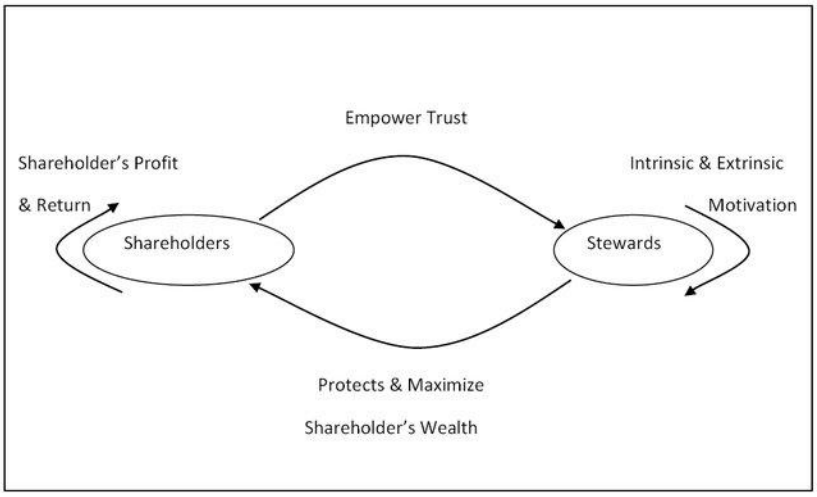
In financial open system, agency relationship could led to two agency problems between shareholder and management, which were the interest conflict and risk tolerance. These two problems bring CG issues, when shareholder and managers have distinct opinions, shareholder will tend to act in their best interest while managers will emphasis in the risk preferences. Follow by that, waste of time spends, additional expenses cost and supervision cost will increase the agency cost (Homayoun, 2015; Oguz & Dincer, 2016; Rahman & Salim, 2010).

Agency theory concentrated on extrinsic rewards such as tangible, exchangeable merchandise have a market value that can be measured (Rahman & Salim, 2010). There were some studies shows that ROA and ROE can measure the agency cost (Li & Cui, 2003; Xu, Zhu & Lin, 2005). Thus, Tobin's Q also one of the method to measure the agency cost (Morck, Shleifer & Vishny, 1988; Agrawal & Knoeber, 1996).

There was some research supported that agency theory has significance relationship to set up efficient management control (Dikolli, 2001; Eldenburg & Krishnan, 2003). Therefore, a firm choose an appropriate CG between principle and agent could ensure the efficient management control and reduce the agency costs.

2.3.2 Stewardship Theory

Figure 2.3.2: Diagram of Stewardship Theory



Source: Abdullah & Valentine (2009)

In stewardship theory, shareholder and managers were having the same interest, which opposite with agency theory (Kultys, 2016). Therefore, the

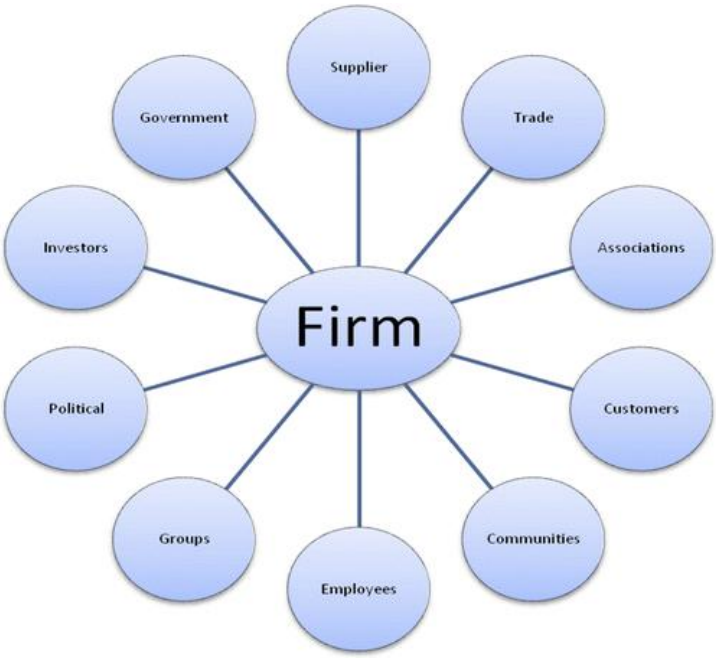
firm should assign required authorities to managers as they are good stewards which represent the organization and motivated to work hard (Rahman & Salim, 2010). Thus, in the research of Davis, Schoorman & Donaldson (1997) uncovered that a steward ensures the firm performance to maximize the wealth of shareholder as doing so, steward also able to enhance the effectiveness of function.

Stewardship theory concentrated on intrinsic rewards such as growth opportunity, accomplishment, affiliation, and self-actualization (Rahman & Salim, 2010). Besides, steward was willing to act in the manner of hard working to achieve the best interest which leads to collectivist benefit rather than individual profit (Keay, 2017; Okiro, 2014). In the study of Okiro (2014) reveal that there was no interest conflict between the stewards and shareholders.

Stewards preferred low-power distance culture and involvement-oriented management structure rather than direct control management (Donaldson & Davis, 1991; Baeten, Balkin & Berghe, 2011). In stewardship theory, the final goal was to determine whether the mechanisms and structure could increase the effectiveness of conformity between the shareholder and stewards (Okiro, 2014). Thus, in Donaldson & Davis (1991) revealed that stewardship theory brings better decision making and CG.

2.3.3 Stakeholder Theory

Figure 2.3.3: Diagram of Stakeholder Theory



Source: Donaldson & Preston (1995)

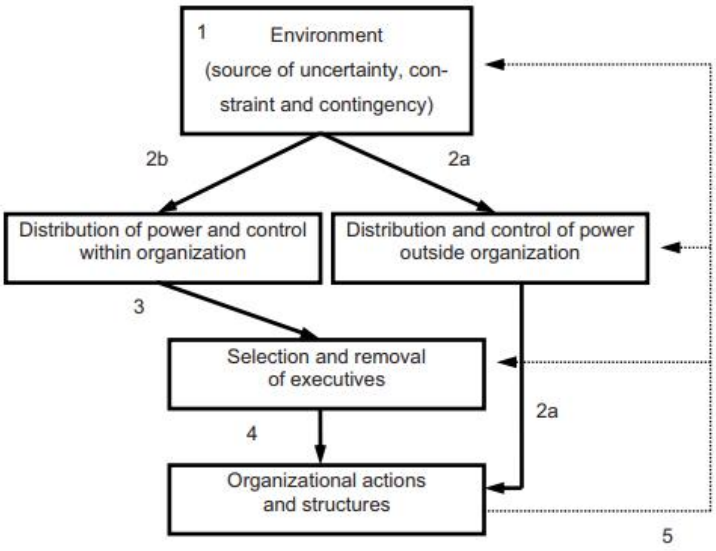
The stakeholder theory was to describing any individuals or organization who could affect the company success or failure such as shareholders, suppliers, customers, employees, local communities and other public which have related relationship with the company (Heath & Norman, 2004). Thus, stakeholder theory was to determine and examine the affection on organization action to let company be aware of their corporate governance, strategic administration, business ethics, and the effectiveness of mechanism (Donaldson & Preston, 1995).

According to the study of Smallman (2004), stakeholder theory was an extension from agency theory, therefore the responsibility of BoD was enhanced from shareholders to stakeholder's interest. Besides, company considered a broader group of stakeholders has become the alternative of a narrow focus on shareholder (Freeman, Wicks & Parmar, 2004).

There was some research uncovered that stakeholder theory's moral viewpoint, by gaining the confidence from stakeholder, organization should ensure that all stakeholder was treated equitable (Okiro, 2014; Donaldson & Preston, 1995). In stakeholder theory, shareholder unable to maximizing their wealth, this was due to the company would fairly divide and served all stakeholder interest (Donaldson & Preston, 1995).

2.3.4 Resource Dependency Theory (RDT)

Figure 2.3.4: Diagram of Resource Dependency Theory



Source: Pfeffer & Salancik (2003)

The resource dependency theory (RDT) was an explanation for a company clearly knew that the behavior, structure, stability, and the changes of an organization (Nienhüser, 2008). In the research of Pfeffer (1972) mentioned that the theory mentioned that when an organization utilized all the usage of resources to let the operation run smoothly it will lead to an effective organization.

In the classification of strategic management and organization theory, RDT has become the most impactful and influential theories. This theory possesses an interdependent and not autonomous organization which could led to decrease the uncertainty, resource dependency and let company able to acquire the resources through the method of alliance and merger with competitors (Hillman, Withers & Collins, 2009; Chiambaretto, 2015).

RDT emphasizes on company take advantage on which BoD had the connection to environment to obtain and insure the resource of the organizations. Besides, this theory also proposes that director on board are an institution to administrating the external dependencies, by decreasing the uncertainty of environment and transaction costs (Pfeffer, 1972; Pfeffer & Salancik, 1978; Hillman, Cannella & Paetzold, 2000).

2.4 Dependent Variables

2.4.1 Return on Assets (ROA)

Return on assets (ROA) is a financial ratio which illustrated the ratio of profits earned from total assets (Saragih, 2018). The calculation of ROA was to dividing a firm's earning before the depreciation, interest, tax and amortization (PBDITA) from the overall assets at the end of the year (Kiel & Nicholson, 2003; Yermack, 1996; Al-Matari, Al-Swidi & Fadzil, 2014). ROA was to using accounting-based measurement in short-term to measure the finance performance (Klapper & Love, 2002). The result of ROA discloses management's effectiveness in utilized company capability to generate net profits from the total available assets (Gitman et al., 2011; Haniffa & Hudaib, 2006). There were many studies found a positive relationship between ROA and board characteristics (Ong, Heng, Ahmad & Muhamad, 2015; Matari, Swidi & Fadzil, 2014; Johl, Kaur & Cooper, 2015). According to the study of Kalsie & Shrivastav (2016), their research stated that ROA was one of the

measurement approaches of firm performance. There was empirical evidence support that ROA has significant impact on board size and CEO tenure (Ng, Teh, Ong & Soh, 2016). However, Matari et al. (2014) uncovered that ROA has no direct impact on the board size and CEO tenure.

2.4.2 Return on Equity (ROE)

Return on equity (ROE) often called by Return on Common Equity, and said to be the ultimate ratio or the "mother of all ratios" which could be obtained from a firm's financial statement (Rosikah, Prananingrum, Muthalib, Azis & Rohansyah, 2018; Gazzola & Amelio, 2014). It was a financial ratio which illustrated the percentage of profit that could generated on the equity capital investors had allocated in the firm. Therefore, every company emphasis on ROE by measuring firm's earnings performance, to ensure the effectiveness level of company management in generating profit (Kamar, 2017). The calculation of ROE is by profit after taxation or total equity shares in issue. ROE is using the accounting-based measurements approach to measure the financial capability. This type of measurement was used on the short-term in the past few years (Al-Matari et al., 2014). There was study found that ROE was positive but no statistically significant association between the firm value (Rosikah et al., 2018). According to Topal & Dogan (2014), ROE does not have any impact on board size. Thus, in the study of ISIK & INCE (2016) revealed that ROE has a positive relationship between the independent CEO while has a negative effective but significant on the board size.

2.4.3 Tobin's Q

Tobin's Q is a financial ratio of a firm's market value which to reposition cost of the assets (Lindenberg & Ross, 1981). The calculation of Tobin's Q is the overall assets of the company divided the percentage of the market capitalization and total debt. Tobin's Q is using market-based measurements to measure the financial performance (Al-Matari et al., 2014; Rostami, 2015). The measurement of Tobin's Q used the traditional way by expected measure long-run company performance (Bozec, Dia & Bozec, 2009). The effectiveness of Tobin's Q indicated that the firm has better performance, asset management, investment and growth potentials (Nuryanah & Islam, 2011; Barontini & Caprio, 2006). According to Topal & Dogan (2014), Tobin's Q has a positive relationship between board sizes. However, some studies showed that Tobin's Q had negative relationship between board sizes (Lipton & Lorsch, 1992; Jensen, 1993). Thus, the study uncovered that Tobin's Q has negative relationship with CEO duality (Topal & Dogan, 2014).

2.5 Independent variables

2.5.1 Number of Independent Directors (NOID)

An independent director was referred as a director which does no has direct relationship and conflict with any commerce or monetary relation with the firm, and also no direct personal and business relationship with the BoD which could interfered the judgement decision or interest of the firm. Independent director was a compulsory for a firm to ensure an equitable decision making can be made. Thus, independent directors could avoid conflicts of interest and able to use unbiased third party vision to cope the

disagreement (Rahman & Salim, 2010; Securities Commission Malaysia, 2007).

In the composition of board of directors, a listed issuer was recommended to have at least 2 or one-third of independent directors on the board (Rahman & Salim, 2010; Securities Commission Malaysia, 2017). However, if the Chairman and Chief Executive Officer (CEO) in the firm is the same member means CEO Duality, the independent directors should increase and make up half of the board to ensure the effectiveness of the management (SID, 2012). In addition, in the Singapore revision of code 2005 stated that the increasing NOID can enhance the effectiveness of judgment decision.

Some of the studies revealed that there was a positive relationship among the NOID with the practice of CG (Kang, Cheng & Gray, 2007; Gómez, Cortés & Betancourt, 2017; Pombo & Gutiérrez, 2011). This was due to independent director was able to make fair decision making to the governance responsibilities (Moreno-Gomez, Gomez-Betancourt & Ramirez, 2016). Besides, it was also an argument that shown a negative coefficient among NOID and firm performance which stated that if independent directors does not execution their responsibility, the existence of independent director will affect the firm to enhance the performance capability (Fuzi, Halim & Julizaerma, 2015; Chugh et al., 2011). In the study of Bhatt (2016) stated that in the CG, independent director of the firm had a negative relation regarded to ROA and Tobin's Q.

The research of Gómez et al. (2017) shown that there was a negative relation with the participation of independent director and firm performance based on the measurement of ROA and ROE. However, in some research revealed that there was a positive relationship among corporate governance and firm performance, the higher ROA and Tobin's Q leads to better corporate governance (Klapper & Love, 2002). In some research uncovered that the existence of the independent directors will enhance the investors trustfulness and company performance, which point out there was a significant positive relationship (Rahman, Ibrahim, & Ahmad, 2015; Fauziah, Yusoff, & Alhaji, 2012).

Besides, one of the study shown that there was an insignificant impact, which indicated the superior of independent director, leads to lower firm performance, (Latif, Shahid, Haq, Waqas & Arshad, 2013) In the research of Rosikah et al. (2018) found that NOID had a positive but insignificant effect with the firm value as measured by ROE. Moreover, there were few findings uncovered that increased the NOID will lead to a negative effect on firm performance (Farhan, Obaid & Azlan, 2017; Wang & Zhou, 2013).

Based on the past studies, it was postulated in the following hypothesis:

$H1_{1A:}$ Number of independent directors has a significantly negative relationship with firm performance (ROA).

$H1_{1B:}$ Number of independent directors has a significantly negative relationship with firm performance (ROE).

$H1_{1C:}$ Number of independent directors has a significantly negative relationship with firm performance (Tobin's Q).

2.5.2 Independent Chairman (IC)

Independent chairman (IC) is the person who can exercised the required independence of judgment in assessing management (Rahman & Salim, 2010). The IC has the responsible to set the agenda and make certain effectual flow of communication on the board, such as enforcing the standards of the group, ensured if a quorum is presented (Kakabadse & Kakabadse, 2007; Robert et al., 2011). Besides, the role of chairman been known as having a different influence on board dynamics, contribution, supervision and support the administration. The chairman also had a role to ensure all the board members obtained accurate and timely information (Kakabadse & Kakabadse, 2007).

Chairman had the responsible to evaluate the performance and comprehend the capability effectiveness of independent director, this was due to when the wrong judgment let the situation get worse chairman was the person who need to remedy the circumstances (Rahman & Salim, 2010). In Krause (2016) revealed that, IC could served as a strong supervise and collaboration such as control the rewarding when the performance was weak while collaborate when the performance is strong to balance the capability. Thus, there was a study found that the presence of IC will decrease the agency problem (Balsam, Puthenpurackal, & Upadhyay, 2011). However, in the study of Krause, Semadeni & Cannella (2014) uncovered that IC could created agency problem.

There was one of the researches uncovered that there had a significant relation among the board composition and the independence of the board chairman (Coles & Hesterly, 2000). However, in some studies found that in general and crisis period there was no statistically significant role of IC with the firm performance (Arslan, Karan & Ek¸si, n.d; Krause et al., 2014). In the research of Hussin and Othman (2012) revealed that IC have a direct relation with the firm performance by reducing the agency problem. However, there was a finding shown that IC have negative impact on the firm performance which will reduce the effectiveness and increase the cost and information flow (Payal and Kang, 2016; Krause et al., 2014). In the research shown that by using the Tobin's Q measurement, IC had negative relationship with the firm performance (Arslan, Karan & Ek¸si, n.d.). Besides, there were few findings uncovered that IC has a positive effect on firm performance (Ibrahim, Ahmad and Khan, 2017; Balsam, Puthenpurackal and Upadhyay, 2011).

Based on the past studies, it was postulated in the following hypothesis:

$H1_{2A:}$ Independent chairman has a significantly positive relationship with firm performance (ROA).

$H1_{2B:}$ Independent chairman has a significantly positive relationship with firm performance (ROE).

$H1_{2C:}$ Independent chairman has a significantly positive relationship with firm performance (Tobin's Q)

2.5.3 CEO Tenure (CEOT)

In most of the studies, CEO tenure (CEOT) is defined as the number of year CEOs hold their position. CEOT is a very important construct for research relating to organizational and executive leadership. In addition, CEOT was always associated with the quality of leadership and power (Herly & Sisnuhadi, 2011; Simsek, 2007). A CEOT in their position was usually limited because certain succession plans were carried out frequently. This was done to avoid of over-extended contracts which led to increase in the cost of management dismissal when performance was poor (Al-Matari, Al-Swidi, Fadzil & Al-Matari, 2012). Over the past decades, researchers found interesting for the relationship between CEOT and firm performance. Researchers analyzed mechanisms that might govern the relationship between CEOT and firm performance by focusing one tenure's more proximal outcomes such as company invention and R&D spending. On the one hand, Barnard (1938) argued that leadership especially the most senior position in a firm had an important impact on firm performance and survival at all levels. For instance, Barnard (1938) believed that top leaders had set a collective goal that ties all the participants in the organization together.

Resource dependence theory holds that the longer time that a member served in his or her job position, the more experience and knowledge his or her will gain. Likewise, CEOs with long tenure tend to contribute higher level of information concerning governance practices as the performance of firm increase. There were few studies found that there was a positive correlation between CEOT and firm performance as measured by ROA in developed countries, for instance Koufopoulos, Zoumbos, Argyropoulou & Motwani (2008) and also in developing countries, for instance Herly & Sisnuhadi

(2011) and Kyereboah-Colema (2007). Consistent with the agency theory, CEOs with long tenure disclose less about corporate governance practices because they felt empowered and less supervised by the board of committees (Shen, 2003). However, new CEOs had a diametrically opposed view. They tend to reveal more information to avoid developing the perception that the CEOs are satisfying their own personal interests.

In terms of agency theory, its advocates believed that the relationship between CEOT and firm performance should be negative. The previous studies found that there was a negative relationship between CEOT and firm performance as measured by ROA, for instance, Evan, Nagarajan & Schloetzer (2010) and Al-Matari et al. (2012). Moreover, Herly et al. (2011) shown there was a negative relationship between CEOT and firm performance as measured by Tobin's Q.

Gacheru (2011) found that CEOT had a negative but insignificant effect with firm performance as measured by ROA based on his study for firms listed on the Nairobi Stock Exchange. The researcher stated that it does not matter whether a CEO stays for long in a firm or was replaced more frequently. Another study examined by Kyereboah-Colema (2007) supported the result from Kusumasari (2018) and Gacheru (2011), as the researcher found that there was not relationship between CEOT and firm performance as measured by Tobin's Q on his study for 103 firms listed drawn from Ghana, South Africa and Kenya from the five years' period 1997-2001. Beside, a strong empirical study supported by Limbach, Schmid & Scholz (2015) found there was a non-linear relation between CEOT and firm performance, and they suggested that the optimal CEOT (the"sweet spot) was about 12 years based on their study for the average 1500 firms. Furthermore, they found that the optimal CEOT depends on a firm's economic environments that determine the cost-benefit relationship. For companies operating in dynamic, rapidly changing environments, their peak performance was reached much earlier compared to the average companies and, conversely, companies in more mature and stable environments reached their peak performance much later.

Based on the past studies, it was postulated in the following hypothesis:

$H1_{3A}$: CEO tenure has a significantly positive relationship with firm performance (ROA).

$H1_{3B}$: CEO tenure has a significantly positive relationship with firm performance (ROE).

$H1_{3C}$: CEO tenure has a significantly positive relationship with firm performance (Tobin's Q).

2.5.4 Board Size (BS)

Board size (BS) is referring to the number of directors on the board. Board size would also affect the efficiency of the board. The number of board directors varies from country to country, or firm to firm due to there was a differences between culture, rules and regulation as well as ownership structure. The optimal size of the board should be consisting of both the executive and non-executive directors (Zabri, Ahmad & Khaw, 2015).

Agency theory holds that the more directors there are, the stronger the control over the management will be, thus contributing to a better performance. From the perspective of resource theory, the more directors of a firm, the stronger ability for companies to benefit from their expertise by building a long-term relationship with strategic environment. Kiel & Nicholson (2003), Li, Armstrong & Clarke (2014) and Nowroz (2015) found a significant positive relationship between firm performance and board size. For the optimal BS, Jensen (1993) suggested that its size needs to be at least seven or eight persons for a board of directors (BoD) to perform effectively.

In the relevant literature, although numerous studies had examined the relationship between BS and firm performance, those results were not conclusive. In examining this relationship in the Bangladesh listed firms, Rashid, De Zoysa, Lodh & Rudkin (2010) found a significant negative

relationship between ROA, however it shown a positive relationship between Tobin's Q. Similarly, Nazar & Rahim found a significant negative relationship between BS associated with ROA and insignificant negative linked with ROE in Sri Lankan listed companies. The same conclusion was drawn by Zabri, Ahmad & Khaw (2015) based on a study of Malaysia PLCs. The results shown that board size had significantly weak negative correlation with ROA and it was found to be no significant to ROE. In Malaysia and Singapore, a study conducted by Mak and Yuanto (2003) stated that the highest performance of a company when their boards made up of five members.

In the *Shariah* Supervisory Board (SSB) context, it preferred to have a SSBs with small size due to it was easy for the management and BoD to control and affect it while the SSBs with large size was difficult for them to control it. At the same time, SSBs with large size contain scholars with various experiences and skills as well as school of *fiqh* will leads to better interpretation of products and operations and thus better performance (Hamza, 2016).

Based on the past studies, it was postulated in the following hypothesis:

$H1_{4A}$: Board size has a significantly positive relationship with firm performance (ROA).

$H1_{4B}$: Board size has a significantly positive relationship with firm performance (ROE).

$H1_{4C}$: Board size has a significantly positive relationship with firm performance (Tobin's Q).

2.5.5 Number of Women on Board (NOW)

The definition of board gender diversity referred to the existence of female as the board of directors (NOW), which is a crucial aspect of board diversity (Dutta & Bose, 2016). Gender diversity of board is an emerging field of CG research recently, but most of the empirical studies on this subject were restricted to developed countries, for instance Andersson & Wallgren (2018) found that the presence of one or more female on board had a positive effect on firm performance as measured by Tobin's Q with a sample of 100 Swedish companies listed on Nasdaq Stockholm on time period 2013-2016.

Nonetheless, the study found on Pasaribu (2017) shown that female directors were unlikely to have a significant impact on firm performance in the UK. Whereas, there was a positive impact of women directors on small firms, which was greater influenced as compared to UK listed firms. This may be caused by two major reasons. Firstly, large firms which were associated with strong governance suffered from over-monitoring issues when female directors were appointed (Adams & Ferreira, 2009; Jurkus, Park & Woodard, 2011). Secondly, large firms were suffering greater external intervention than small firms in terms of the composition of their boards of directors. The impact on NOW on firm performance was not consistent in past empirical studies, which may be due to endogenous problems or some characteristics such as governance, industry and competition (Pasaribu, 2017).

Gender inequality on the BoD had been a systemic issue in the corporate world. Hence, government had imposed quota to increase the presence of women on the boards especially in the developed countries. They believed that increasing diversity of the boards will create more talents, in terms of their expertise, experience, and connections, which will lead to better governance and firm performance. This indicated that there is a positive correlation between women directors and firm performance. It could be supported by the study of Bart & McQueen (2013) which had found that representation of women at board as director improved firm performance.

In Malaysia, Julizaerma & Sori (2012) carried a study and reported that there was a positive relationship existed between gender diversity and firm performance as measured by ROA. The same conclusion drawn by Fan (2012) found the evidence to support a positive effect on gender diversity associated with firm performance as measured by Tobin's Q, this study was using 390 observations from various sectors listed on the SGX on time period 2002-2004. Multiple regression simultaneous equations were used to control the possible endogenous issues in this study.

MCCG which revised in 2012 had made a special reference to the importance of diversity and the issue of gender diversity. The revised 2012 Code claimed for board to develop a formal policy on board diversity in order to ensure there are enough female candidates in the recruitment process. In addition, the Code claimed for the board of listed firms to disclose in their annual reports with regarded to gender diversity policies and the measures taken to achieve these goals (Securities Commission, 2012). Malaysians' attitudes towards gender were largely determined by Confucianism (the religion of the majority of the Chinese) and Islam (the religion of the Malays). Confucianism and Islam imposed a thick 'glass ceiling' and established an impenetrable barrier for women's progression into senior level of position in an organization (Tracey, 2012; Tunimez, 2012).

According to Abdullah (2013), the researcher carried out some interesting findings such as the appointment of female as the board of directors was related to the size of the board. As a result, women were less likely to be appointed to the small boards and vice versa. Moreover, women were appointed as a director mainly due to their relationships with the firm's major shareholders, which mean they were bound to be nominated to the board of government owned firms or in the family owned firms. In addition, women were more likely to be nominated as executive or non-executive directors (as nominees to control shareholders of the firm), but not as independent directors. Therefore, the concept of "know-who" or "guanxi" or simply "relationship" plays a crucial role in female getting on the board in Malaysian firms. In general, the impact of connection appears to be the main determinant of the appointment of women as BoD in Malaysian firms.

In Singapore, even though there was a provision in the code of CG that BoD should be composed of diverse group of directors, however it does not require firms to disclose such diversity policies nor have a quota, therefore it had not much force. In fact, as Singapore had one of the highest levels of education and labour force participation rates for women, it still had the lowest proportion of women directors among developed countries.

In contrast, previous studies shown evidence supporting a significantly negative correlation between the NWOB and firm performance (Haslam, Ryan, Kulich, Trojanowski & Atkins, 2010; Adams et al., 2009). Devi, Hassan & Muhammad Hamza (2015) showed that NWOB has negative impact on ROA and ROE.

On the other hand, Shabbir (2018) based on evidence from Italian investigated the relationship of women on board and firm performance using a sample of 705 Italian listed companies after the introduction of the gender quota law. The researcher highlighted that the presence of women on board had no effect on firm performance. Daunfeldt & Rudholm (2012) all failed to identify any significant relationship between firm performance measures and gender diversity.

Based on the past studies, it was postulated in the following hypothesis:

$H1_{5A}$: Number of women directors has a significantly negative relationship with firm performance (ROA).

$H1_{5B}$: Number of women directors has a significantly negative relationship with firm performance (ROE).

$H1_{5C}$: Number of women directors has a significantly negative relationship with firm performance (Tobin's Q).

2.5.6 Foreign Director on Board (FD)

The definition of foreign director (FD) on board is a director from a distinct country with diverse habits and customs (Alabdullah & Ferris, 2014). Thus, FD had superior capabilities and experienced knowledge working in other countries. Thereby, when the firm engage in a cross-border merging and acquisition, FD have an advantages by possessing the close connections with home country local business, social, and political relations (Masulis, Wang & Xie, 2012). The presence of foreign director was able to let the firm enhanced the easier of acquired global experience to expand internationally (Adams, Hermalin & Weisbach, 2010).

There was one of the research revealed that FD on board has positive effect on firm value by enhancing the supervision of BoDs, new capabilities and experiences (Polovina & Peasnell, 2015). In countries with low quality legal institutions, FD seems to have a positive association between the firm performance (Miletkov, Poulsen & Wintoki, 2016). However, in the research uncovered that FD has poor board meeting attendance and low sensitivity of turnover to performance shown that significant negative relation with the firm performance (Masulis et al., 2012). Some research findings found that there was a direct relationship among FD and firm value (Giannetti, Liao & Yu, 2015; Pucheta-Martínez & López-Zamora, 2016).

The research of Salloum, Bouri & Khalife (2013) revealed that the increasing of FD could eliminated the agency problem due to the foreign director have independent judgment decision making which do not have conflict with the shareholder interest. The findings of Ciavarella (2017) revealed that FD has no significant relationship with the firm performance.

Based on the past studies, it was postulated in the following hypothesis:

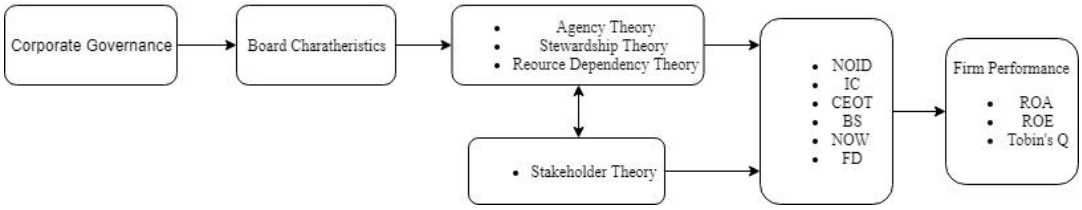
$H1_{6A:}$ Foreign director has a significantly positive relationship with firm performance (ROA).

$H1_{6B:}$ Foreign director has a significantly positive relationship with firm performance (ROE).

$H1_{6C:}$ Foreign director has a significantly positive relationship with firm performance (Tobin's Q).

2.6 Research Framework

Figure 2.5: Research Framework of Corporate Governance and Firm Performance



Source: Developed for the research

The conceptual framework performed as a foundation to carry out this study. The framework was composition on the four CG theories which are agency theory, stewardship theory, stakeholder theory and RDT. There were six independent variables which were NOID, IC, CEOT, BS, NWOB and FD to define the board characteristics. Besides, there were also three dependent variables which were ROA, ROE and Tobin's Q to measure the firm performance.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter explained the sample selection and research design of the hypothesis proposed in Chapter 2. It discussed the sample population and sources of the data. A panel data methodology and the procedure to investigate the panel data were introduced. In this chapter, it consisted of several parts which were research design, sampling design, data collection methods, constructs measurement, research instrument, data processing, data analysis and lastly the conclusion.

3.1 Research Design

This research was aimed to examine the relationship between board characteristics and firm performance (ROA, ROE and Tobin's Q) of *Shariah* PLCs among Malaysia and Singapore on 5 years' time period from 2013 to 2017. Moreover, it also investigated the effect between CG variables and firm performance in *Shariah* PLCs in term of ROA, ROE and Tobin's Q. Specifically, board characteristics which including the number of independent director, independent chairman, CEO tenure, board size, number of women on board, the presence of foreign director on board were expected to be associated to firm performance. According to Alagha (2016), the researcher stated that most studies which related to examine these relationships were mainly using quantitative techniques. Thus, this research was using quantitative techniques for analysing data collected from secondary sources. The sources of data were collected from two sources: annual reports of sample companies and Bloomberg, covering the period from 2013 to 2017. This research was only conducted for companies with completed data during the observation period, and those companies with uncompleted data would not being targeted. This research implemented cross-sectional and longitudinal

analysis. The relationship between the IVs and DVs were examined which covering 5 years' period. Panel data Analysis was employed as a main methodology to investigate which board characteristic variables impact *Shariah* PLCs among Malaysia and Singapore.

3.2 Data Collection Method

3.2.1 Secondary Data

For this research, secondary data was being used. The data regarding CG variables used for comparison between sample companies were collected and downloaded from annual report which available in the official websites of companies. The companies in initial sample were retrieved from Bursa Malaysia and Singapore Stock Exchange. The financial data were extracted from the same database which is Bloomberg in order to avoid potential differences. Bloomberg is a database that can be used to access annual reports of listed companies around the world. Since all the annual reports were audited, hence it offers high data reliability and high quality data sources when obtaining data in this way. By compared to primary data, secondary data access is convenient, cost effective and can be collected more quickly. Several data was sought from E-Databases including UTAR Library, journal, Google Scholar, ScienceDirect, Emerald Management eJournals Collection and SAGE Journals.

3.3 Sampling Design

3.3.1 Target Population

Target population defined as a group of individuals or participants with specific observable characteristic (Asiamah, Mensah & Oteng Abayie, 2017). The target population for this research included all Shari'ah compliant companies which listed in Bursa Malaysia and Singapore Stock Exchange. There were 676 Malaysian listed companies are classified as *Shariah* compliant, this research only targeted the 25 *Shariah* PLCs in Malaysia, and the selection of this sample companies was based on the top 25 well-known companies and share price which listed in Bursa Malaysia as at May 26, 2017. Moreover, there were 48 *Shariah* PLCs in Singapore, 25 listed companies were being targeted due to those companies have incomplete annual reports, insufficient data and financial institutions due to different regulation.

3.3.2 Sampling Frame

A sampling frame is the set of source materials used to select the sample. The purpose of the sampling framework is to provide a technique for selecting specific members of the target population that are ready to be examined in the research (Ghazi, Petersen, Reddy & Nekkanti, 2017). Sampling frame in this research would be the top 25 *Shariah* PLCs in Malaysia and Singapore respectively. The list of companies was derived through the website of Bursa Malaysia and Singapore Stock Exchange.

Table 3.3.2.1: List of Top 25 Selected *Shariah* PLCs in Malaysia

Malaysia	
1. Ajinomoto (Malaysia) Berhad	14.Malaysia Resources Corporation Bhd
2. Air Asia X Bhd	15.Parkson Holdings Bhd
3. Amway (Malaysia) Holding Berhad	16.Petronas Chemicals Group Berhad
4. Apex Healthcare Bhd	17.Petronas Dagangan Bhd
5. Axiata Group Berhad	18.Petronas Gas Berhad
6. Dutch Lady Milk Industries Bhd	19.SAM Engineering & Equipment (M) Berhad
7. Enra Group Berhad	20.Sime Darby Property Bhd
8. Gamuda Bhd	21.SP Setia Bhd
9. Genting Plantations Berhad	22.Star Media Group Bhd
10. IJM Corporation Bhd	23.Tasek Corporation Berhad
11.IHH Healthcare Berhad	24.Telekom Malaysia Bhd
12.Magni-Tech Industries Berhad	25.Tenaga Nasional Bhd
13.Mah Sing Group Berhad	

Source: Developed for the research

Table 3.3.2.2: List of Top 25 Selected *Shariah* PLCs in Singapore

Singapore	
1. AIMS AMP Capital Industrial REIT	14.SATS Ltd
2. Ascendas REIT	15.Sembcorp Industries Ltd
3. Capitaland Commercial Trust	16.SIA Engineering Company Ltd
4. Capitaland Ltd	17.Singapore Airlines
5. Capitaland Mall Trust	18.Singapore Exchange
6. City Developments Ltd	19.Singapore Press Holdings
7. ComfortDelGro Corporation	20.Singapore Technologies Engineering Ltd
8. Global Logistic Properties Ltd	21.Singapore Telecommunication Ltd
9. Golden Agri-Resources Ltd	22.Starhill Global REIT
10.Hutchison Port Holdings Trust	23.StarHub
11.Jardine Cycle & Carriage	24.UOL Group Ltd
12.Keppel Corporation	25.Wilmar International Ltd
13.Mapletree Industrial Trust	

Source: Developed for the research

3.3.3 Sampling Element

In sampling element, the target sample companies were *Shariah* PLCs listed in Bursa Malaysia and also Singapore Stock Exchange. In Singapore, there were fewer *Shariah* PLCs as compared to Malaysia due to Singapore was relatively new market player in the field of Islamic finance. Moreover, Singapore does not have a complete list of *Shariah* PLCs, hence it required to identify the *Shariah* PLCs from the list of listed companies.

3.3.4 Sampling Technique

Sampling technique is a method of selecting target samples from a population (Saunder & Lewis, 2009). This research was completed by utilizing simple random sampling technique in the category of probability sampling. Probability sampling defined as all the sample units in the population has an equal opportunity of being included in the sample. For a given level of sampling error, probability and random sampling is the most effective way to achieve the greatest freedom of deviation. Unfortunately, it is also the costliest sample in term of time and energy (Brown, 1947). This research only targeted on 25 companies out of 676 *Shariah* PLCs in Malaysia which were in the list of top 25 based on their share price in Bursa Malaysia. Furthermore, this research also targeted on 25 companies out of 48 *Shariah* PLCs in the list of top 25 based on their share price in Singapore Exchange.

3.3.5 Sampling Size

The sample size is the total number of target to be studied on the research. The larger the sample size, the less likely that the sampling errors will occur. However, when the sample exceeds a certain size it requires to be balanced with the researcher's resources, and thus the returns quickly decline (Taherdoost, 2016). The total number of sample companies in this research was 25 in Malaysia and Singapore respectively after exclude the unqualified companies which does not achieved the criteria. This study covers 5 years' period which resulted in 125 observations for Malaysia and Singapore respectively.

Table 3.3.5: Number of Firm Year Observation in Malaysia and Singapore over 5-Years Period

	Firm Year Observations
	2013 to 2017
Malaysia	125
Singapore	125

Source: Developed for the research

3.4 Research Instrument

Evidence required to test the hypotheses or answer the research questions of this study was based on published statistics, financial statements and data from annual report were being used. Hence, the data used in this study were secondary in nature. Secondary data is data that existed, such as data obtained from annual report, published statistics and internal records kept by companies (Dunn, Arslanian-Engoren, Dekoekkoek, Jadack & Scott, 2015). In order to collect the

data for IVs which were unavailable in Bloomberg, we gathered those data through annual reports from the official websites of each sample companies. Microsoft Excel was employed to calculate the amount of ROA, ROE and Tobin's Q. The variables were transferred to EView version 8 software to run the Panel Data Analysis. The Multiple Linear Regression (MLR) and Descriptive Analysis were run by using Statistical Package for Social Science (SPSS) Version 21.

3.5 Constructs Measurement

3.5.1 Origin of Construct

In this study, there were 3 dependent variables and 6 independent variables being applied. Table 3.5.1 shown a table of dependent variables whereas independent variables are shown in Table 3.5.2.

Table 3.5.1: Table of Dependent Variables

Dependent Variable	**Acronym**	**Measurement**	**Adopted from**
Return on Assets	ROA	Profit after tax / Total Assets	Alagha (2016), K Katper et al. (2018)
Return on Equity	ROE	Profit after tax / Shareholder's Equity	Chaghadari & Chaleshtor (2011)
Tobin's Q	TOBINQ	Total Market Value of Firm / Total Asset Value	Haniffa & Hudaib (2006), Nuryanah & Islam (2011)

Table 3.5.2: Table of Independent Variables

Independent Variable	**Acronym**	**Measurement**	**Adopted from**
Number of Independent Directors	NOID	Number of independent director on board.	Joher & Ali (2015)
Independent Chairman	IC	0= No independent chairman. 1= Independent chairman.	Mohd Saat & Kallamu (2014), Hsu, Wang & Hsu (2012)
CEO Tenure	CEOT	Number of years CEO in company.	Rashid (2017), Al-Matari (2012)
Board Size	BS	Total numbers of directors on board.	Haniffa & Hudaib (2006), Ren (2014)
Number of women on board	NOW	Number of women represent on board.	Pham (2016)
Foreign director	FD	0= No foreign board members. 1= Foreign board members.	Zakaria, Purhanudin & Palanimally (2014)

Source: Developed for the research

3.5.2 Scale Measurement

Measurement is the process of assigning of numbers to observations in order to quantify phenomena and also to determine which are the appropriate statistical techniques were being used in the research (Raiphea, 2015). Interval and ratio scale were used on all the variables in this research as it represented absolute meaning and the precise amount could be collected from the companies' financial report.

3.6 Data Processing

The main activity in data processing which included data entry and editing as well as transforming data to a data structure suitable for tabulations (Kothari, 2014). First stage of data processing was data entry. Microsoft Excel was being employed for the data entry, each row represents the name of companies from each country, and each column represents the DVs and IVs. The data in Microsoft Excel that collected from Bloomberg and annual reports were being delivered to SPSS version 21 and Eviews version 8. All the variables (ROA, ROE, Tobin's Q, NO_ID, IC, CEOT, BS, NOW and FD) were extracted from Bloomberg and annual reports from the year 2013 to 2017. After the transferring of data, data editing was the second stage in processing of data. Data editing is the process of checking, discovering and correcting errors and omissions.

3.7 Data Analysis

3.7.1 Descriptive Analysis

Descriptive analysis was used to depict the numbers that summarize the data in the sample. It also helps researchers detect sample characteristics of the variables that might affect their results. Besides, central tendency such as mode, mean, median and standard deviation of DVs and IVs were used to describe in descriptive table (Thompson, 2009).

3.7.2 Inferential Analysis

Inferential analysis was used to infer the population's characteristics on the sample data (Bureau, 2012). Panel data analysis was the primary analysis tool for this research. Other than that, Multiple Linear Regression was also employed in this research.

3.7.2.1 Panel Data Analysis

Panel data was used frequently in previous corporate finance literature in order to test the research hypothesis. This could be found in the researches from Ren (2014), Altuwaijri & Kaylanaraman (2016), Irshad Younas, Mahmood & Saeed (n.d.), Yilmaz & Buyuklu (2016). As a matter of fact, panel data estimation was generally regarded as an effective analysis tool to process econometric data.

Panel data methodology, which is a type of longitudinal design commonly referred to as data, it involved the observation of a large number of individuals over time. The major advantage of panel data was the researchers able to include *N* cross-sectional data such as individuals, families, companies, countries and so on, and *T* time periods such as annually, quarterly, monthly and so on (Ren, 2014). According to Gokmen & Turen (2013), there were also few advantages while adopted panel data methodology stated below:

1. Panel data estimation methods can confine heterogeneity by permitting for individual-specific variables.

2. Panel data offers more informative data, more degrees of freedom, more efficiency, more variability and less collinearity among the variables.

3. The dynamics of adjustment can be checked by panel data conveniently.

4. Panel data is the most advisable in order to tackle with more complex behavioral models.

5. Through tools are provided by panel data to investigate how variables and the relationships between them change dynamically.

6. The effect of specific forms of neglected variables bias in regression results can be eliminated by structuring the panel data model in a more convenient way.

There were several types of panel analysis models being used in this study. Among them are fixed effects model and random effects model. Fixed effects model assumes that individual-specific effect is a random variable and the independent variables are correlated. While the random effects model assumes that the individual-specific effect is also a random variable but is uncorrelated with the independent variables. Hence, the following two hypotheses need to be tested:

H0: Random variable is uncorrelated with each independent variable.

H1: Random variable is correlated with each independent variable.

Hausman test was usually employed to determine whether the fixed effects model and the random effects model were suitable for data analysis. Null hypothesis H0 predicts the use of random effects model while H1 predicts the use of fixed effects model. Based on the test results, whenever the probability value (p-value) is greater than 0.05, random effects was selected (Nwakuya & Ijomah, 2017).

According to Bollen & Brand (2010), the fixed effects model and the random effects model which had the same general panel data model form:

$$y_{it} = \beta_1 x_{1,it} + \beta_2 x_{2,it} + \ldots + \beta_k x_{k,it} + \alpha_i + \varepsilon_{it}$$

The following equations were constructed for each DVs:

$$ROA_{it} = \beta_o + \beta_1 NOID_{it} + \beta_2 IC_{it} + \beta_3 CEOT_{it} + \beta_4 BS_{it} + \beta_5 NOW_{it} + \beta_6 FD_{it} + \varepsilon_{it}$$

$$ROE_{it} = \beta_o + \beta_1 NOID_{it} + \beta_2 IC_{it} + \beta_3 CEOT_{it} + \beta_4 BS_{it} + \beta_5 NOW_{it} + \beta_6 FD_{it} + \varepsilon_{it}$$

$$Tobin's Q_{it} = \beta_o + \beta_1 NOID_{it} + \beta_2 IC_{it} + \beta_3 CEOT_{it} + \beta_4 BS_{it} + \beta_5 NOW_{it} + \beta_6 FD_{it} + \varepsilon_{it}$$

y = Value of the dependent variable

β = Beta

ε = An error term

i = Observations in cross-sectional data

t = Observations in time series data

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

This chapter was the determination and decomposition of the outcomes that were analyses by using EViews and SPSS software to test the research question and hypothesis of the research. The collected data included of 25 Malaysian *Shariah* PLCs and 25 Singapore *Shariah* PLCs. Thus, it also consisted of descriptive analysis, inferential analysis (Panel Data Analysis) and conclusion.

4.1 Descriptive Analysis- Malaysia and Singapore

4.1.1 Statistic for Dependent Variables

Table 4.1.1 (a): Descriptive Statistic for ROA, ROE and Tobin's Q in Malaysia

Malaysia							
		ROA		**ROE**		**Tobin's Q**	
Year	**Sample**	**Mean**	**S.D**	**Mean**	**S.D**	**Mean**	**S.D**
2013	25	8.29	8.79	13.78	15.39	2.02	1.70
2014	25	7.63	8.26	12.01	18.60	1.92	1.63
2015	25	7.55	8.14	12.24	21.38	1.90	1.55
2016	25	7.56	7.18	14.11	17.67	1.82	1.35
2017	25	7.64	11.43	13.52	21.31	1.99	1.94
Average	**125**	**7.73**	**8.76**	**13.13**	**18.87**	**1.93**	**1.63**

S. D: Standard Deviation

Source: Developed for the research

Malaysia

The firm performance was measured by ROA, ROE and Tobin's Q. The mean of ROA from year 2013 to 2017 was 8.29, 7.63, 7.55, 7.56, and 7.64 respectively. The S.D. of ROA from 2013 to 2017 was 8.79, 8.26, 8.14, 7.18, and 11.43 respectively.

The mean of ROE from year 2013 to 2017 were 13.78, 12.01, 12.24, 14.11, and 13.52 respectively. The S.D. of ROE from 2013 to 2017 was 15.39, 18.60, 21.38, 17.67, and 21.31 respectively.

The mean of Tobin's Q from year 2013 to 2017 were 2.02, 1.92, 1.90, 1.82, and 1.99 respectively. The S.D. of Tobin's Q from 2013 to 2017 was 1.70, 1.63, 1.55, 1.35, and 1.94 respectively.

Table 4.1.1 (b): Descriptive Statistic for ROA, ROE and Tobin's Q in Singapore

Singapore							
		ROA		**ROE**		**Tobin's Q**	
Year	**Sample**	**Mean**	**S.D**	**Mean**	**S.D**	**Mean**	**S.D**
2013	25	7.23	4.97	32.47	96.19	1.59	1.11
2014	25	6.25	6.22	21.95	56.05	1.58	1.1
2015	25	6.18	4.98	19.36	42.72	1.53	1.08
2016	25	5.62	4.28	16.91	34.35	1.42	0.86
2017	25	5.53	4.61	15.68	28.67	1.44	0.84
Average	**125**	**6.16**	**5.01**	**21.27**	**51.6**	**1.51**	**1**

S. D: Standard Deviation

Source: Developed for the research

Singapore

The firm performance was measured by ROA, ROE, and Tobin's Q. The mean of ROA from year 2013 to 2017 were 7.23, 6.25, 6.18, 5.62, and 5.53 respectively. The S.D. of ROA from 2013 to 2017 was 4.97, 6.22, 4.98, 4.28, and 4.61 respectively.

The mean of ROE from year 2013 to 2017 were 32.47, 21.95, 19.36, 16.91, and 15.68 respectively. The S.D. of ROE from 2013 to 2017 was 96.19, 56.05, 42.72, 34.35, and 28.67 respectively.

The mean of Tobin's Q from 2013 to 2017 were 1.59, 1.58, 1.53, 1.42, and 1.44 respectively. The S.D. of Tobin's Q from 2013 to 2017 was 1.11, 1.1, 1.08, 0.86, and 0.84 respectively.

4.1.2 Statistic for Independent Variables

Table 4.1.2 (a): Descriptive Statistic for IC and FD in Malaysia

Malaysia					
		IC		**FD**	
Year	**Sample**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
2013	25	12 (48)	13 (52)	13 (52)	12 (48)
2014	25	13 (52)	12 (48)	14 (56)	11 (44)
2015	25	12 (48)	13 (52)	13 (52)	12 (48)
2016	25	12 (48)	13 (52)	13 (52)	12 (48)
2017	25	12 (48)	13 (52)	13 (52)	12 (48)
Average	**125**	**12.2 (48.8)**	**12.8 (51.2)**	**13.2 (52.8)**	**11.8 (47.2)**

Source: Developed for the research

Malaysia

In this study, IC and FD were nominal variables. The number of *Shariah* PLCs in Malaysia that appointed IC was 12 for year 2013, 2015 to 2017, 13 in year 2014. Besides, the number of *Shariah* PLCs in Malaysia that appointed foreign director on board was 13 for year 2013, 2015 to 2017, 14 in year 2014.

Table 4.1.2 (b): Descriptive Statistic for IC and FD in Singapore

Singapore					
		IC		**FD**	
Year	**Sample**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
2013	25	13 (52)	12 (48)	16 (64)	9 (36)
2014	25	12 (48)	13 (52)	17 (68)	8 (32)
2015	25	12 (48)	13 (52)	17 (68)	8 (32)
2016	25	12 (48)	13 (52)	17 (68)	8 (32)
2017	25	12 (48)	13 (52)	17 (68)	8 (32)
Average	**125**	**61 (48.8)**	**64 (51.2)**	**84 (67.2)**	**41 (32.8)**

Source: Developed for the research

Singapore

In this study, IC and FD were nominal variables. The number of *Shariah* PLCs in Singapore that appointed IC was 12 for year 2014 to 2017, 13 in year 2013. Moreover, the number of *Shariah* PLCs in Singapore that appointed FD was 17 for year 2014 to 2017, 16 in year 2013.

Table 4.1.2 (c): Descriptive Statistic for NOID, CEOT, BS and NOW in Malaysia

Malaysia									
		NOID		**CEOT**		**BS**		**NOW**	
Year	Sample	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
2013	25	5.56	**2.35**	8.08	9.86	9.28	**2.67**	1.16	0.94
2014	25	5.52	2.06	7.88	9.75	9.04	2.54	1.24	0.97
2015	25	5.24	**1.98**	7.68	9.86	8.84	2.27	1.24	**0.88**
2016	25	5.40	2.02	7.80	**9.68**	9.00	2.52	1.56	1.08
2017	25	5.80	2.16	8.20	**9.97**	9.20	**2.18**	1.84	**1.11**
Average	**125**	**5.50**	**2.11**	**7.93**	**9.82**	**9.07**	**2.44**	**1.41**	**1.00**

Source: Developed for the research

S. D: Standard Deviation

Malaysia

The average mean of NOID from year 2013 to 2017 was 5.50. In this variable, the highest and lowest S.D. was 2.35 in 2013 and 1.98 in 2015 respectively. Moreover, the average mean of CEOT from year 2013 to 2017 was 7.93. In this variable, the highest and lowest S.D. was 9.97 and 9.68 respectively. Besides, the average mean of BS from year 2013 to 2017 was 9.07. In this variable, the highest and lowest S.D. was 2.67 and 2.18 respectively. Next, the average mean of NOW from 2013 to 2017 was 1.41. In this variable, the highest and lowest S.D. was 1.11 and 0.88 respectively.

Table 4.1.2 (d): Descriptive Statistic for NOID, CEOT, BS and NOW in Singapore

Singapore									
		NOID		**CEOT**		**BS**		**NOW**	
Year	Sample	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
2013	25	5.96	**1.86**	5.84	**4.66**	9.72	**1.81**	0.68	0.75
2014	25	6.2	**2.08**	6.28	5.07	9.92	1.96	0.8	**0.65**
2015	25	6.12	1.99	6.48	**5.08**	9.6	**2.33**	0.92	0.81
2016	25	6.32	1.97	6.44	4.96	9.56	1.85	1	0.91
2017	25	6.16	1.95	5.52	4.77	9.36	1.78	1.2	**1.08**
Average	**125**	**6.15**	**1.97**	**6.11**	**4.9**	**9.63**	**1.95**	**0.92**	**0.84**

Source: Developed for the research

S.D.: Standard Deviation

Singapore

The average mean of NOID from 2013 to 2017 was 6.15. For this variable, the highest S.D. was 2.08 in 2014 and the lowest S.D. was 1.86 in 2013. Moreover, the average mean of CEOT from year 2013 to 2017 was 6.11. For this variable, the highest S.D. was 5.08 in 2015 and the lowest S.D. was 4.66 in 2013. Besides, the average mean of BS from year 2013 to 2017 was 9.63. For this variable, the highest S.D. was 2.33 in 2015 and lowest S.D. 1.81 in 2013. Next, the average mean of NOW from 2013 to 2017 was 0.92. For this

variable, the highest S.D. was 1.08 in 2017 and the lowest S.D. was 0.65 in 2014.

4.2 Panel Data Analysis

4.2.1 ROA in Malaysia

4.2.1.1 Random Effect Model of ROA in Malaysia

Table 4.2.1.1: Random Effect Model of ROA in Malaysia

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 12/14/18 Time: 20:22
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (unbalanced) observations: 124
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-0.310196	0.639662	-0.484937	0.6286
IC	-0.361945	2.685489	-0.134778	0.8930
CEOT	-0.000699	0.118328	-0.005903	0.9953
BS	-0.427758	0.578702	-0.739168	0.4613
NOW	0.715835	0.781381	0.916114	0.3615
FD	1.552158	2.522546	0.615314	0.5395
C	11.66285	4.492755	2.595924	0.0106

Effects Specification	S.D.	Rho
Cross-section random	7.933524	0.7295
Idiosyncratic random	4.830556	0.2705

Weighted Statistics

R-squared	**0.021833**	Mean dependent var	2.035222
Adjusted R-squared	**-0.028329**	S.D. dependent var	4.737058
S.E. of regression	4.803908	Sum squared resid	2700.071
F-statistic	**0.435248**	Durbin-Watson stat	1.066952
Prob(F-statistic)	0.854040		

Unweighted Statistics			
R-squared	0.038259	Mean dependent var	7.722339
Sum squared resid	9099.389	Durbin-Watson stat	0.316598

Based on the table above, the equation was formed as below:

ROA = 11.663 – 0.310 NOID – 0.362 IC - 0.0001 CEOT - 0.428 BS + 0.716 NOW + 1.552 FD + 4.493 ε

Table 4.2.1.1 indicated a positive correlation of NOW and FD affected ROA while NOID, IC, CEOT and BS had a negative effect on ROA.

Random Effect Model was run by using ROA and referring on the five years' data. According to the results, there were no independent variables have significant effect on ROA which were NOID, IC, CEOT, BS, NOW, and FD with P-values of 0.6286, 0.8930, 0.9953, 0.4613, 0.3615, and 0.5395, more than alpha 0.05. Hence, the 6 independent variables were illustrated 2.18% of the ROA. The Adjusted R-squared is -0.028329 and F-statistic is 0.435248.

4.2.1.2 Hausman Test for ROA in Malaysia

Table 4.2.1.2: Hausman Test Results for ROA in Malaysia

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.780218	6	**0.5723**

Hausman test was used to investigate which regression was the most appropriated among Fixed Effects Model and Random Effect Model, the Hausman test was done by the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

The Hausman test statistic presented that the probability value was 0.5723 which more than alpha 0.05, thus reject H0. In short, random effect model was the most suitable regression to explain ROA.

4.2.2 ROA Singapore

4.2.2.1 Random Effect Model of ROA in Singapore

Table 4.2.2.1: Random Effect Model of ROA in Singapore

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 12/19/18 Time: 01:39
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (balanced) observations: 125
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-0.803194	0.382986	-2.097189	**0.0381**
IC	-0.102776	1.503554	-0.068356	0.9456
CEOT	0.021475	0.069292	0.309917	0.7572
BS	0.886147	0.307090	2.885628	**0.0046**
NOW	-0.290403	0.442356	-0.656492	0.5128
FD	-1.246667	1.581277	-0.788392	0.4320
C	3.593093	2.805221	1.280859	0.2028

Effects Specification	S.D.	Rho
Cross-section random	4.646510	0.8284
Idiosyncratic random	2.114951	0.1716

Weighted Statistics			
R-squared	**0.090441**	Mean dependent var	1.229231
Adjusted R-squared	**0.044192**	S.D. dependent var	2.156178
S.E. of regression	2.107997	Sum squared resid	524.3506
F-statistic	**1.955537**	Durbin-Watson stat	1.782228
Prob(F-statistic)	0.077512		

Unweighted Statistics			
R-squared	0.049521	Mean dependent var	6.162560
Sum squared resid	2959.763	Durbin-Watson stat	0.315739

Based on the table above, the equation was formed as below:

ROA = 3.59 -0.8 NOID -0.1 IC + 0.021 CEOT + 0.89 BS - 0.29 NOW - 1.25 FD +0.81**ε**

Based on the equation above, it explained that CEOT and BS were positively related to ROA whereas the other variables such as NOID, IC, NOW and FD were negatively related to ROA.

Random Effect Model was run by using ROA and referring on the five years' data. According to the results, there were 2 independent variables was significant effect on ROA which were NOID and BS with P-values of 0.0381 and 0.0046 respectively which were less than alpha 0.05. Nevertheless, the others 4 independent variables which included IC, CEOT, NOW and FD with P-values of 0.9456, 0.7572, 0.5128 and 0.4320 respectively do not have significant effect on ROA which were more than 0.05 and 0.10. Hence, the 6 independent variables were able to explain 9.04% of the Tobin's Q. The Adjusted R-squared is 0.044192 and F-statistic is 1.955537.

4.2.2.2 Hausman Test for ROA in Singapore

Table 4.2.2.2: Hausman Test Results for ROA in Singapore

Correlated Random Effects - Hausman Test
Equation: RANDOMROA
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.225235	6	**0.5153**

Hausman test was used to decide which regression was the most appropriated between Fixed Effects Model and Random Effect Model, the Hausman test was done with the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

The Hausman test statistic showed that the value probability was 0.5153 which was more than alpha 0.05 therefore do not reject H1. In short, random effect model was the most advisable model to explain ROA.

4.2.3 ROE in Malaysia

4.2.3.1 Random Effect Model of ROE in Malaysia

Table 4.2.3.1: Random Effect Model of ROE in Malaysia

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 12/14/18 Time: 20:23
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (unbalanced) observations: 124
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-1.420219	1.258402	-1.128590	0.2614
IC	0.598705	5.409430	0.110678	0.9121
CEOT	0.038235	0.234770	0.162861	0.8709
BS	-0.677983	1.143020	-0.593150	0.5542
NOW	1.834076	1.493671	1.227898	0.2219
FD	-0.921915	5.106502	-0.180538	0.8570
C	24.40649	9.044891	2.698373	0.0080
Effects Specification				
			S.D.	Rho
Cross-section random			17.39502	0.7839
Idiosyncratic random			9.134087	0.2161
Weighted Statistics				

R-squared	**0.038828**	Mean dependent var	3.014213
Adjusted R-squared	**-0.010463**	S.D. dependent var	9.190640
S.E. of regression	9.239938	Sum squared resid	9989.045
F-statistic	**0.787730**	Durbin-Watson stat	1.229536
Prob(F-statistic)	0.581257		
Unweighted Statistics			
R-squared	-0.029500	Mean dependent var	13.15613
Sum squared resid	44710.28	Durbin-Watson stat	0.274699

Based on the table above, the equation was formed as below:

ROE = 24.406 – 1.420 NOID + 0.599 IC + 0.038 CEOT - 0.678 BS + 1.834 NOW – 0.922 FD + 9.045 ε

Table 4.2.3.1 indicated a positive correlation of IC, CEOT and NOW affected ROE while NOID, BS and FD had a negative effect on ROE.

Random Effect Model was run by using ROA and referring on the five years' data. According to the results, there were no independent variables have significant effect on ROE which were NOID, IC, CEOT, BS, NOW, and FD with P-values of 0.2614, 0.9121, 0.8709, 0.5542, 0.2219, and 0.8570, more than alpha 0.05. Hence, the 6 independent variables were to illustrate 3.89% of the Tobin's Q. The Adjusted R-squared is -0.010463 and F-statistic is 0.787730.

4.2.3.2 Hausman Test for ROE in Malaysia

Table 4.2.3.2: Hausman Test Results for ROE in Malaysia

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.818291	6	**0.1841**

Hausman test was used to investigate which regression was the most appropriated among Fixed Effects Model and Random Effect Model, the Hausman test was done by the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

Hausman test statistic presented that the probability value was 0.1841 which more than alpha 0.05, thus reject H0. In short, random effect model waas the most suitable regression to explain ROE.

4.2.4 ROE in Singapore

4.2.4.1 Random Effect Model of ROE in Singapore

Table 4.2.4.1: Random Effect Model of ROE in Singapore

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 12/19/18 Time: 01:41
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (balanced) observations: 125
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-9.672241	4.623586	-2.091935	**0.0386**
IC	6.885031	17.37250	0.396318	0.6926
CEOT	-1.164062	0.849476	-1.370330	0.1732
BS	11.56785	3.685976	3.138342	**0.0021**
NOW	-14.02815	5.435014	-2.581069	**0.0111**
FD	7.435316	17.54944	0.423678	0.6726
C	-19.03433	32.45666	-0.586454	0.5587

Effects Specification

	S.D.	Rho
Cross-section random	47.51216	0.7631
Idiosyncratic random	26.47538	0.2369

Weighted Statistics

R-squared	**0.145613**	Mean dependent var	5.144323
Adjusted R-squared	**0.102170**	S.D. dependent var	27.76331
S.E. of regression	26.30682	Sum squared resid	81661.77
F-statistic	**3.351792**	Durbin-Watson stat	0.843603
Prob(F-statistic)	0.004374		
Unweighted Statistics			
R-squared	0.167185	Mean dependent var	21.27448
Sum squared resid	327977.6	Durbin-Watson stat	0.210045

Based on the table above, the equation was formed as below:

ROE= (19.34) -9.67 NOID +6.89 IC -1.16 CEOT +11.57 BS -14.03 NOW +7.44 FD + 32.46**ε**

Based on the equation above, it shown that IC and BS and FD were positively related to ROE whereas others 5 variables such as NOID, CEOT and NOW were negatively related to ROE

Random Effect Model was run by using ROA and referring on the five years' data. According to the results, there were 3 independent variables was significant effect on ROE which were NOID, BS and NOW with P-values of 0.6926, 0.1732 and 0.6726 respectively which were less than alpha 0.05. Nevertheless, the others 3 independent variables which included IC, CEOT, and FD with P-values of 0.9456, 0.7572, 0.5128 and 0.4320 respectively do not have significant effect on ROE which were more than 0.05 and 0.10. Hence, the 6 independent variables were able to explain 14.56% of the Tobin's Q. The Adjusted R-squared is 0.102170 and F-statistic is 3.351792.

4.2.4.2 Hausman Test for ROE in Singapore

Table 4.2.4.2: Hausman Test Results for ROE in Singapore

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.

Cross-section random	4.502281	6	**0.6090**

Hausman test was used to investigate which regression was the most appropriated between Fixed Effects Model and Random Effect Model, the Hausman test was done with the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

The Hausman test statistic showed that the value probability was 0.6090 which more than alpha 0.05 thus reject H0. In short, random effect model was the most advisable model to explain ROE.

4.2.5 Tobin's Q in Malaysia

4.2.5.1 Random Effect Model of Tobin's Q in Malaysia

Table 4.2.5.1: Random Effect Model of Tobin's Q in Malaysia

Dependent Variable: TOBINQ
Method: Panel EGLS (Cross-section random effects)
Date: 12/14/18 Time: 20:20
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (unbalanced) observations: 124
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-0.002150	0.068438	-0.031419	0.9750
IC	-0.087335	0.316598	-0.275855	0.7831
CEOT	0.007257	0.013110	0.553533	0.5810
BS	0.025241	0.063380	0.398248	0.6912
NOW	-0.109675	0.075198	-1.458484	0.1474
FD	0.020020	0.306899	0.065232	0.9481
C	1.844912	0.562447	3.280151	0.0014

Effects Specification

	S.D.	Rho

Cross-section random		1.577746	0.9257
Idiosyncratic random		0.447033	0.0743
Weighted Statistics			
R-squared	**0.021660**	Mean dependent var	0.243784
Adjusted R-squared	**-0.028512**	S.D. dependent var	0.444600
S.E. of regression	0.450783	Sum squared resid	23.77506
F-statistic	**0.431712**	Durbin-Watson stat	1.114625
Prob(F-statistic)	0.856480		
Unweighted Statistics			
R-squared	-0.022196	Mean dependent var	1.931048
Sum squared resid	332.8595	Durbin-Watson stat	0.079614

Based on the table above, the equation is formed as below:

Tobin's Q = 1.845 – 0.002 NOID – 0.087 IC + 0.007 CEOT + 0.025 BS – 0.110 NOW + 0.020 FD + 0.562 ε

Table 4.2.5.1 indicated a positive correlation of CEOT, BS and FD affected Tobin's Q while NOID, IC and NOW had a negative effect on Tobin's Q.

Random Effect Model was run by using Tobin's Q and referring on the five years' data. According to the results, there were no independent variables have significant effect on Tobin's Q which were NOID, IC, CEOT, BS, NOW, and FD with P-values of 0.9750, 0.7831, 0.5810, 0.6912, 0.1474, and 0.9481, more than alpha 0.05. Hence, the 6 independent variables were to illustrate 2.16% of the Tobin's Q. The Adjusted R-squared is -0.028512 and F-statistic is 0.431712.

4.2.5.2 Hausman Test for Tobin's Q in Malaysia

Table 4.2.5.2: Hausman Test Result for Tobin's Q in Malaysia

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.100717	6	**0.2308**

Hausman test was used to investigate which regression was the most appropriated among Fixed Effects Model and Random Effect Model, the Hausman test was done by the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

The Hausman test statistic presented that the probability value was 0.2308 which more than alpha 0.05, thus reject H0. In short, random effect model was the most suitable regression to explain Tobin's Q.

4.2.6 Tobin's Q in Singapore

4.2.6.1 Random Effect Model of Tobin's Q in Singapore

Table 4.2.6.1: Random Effect Model of Tobin's Q in Singapore

Dependent Variable: TOBINQ
Method: Panel EGLS (Cross-section random effects)
Date: 12/19/18 Time: 01:34
Sample: 2013 2017
Periods included: 5
Cross-sections included: 25
Total panel (unbalanced) observations: 124
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOID	-0.041938	0.041409	-1.012779	0.3133
IC	-0.240400	0.180727	-1.330180	0.1860
CEOT	0.010302	0.007181	1.434605	0.1541
BS	0.089294	0.033541	2.662251	**0.0089**
NOW	-0.151396	0.045640	-3.317163	**0.0012**
FD	-0.096356	0.210737	-0.457235	0.6484
C	1.170867	0.360215	3.250463	0.0015

Effects Specification

		S.D.	Rho
Cross-section random		0.931598	0.9510
Idiosyncratic random		0.211373	0.0490
Weighted Statistics			
R-squared	**0.185680**	Mean dependent var	0.153509
Adjusted R-squared	**0.143920**	S.D. dependent var	0.231464
S.E. of regression	0.214258	Sum squared resid	5.371039
F-statistic	**4.446355**	Durbin-Watson stat	0.971784
Prob(F-statistic)	0.000435		
Unweighted Statistics			
R-squared	-0.003322	Mean dependent var	1.516613
Sum squared resid	121.7982	Durbin-Watson stat	0.042854

Based on the table above, the equation is formed as below:

Tobin's Q = 1.17 -0.042 NOID -0.24 IC +0.01 CEOT + 0.089 BS -0.15 NOW -0.096 FD +0.36**ε**

Based on the equation above, it presented CEOT and BS was positively affected to Tobin's Q. The others 4 variables which included NOID, IC, NOW and FD were negatively related to Tobin's Q.

Random Effect Model was run by using Tobin's Q and referring on the five years' data. According to the results, there were 2 independent variables was significant effect on Tobin's Q which were BS and NOW with P-values of 0.0089 and 0.0012 respectively which were less than alpha 0.05. Nevertheless, the others 4 variables such as NOID, IC, CEOT and FD with the P-values of 0.3133, 0.1860, 0.1541 and 0.6484 respectively do not possess any significant effect on Tobin's Q which the P-values were more than 0.05 and 0.10. Hence, the 6 independent variables were able to explain 18.57% of the Tobin's Q. The Adjusted R-squared is 0.143920 and F-statistic is 4.446355.

4.2.6.2 Hausman Test for Tobin's Q in Singapore

Table 4.2.6.2: Hausman Test Result for Tobin's Q in Singapore

Correlated Random Effects - Hausman Test
Equation: RANDOMTOBINSQ
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.362674	6	**0.1542**

Hausman test was used to investigate which regression was the most appropriate between Fixed Effects Model and Random Effect Model, the Hausman test was done with the following hypothesis:

H0: Fixed Effect Model

H1: Random Effect Model

The Hausman test statistic presented that the probability value was 0.1542 which more than alpha 0.05, thus reject H0. In short, random effect model was the most appropriate regression to explain Tobin's Q.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

This chapter included five sections which were hypothesis testing, statistical analysis (descriptive, panel data and multiple regressions), discussion on findings, limitations of the research, recommendation for future research and lastly the conclusion of the research.

5.1 Hypothesis Testing

5.1.1 Hypothesis Testing Summary of ROA Results

Table 5.1.1: Hypothesis Testing Summary of ROA Results in Malaysia and Singapore

	ROA	
	Malaysia	Singapore
	Overall 5 Years	Overall 5 Years
(constant)	0.0106	0.2028
NOID	0.6286	**-0.0381***
IC	0.8930	-0.9456
CEOT	0.9953	0.7572
BS	0.4613	**0.0046***
NOW	0.3615	-0.5128
FD	0.5395	-0.4320

Source: Developed for the research

5.1.2 Hypothesis Testing Summary of ROE Results

Table 5.1.2: Hypothesis Testing Summart of ROE Results in Malaysia and Singapore

	ROE	
	Malaysia	Singapore
	Overall 5 Years	Overall 5 Years
(constant)	0.0080	0.5587
NOID	0.2614	**-0.0386***
IC	0.9121	0.6926
CEOT	0.8709	-0.1732
BS	0.5542	**0.0021***
NOW	0.2219	**-0.0111***
FD	0.8570	0.6726

Source: Developed for the research

5.1.3 Hypothesis Testing Summary of Tobin's Q Results

Table 5.1.3: Hypothesis Testing Summary of Tobin's Q Results in Malaysia and Singapore

	Tobin's Q	
	Malaysia	Singapore
	Overall 5 Years	Overall 5 Years
(constant)	0.0014	0.0015
NOID	0.9750	-0.3133
IC	0.7831	-0.1860
CEOT	0.5810	0.1541
BS	0.6912	**0.0089***
NOW	0.1474	**-0.0012***
FD	0.9481	-0.6484

Source: Developed for the research

5.1.4 Summary of Hausman Specification Test

Table 5.1.4: Summary of Hausman Specification Test

	Malaysia	Singapore
ROA	REM	REM
ROE	REM	REM
Tobin's Q	REM	REM

Source: Developed for the research

5.1.5 Hypothesis Test Summary

In this research is conducting Panel Data Analysis.

Table 5.1.5: Summary of Hypothesis Testing

Research Questions	Research Hypothesis	Panel Data	
		Malaysia	Singapore
		Results	Results
		Overall 5 years	Overall 5 years
Does there any negative impact between NOID with Malaysian or Singaporean *Shariah* PLCs' performance?	$H1_{1A}$: NOID has a significantly negative relationship with ROA.	R	A
	$H1_{1B}$: NOID has a significantly negative relationship with ROE.	R	A
	$H1_{1C}$: NOID has a significantly negative relationship with Tobin's Q.	R	R

Does IC positively associated to Malaysian or Singaporean *Shariah* PLCs' performance?	$H1_{2A}$: IC has a significantly positive relationship with ROA.	R	R
	$H1_{2B}$: IC has a significantly positive relationship with ROE.	R	R
	$H1_{2C}$: IC has a significantly positive relationship with Tobin's Q.	R	R
Does CEOT have negative relationship with Malaysian or Singaporean *Shariah* PLCs' performance?	$H1_{3A}$: CEOT has a significantly positive relationship with ROA.	R	R
	$H1_{3B}$: CEOT has a significantly positive relationship with ROE.	R	R
	$H1_{3C}$: CEOT has a significantly positive relationship with Tobin's Q.	R	R
Does there a positive relationship between BS with Malaysian or Singaporean *Shariah* PLCs' performance?	$H1_{4A}$: BS has a significantly positive relationship with ROA.	R	A
	$H1_{4B}$: BS has a significantly positive relationship with ROE.	R	A
	$H1_{4C}$: BS has a significantly positive relationship with Tobin's Q.	R	A
Does NOW negatively affect with Malaysian or	$H1_{5A}$: NOW has a significantly negative relationship with ROA.	R	R

Singaporean *Shariah* PLCs' performance?	$H1_{5B}$: NOW has a significantly negative relationship with ROE.	R	A
	$H1_{5C}$: NOW has a significantly negative relationship with Tobin's Q.	R	A
Has FD a significant positive relationship with Malaysian or Singaporean *Shariah* PLCs' performance?	$H1_{6A}$: FD has a significantly positive relationship with ROA.	R	R
	$H1_{6B}$: FD has a significantly positive relationship with ROE.	R	R
	$H1_{6C}$: FD has a significantly positive relationship with Tobin's Q.	R	R

Source: Developed for the research

Hypothesis 1

$H1_{1A}$: Number of independent directors has a significantly negative relationship with ROA.

$H1_{1B}$: Number of independent directors has a significantly negative relationship with ROE.

$H1_{1C}$: Number of independent directors has a significantly negative relationship with Tobin's Q.

In Malaysia, the outcome from panel data does not sustained the entire hypothesis $H1_{1A}$, $H1_{1B}$ and $H1_{1C}$, hence there was no significant proof to

rejected the null hypothesis of $H0_{1A}$, $H0_{1B}$ and $H0_{1C}$. Hence, it could be said that NOID does not has a significantly negative relationship with the firm performance. These findings consistent with the findings of Latif et al. (2013).

In Singapore, the outcome from panel data does not sustained $H1_{1C}$. However, the outcome supported $H1_{1A}$ and $H1_{1B}$, therefore there was adequate proof to deny the null hypothesis of $H0_{1A}$ and $H0_{1B}$. Hence, it could be said that NOID has a significantly negative relationship with the firm performance. The findings were stood by Gómez et al. (2017).

In conclusion, NOID has a significantly negative relationship with firm performance in Singapore whereas there was no relationship between NOID and firm performance in Malaysia.

Hypothesis 2

$H1_{2A}$: Independent chairman has a significantly positive relationship with ROA.

$H1_{2B}$: Independent chairman has a significantly positive relationship with ROE.

$H1_{2C}$: Independent chairman has a significantly positive relationship with Tobin's Q.

According to the outcome of panel data for Malaysia and Singapore, it does not sustain the entire hypothesis $H1_{2A}$, $H1_{2B}$ and $H1_{2C.}$ Hence there was no significant proof to reject the null hypothesis of $H0_{2A}$, $H0_{2B}$ and $H0_{2C}$. It could be said that IC does not has a significantly positive relationship with the firm performance. The findings were supported by Krause et al. (2014).

In conclusion, IC has no contributing impact with firm performance in Malaysia and Singapore.

Hypothesis 3

$H1_{3A}$: CEO tenure has a significantly positive relationship with ROA.

$H1_{3B}$: CEO tenure has a significantly positive relationship with ROE.

$H1_{3C}$: CEO tenure has a significantly positive relationship with Tobin's Q.

Based on the results of panel data, both of the countries provided no significant evidence to support $H1_{3A}$, $H1_{3B}$ and $H1_{3C}$. The evidence was not significance to deny the null hypothesis of $H0_{3A}$, $H0_{3B}$ and $H0_{3C}$. Therefore, it could be summarized that CEOT was not significantly related to firm performance. The research findings also supported by Kyereboah-Colema (2007), Limbach et al. (2015) and Kusumasari (2018).

Hypothesis 4

$H1_{4A}$: Board size has a significantly positive relationship with ROA.
$H1_{4B}$: Board size has a significantly positive relationship with ROE.
$H1_{4C}$: Board size has a significantly positive relationship with Tobin's Q.

Malaysia and Singapore did not provide the same results from panel data. For Malaysia, the panel data shown that there was no significant evidence to accept $H1_{4A}$, $H1_{4B}$ and $H1_{4C}$, whereas there were also not enough evidence to deny the null hypothesis of $H0_{4A}$, $H0_{4B}$ and $H0_{4C}$. Hence, this could be summarized that the BS was not significantly related with firm performance. The findings was also supported by Zabri et al. (2015) of findings.
For Singapore, panel data shown that BS was significantly and positively affected toward ROA, ROE and Tobin's Q. Therefore, it had adequate evidence to deny the null hypothesis of $H0_{4A}$, $H0_{4B}$ as well as $H0_{4C}$ and accepted $H1_{4A}$, $H1_{4B}$ and $H1_{4C}$. Hence, panel data supported BS had a significantly positive relationship with firm performance. The findings also supported by Kiel et al. (2003), Li et al. (2014) and Nowroz (2018).

Hypothesis 5

$H1_{5A}$: Number of women directors has a significantly negative relationship with ROA.
$H1_{5B}$: Number of women directors has a significantly negative relationship with ROE.

$H1_{5C}$: Number of women directors has a significantly negative relationship with Tobin's Q.

From the results of panel data shown that Malaysia and Singapore do not provide the same results. For Malaysia, the panel data shown that there was no enough evidence to support $H1_{5A}$ and $H1_{5B}$, whereas there were also not enough to deny the null hypothesis of $H0_{5C}$. This could be summarized that NOW was not significantly related with firm performance which measured by ROA, ROE and Tobin's Q. The findings also confirmed by Daunfeldt et al. (2012), Pasarbu (2017) and Shabbir (2018).

For Singapore, panel data shown that NOW was significant negative affected toward ROE and Tobin's Q. Therefore, it was sufficient evidence to reject $H0_{5B}$ and $H0_{5C}$, accept $H1_{5B}$ and $H1_{5C}$. Hence, this could be summarized that NOW had a significant negative relationship on ROE and Tobin's Q. The research findings also supported by Adams et al. (2009), Haslam et al. (2010) and Devi et al. (2015).

Hypothesis 6

$H1_{6A}$: Foreign director has a significantly positive relationship with ROA.

$H1_{6B}$: Foreign director has a significantly positive relationship with ROE.

$H1_{6C}$: Foreign director has a significantly positive relationship with Tobin's Q.

According to the outcome of panel data represented that Malaysia and Singapore do not sustain the entire hypothesis $H1_{6A}$, $H1_{6B}$ and $H1_{6C}$, therefore there was no significant proof to deny the null hypothesis of $H0_{6A}$, $H0_{6B}$ and $H0_{6C}$. Hence, it could be said that FD does not possess significantly positive effect with the firm performance. The findings supported by Ciavarella (2017).

In conclusion, FD has no impact with firm performance in Malaysia and Singapore.

5.2 Summary of Test

5.2.1 Descriptive Analysis

The descriptive analysis is to show the maximum and minimum of mean and standard deviations of the companies for the 5-years observation period.

5.2.1.1 Dependent Variables – Malaysia and Singapore

Malaysia

The descriptive analysis uncovered that CG characteristics affected the Malaysia *Shariah* PLCs performance. The firm performance was measured by ROA, ROE and Tobin's Q. The mean of ROA depicted that a significant decreased over the research period from 8.29 (2013) to 7.64 (2017). Besides, during the 5-years observation period the mean of ROE shows significant decreased from 13.78 (2013) to 13.52 (2017). The mean of Tobin's Q presented a decreased over the research period from 2.02 (2013) to 1.99 (2017).

Singapore

The results had shown that the characteristics of the board had an impact on the Singapore *Shariah* PLCs performance. ROA, ROE and Tobin's Q as the analysis tools were used to measure the performances. It can be seen that there was significant decrease from the results during the research period, which implies that the mean of ROA drop from 7.23 to 5.53. On top of that, there was also a significant decrease of ROE, which was the mean of ROE drop from 32.47 to 15.68. For Tobin's Q, it also showed a downward trend which the mean of Tobin's Q decreased from 1.59 to 1.44.

5.2.1.2 Independent Variables – Malaysia and Singapore

Malaysia

The descriptive analysis of IC and FD had shown that no significant movement from year 2013 to 2017. It showed that almost 52% of Malaysia *Shariah* PLCs do not emphasis on the importance of IC to ensuring the transparency, fair and just of the board meeting. Besides, 48% of *Shariah* PLCs in Malaysia uncovered that FD is importance for company to broader their perspective of experience and knowledge.

The analysis for NOID presented that in Malaysia *Shariah* PLCs a board should have at least 2 or one-third of independent director on board which complied with the MCCG 2012 and 2017. Moreover, the results of CEOT had shown that senior CEO had more experience and knowledge to enhance the firm performance.

The descriptive analysis of BS uncovered that smaller size of BS would enhanced the ease of management and increase the control of BOD. Furthermore, the mean results of NOW showed that Malaysia *Shariah* PLCs has increased to 1.84 in 2017. This revealed that *Shariah* PLCs in Malaysia is complying MCCG 2012, which proved that increasing diversity of the boards will lead to better firm performance.

Singapore

Based on the descriptive analysis of IC and FD had shown that no significant movement from year 2013 to 2017. IC indicated that nearly 49% comply with the Guideline 3.1, Principle 3 of Singapore Code suggest that "the chairman and chief executive officer should in principle be separate persons, to ensure an appropriate balance of power, increased accountability and greater capacity of the board of independent decision making". Furthermore, 67% of *Shariah* PLCs in Singapore revealed that FD directors from different

nationality able to bring different value, knowledge and physical behavior while in the decision making process and thus enhance effectiveness of firm performance.

From the descriptive analysis of NOID shown that *Shariah* PLCs in Singapore is increasingly prominent, and independent directors must form for half the board which complies with Singapore Code 2012. There was a decreased in the mean of CEOT, which means that CEOs with long tenure disclose less about CG practices because they feel empowered and less supervised by the BoD.

Descriptive analysis of BS revealed that firms' performance was highest when their boards are made up of five members instead with more members. NOW presented that there is still has the lowest proportion of women directors among other developed countries. In the Singapore Code, Guideline 2.6 stated that board should include directors with a "diversity of skills, experience, gender, and knowledge of the firm.", however, firms are free to comply with this code.

5.3 Discussion on Findings

The research finding was conducted to discover the effect of CG characteristics such as NOID, IC, CEOT, BS, NOW an FD towards company performance in Malaysia and Singapore *Shariah* PLCs. The results were examined based on the dependent variable ROA, ROE and Tobin's Q.

The finding in Malaysia revealed that NOID possesses a negative relationship with firm performance (ROA, ROE and Tobin's Q) and was not statistically significant at 1%, 5% and 10% level. However, in Singapore represented that NOID was statistically significant at 10% level and has a negative relationship with the firm performance (ROA and ROE). These were consistent with the past research studies of Fuzi, Halim & Julizaerma (2015), Bhatt (2016) and Gómez et

al. (2017) revealed that overage NOID would affected the firm performance if independent director failed to exercise their responsibility.

The finding in Malaysia and Singapore revealed that IC possesses a positive relationship with firm performance (ROA, ROE and Tobin's Q) and was not statistically significant at 1%, 5% and 10% level. These were consistent with the past research studies of Hussin and Othman (2012) and Balsam, Puthenpurackal, & Upadhyay (2011) which presented that existence of IC was able to reduce the agency problem and enhance the firm performance.

The findings for Malaysia and Singapore presented that CEOT had a positive relationship with firm performance and was not statically significant at 1%, 5% and 10% level. According to Bernard (1938) argued that leadership from the most senior position in a firm had an important impact toward firm performance. This could be supported by CG theory. Resource dependence theory also holds that the longer time that a member serves in his or her job position, the more experience and knowledge his or her will gain. Similarly, CEOs with long tenure tend to contribute higher level of information concerning governance practices as the performance of firm increase. Limbach et al. (2015) suggested that the optimal CEOT is about 12 years based on their study. Moreover, the optimal CEOT depends on a firm's economic environments. For instance, firms that operating in dynamic, rapidly changing environments, their peak performance reached much earlier compared to the average companies, and vice versa.

The findings for Malaysia, BS was not statically significant at 1%, 5% and 10 % level, whereas the findings for Singapore shown that BS is statically significant at 5% level and it had positive relationship with firm performance (ROA, ROE and Tobin's Q). This indicated that the relationship between BS and firm performance was supported by CG theories. Agency theory holds that a higher number of directors there are, the stronger the control over the management and thus contributing to a better performance. From the perspective of resource theory which connects a higher number of directors to a stronger ability for companies to benefit from their professional skills. Jensen (1993) suggested that the optimal BS needs to be at least seven or eight persons for a BoD to perform effectively. For

Singaporean *Shariah* PLCs, the average BS was 9.63 members which indicated that it will lead to a better firm performance from the perspective of CG theories.

The findings for Malaysia, NOW was not statically significant at 1%, 5% and 10% level, whereas the findings for Singapore shown that NOW is statically significant at 5% level and had negative relationship with firm performance (ROE and Tobin's Q). In Singapore, there is a provision in the code of CG that BoD should be composed of diverse group of directors, however it does not require firms to comply with this. In fact, Singapore has one of the highest levels of education and labour forces participation rates for women. Surprisingly, Singapore still had the lowest proportion of women directors among other developed countries.

The finding in Malaysia and Singapore revealed that FD possesses a positive relationship with firm performance (ROA, ROE and Tobin's Q) and was not statistically significant at 1%, 5% and 10% level. This was persistent with the past research studies of Polovina & Peasnell (2015) uncovered that the existence of FD was able to enhance the capabilities and experience towards the firm performance. Besides, according to the past research of Salloum, Bouri & Khalife (2013) revealed that increasing the proportion of FD was able to reduce the agency problem.

5.4 Limitation of the Research

There were few limitations found when conducting the process of this study. First, this study was limited by only three DVs of ROA, ROE, Tobin's Q to measure the firm performance. Second, the collecting data of quantitative research have only five-year short time frame, which was from 2013 to 2017. Third, this study was not completely done on every aspect research, which does not include some factor such as economic factor, inflation rate and political factor have direct relationship with the firm performance.

5.5 Recommendation in Future Research

There were few recommendations which could future the studies such as increased the observing years to 15 years to improve the differences of data collection. Besides, it was also recommended to expand the factors studies which affected the CG practices such as global political issues, economic issues. Moreover, by using quantitative and qualitative analysis together could obtain an overall and perfect research results such as interview with the top management and board on director. It was also recommended to increase the measuring tools such as return on capital employed, net profit margin and earning per share (EPS).

5.6 Conclusion

In this research's findings carried out whether Malaysia or Singapore *Shariah* PLCs which conducted CG has a greater impact towards company performance. As in the research, there was a consistent with the research findings and the results of panel data analysis which answer and response to the specific general question and conclude the research topic.

Based on the results from panel data analysis and research finding, in NOID Singaporean *Shariah* PLCs had a significantly negative impact on the firm performance of ROA and ROE while Malaysian *Shariah* PLCs showed no impact towards the firm performance. However, in IC and CEOT, there was no impact towards Malaysian and Singaporean *Shariah* PLCs performance.

Moreover, in BS Singaporean *Shariah* PLCs presented a significant and positive impact towards the firm performance of ROA, ROE and Tobin's Q in the panel data analysis result and research finding. At the same time, Malaysian *Shariah* PLCs stated that there was no impact on the firm performance.

Furthermore, in NOW Singaporean *Shariah* PLCs uncovered a significant and negative impact towards the firm performance of ROE and Tobin's Q. At the meanwhile, Malaysian *Shariah* PLCs revealed that there was no impact towards

the firm performance. In last, there was no impact on Malaysian and Singaporean *Shariah* PLCs FD towards the firm performance of ROA, ROE and Tobin's Q.

In a nutshell, Singapore *Shariah* PLCs which executed CG has greater impact towards the company performance, which leads to improve Malaysian *Shariah* PLCs board characteristics of NOID, IC, CEOT, BS, NOW and FD to attain the CG best practices. In the meanwhile, Singaporean *Shariah* PLCs should enhance the IC, CEOT and FD to achieve the CG best practices.

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