CORPORATE GOVERNANCE AND CORPORATE PERFORMANCE OF SHARIAH- COMPLIANT COMPANIES IN MALAYSIA AND SINGAPORE: EXAMINING FROM AN ISLAMIC PERSPECTIVE

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BY

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DECLARATION

I hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) The word count of this research report is 10877.

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AFC	Asian Financial Crisis
BS	Board Size
CG	Corporate Governance
MAS	Monetary Authority of Singapore
MC	Muslim Chairman
MCCG	Malaysian Code on Corporate Governance
MCEO	Muslim Chief Executive Officer
NODHPAQ	Number of Directors Holding Professional Accounting Qualification
NOMD	Number of Muslim Directors
NOMID	Number of Muslim Independent Directors
NONMD	Number of Non- Muslim Directors
P-value	Probability Value
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Science
The Code	Code on Corporate Governance in Singapore
ε	Error terms

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PREFACE

Universiti Tunku Abdul Rahman (UTAR) has programmed final year project in the course structure and thus this research was conducted as course required. The research objective is to evaluate the relationship between the independent variables which represent the board characteristics and the dependent variables which represent the company performance in Malaysia and Singapore. This research is concentrated on the impacts of corporate governance towards the company performance of Shariah- compliant companies in Malaysia and Singapore.

Corporate governance as an internal governance mechanism to help in provide effective management of the companies in guiding actions and produce standards within an organisation. There are four basic principles of CG which included fairness, transparency, accountability and responsibility.

Malaysia is implementing Malaysian Code on Corporate Governance by the Finance Committee on Corporate Governance. The principles underlying the report focus on board of directors, director's remuneration, shareholders and accountability and audit. Meanwhile, Singapore is adopting Code on Corporate Governance by The Monetary Authority of Singapore. It focuses primarily only on Listed Companies on the Singapore Exchange Securities Trading Limited (SGX-ST).

The main fact of starting this research is to investigate the implementation of corporate governance which examined from the board characteristics and the impacts towards the Shariah- compliant companies' performance in Malaysia and Singapore. Thus, this research was conducted to explore the significance of the board characteristics which reflects whether the corporate governance affect the company performance.

ABSTRACT

The objective of this research is to indicate corporate governance contribution to the Shariah- compliant companies' performance in Malaysia and Singapore from an Islamic perspective. Corporate governance variables as the independent variables applied in this research are number of Muslim directors, number of non-Muslim directors, board size, Muslim CEO, number of Muslim independent directors, Muslim Chairman and number of directors holding professional Accounting qualification. Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q are the dependent variables that represent the company performance.

The sample frame are 30 companies from FTSE Bursa Malaysia Hijrah Shariah Index and 30 companies from FTSE ST Singapore Shariah Index. The research time frame included from year 2013 to 2018. Panel Data Analysis was applied to determine the results of overall 6 years period. Hausman Test was adopted to determine whether Fixed Effect Model or Random Effect Model is the most appropriate model to be used in the research. Furthermore, Multiple Linear Regression was performed as an additional analysis.

The findings of this research presented NOMID has significant influence on ROA in Malaysia and Singapore. NODHPAQ also has significant influence on ROA in Singapore but not in Malaysia. Meanwhile, all the others independent variables such as NOMD, NONMD, BS, MCEO and MC have no influence on ROA, ROE and Tobin's Q in Malaysia and Singapore.

CHAPTER 1: INTRODUCTION

1.0 Introduction

This research attempted to examine if corporate governance influence corporate performance of Shariah-compliant companies in Malaysia and Singapore from an Islamic perspective. This chapter included eight sections: introduction, research background, problem statement, research objectives, research questions, significance of the research and chapter layout.

1.1 Research Background

CG is a mechanism of transparency to stakeholders for effective business management. CG was concerned with the company's principles, standards, values, rules, attitudes and conduct. According to Janggu, Darus, Zain & Sawani (2014), the underlying principles of CG revolved around four basic segments which included fairness, transparency, accountability and responsibility. Companies that follow the principles of good governance are more likely to create trust among stakeholders and achieve sustainable long-term business performance.

According to MCCG (2017), the long-term benefit of the shareholder and the interest of other stakeholders could be increased by having the appropriate staff, processes and system to handle the company's business and profits. It is an important matter in the current business environment and more especially on the companies' performance evaluation. "Good corporate governance is simply good-governed company" (Code of Corporate Governance, 2018).

Since Asian Financial Crisis arisen in 1997, many Asian countries, including Malaysia and Singapore, CG has become substantially important (OECD, 2014). In order to avoid the recurrence of financial crisis, Asian countries started to govern their respective CG Code (Zabri, Ahmad & Wah, 2016). Malaysia conducted the Malaysian Code on Corporate Governance (MCCG) while Singapore adopted Code on Corporate Governance (Code). According to Cochran, Allen & Yonts (2016), Singapore was ranked first while Malaysia was ranked sixth in the Asian countries ' CG index.

According to Kelly, E.V. (2010), CG mechanisms can be categorized into two, which are internal and external supported by Weir, Laing, and McKnight (2002). Internal governance, is a set of systems and processes used by organisations to coordinate, administer and control internally. In other words, within an organisation, internal governance aims to direct behavior and establish expectations.

The focus of this research was to determine the influences of internal CG variables such as number of Muslim Directors (NOMD), number of Non-Muslim Directors (NONMD), Board Size (BS), Muslim CEO (MCEO), number of Muslim Independent Directors (NOMID), Muslim Chairman (MC) and number of Directors Holding Professional Accounting Qualification (NODHPAQ) on the corporate performance in relation to Return on Equity (ROE), Return on Assets (ROA) and Tobin's Q of Shariah-compliant companies in Malaysia and Singapore from Islamic perspectives.

1.2 Problem Statement

Many researchers have conducted research on topics about the correlations between the CG and company performance. They were theoretically determined from a normative perspective on the conventional companies (Majeed, S., Aziz, T., & Saleem, S., 2015). Due to the scarcity of existing studies, this resulted in insufficient studies about the impact of CG on Shariah compliant companies' performance.

Some previous studies presented a mixture of CG and firm results, rather than only in Islamic perspective (Quang, Kim, & Yi, 2014; Nguyen & Nguyen, 2016). Hence, the cogent reason behind the determination of Shariah compliant companies in this research was to imply the reflection of board attributes of these companies towards their business practices.

1.3 Research Objectives

In line with the problem statement, the main objective of this study was to examine if the performance of companies in Malaysia and Singapore measured by ROA, ROE and TOBIN'S Q will be influenced by board characteristics examining from an Islamic perspective.

In conformity with the main objectives, secondary objectives were:

i. To evaluate the influence between NOMD and company performance in Malaysia and Singapore.
ii. To determine the influence between NONMD and company performance in Malaysia and Singapore.
iii. To explore the influence between BS and company performance in Malaysia and Singapore.
iv. To understand the influence between MCEO and company performance in Malaysia and Singapore.
v. To ascertain the influence between NOMID and company performance in Malaysia and Singapore.
vi. To investigate the influence between MC and company performance in Malaysia and Singapore.
vii. To examine the influence between NODHPAQ and company performance in Malaysia and Singapore.

1.4 Research Questions

The general question of study was:

Has the implementation of the board characteristics affected the performance of companies from an Islamic perspective in Malaysia and Singapore?

The specific questions of study were as follows:

i. Does NOMD has a significant influence with company performance in Malaysia and Singapore?
ii. Does NONMD portray significant influence with company performance in Malaysia and Singapore?
iii. Does the BS influence the company performance significantly in Malaysia and Singapore?
iv. Is there any significant influence between MCEO and company performance in Malaysia and Singapore?
v. Does NOMID has a significant influence with company performance in Malaysia and Singapore?
vi. Does MC influence the company performance significantly in Malaysia and Singapore?
vii. Is there any significant influence between NODHPAQ and company performance in Malaysia and Singapore?

1.5 Significance of the Research

CG has been widely linked with the corporate performance. Since the cost of developing the CG practices was large, the findings of this study would actually assist

potential investors, business leaders, companies and institutions, professional associations and wider society (Alvarez, Luis, Turner& Rodney, 2012).

Islamic finance has grown significantly in Asia in the last two decades. The demand for goods that comply with Shariah continues to grow. This growth acceleration is due to the growing Muslim population of Asia, solid economic and financial foundations, a large base of investors, and strong support from government. Greater awareness and demand for global investment in line with Shariah principles has been the driver for making the Islamic financial institutions industry a thriving industry (IFN Singapore Report, 2018). This could be a result of both Muslim and non-Muslim investors ' growing wealth and capacity to pursue and look for new investment products that suit their interests. The global Islamic fund and wealth management market outlook in Singapore continues to be positive, backed by a rising range of Islamic financial derivatives accessible to stakeholders (FTSE Russell, 2018).

However, the Islamic economic system requires companies to have ethical and moral obligations while carrying out economic activities, unlike secular economic system that emphasized in profit maximization (Ghosh, Ghosh and Zaher, 2011).

1.6 Chapter Layout

There were five chapters in this study. Chapter 1 gave a summary of the entire research picture and proceeded by the problem statement. Chapter 2 presented about the review of literature analysis from journals and theses which were done by previous researchers relevant to the CG and Islamic. Chapter 3 explains the methodology of study which involves the techniques used to perform the research. Moreover, Chapter 4 demonstrated the findings of panel data analysis while descriptive analysis where the data collected from the annual report and sources such as Bloomberg. Chapter 5 performed a review of the hypothesis test summary between panel data analysis and multiple linear regression, summary of descriptive tests and inferential analysis, study

results and limitations, and suggestions for further improvement on this type of research.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Review of literature discussed in this chapter. The literatures were acquired secondarily through journals, textbooks, reports, e-books, articles from the internet. There were seven sections in this chapter. Section 2.1 covered the Shariah- compliant literature; Literature of CG in Malaysia and Singapore was discussed in Section 2.2; The literature review for all dependent variables and independent variables was in Section 2.3; Section 2.4 was the CG analytical perspective. Whereby research framework was discussed in Section 2.5 and the conceptual framework was presented Section 2.6.

2.1 Shariah- Compliant

Financial Times Stock Exchange (FTSE) Russell provides Shariah- complaint benchmarking, information and analytical tools to committed and qualified constituents through the examining of Yasaar's principles which carried out by Yasaar Ltd (FTSE Russel, 2018).

Shariah-Compliant investments are not only to be applied to Muslims, but the investments should fulfill the Shariah requirements based on the Shariah Adviser's established parameters. The funds shall invest in activities and instruments that are affirmed under Shariah principles.

The Shariah Advisory Council (SAC) by the Securities Commission Malaysia (SC) is the highest authoritative body for the ascertainment of the application of Shariah principles relating to Islamic capital market (ICM) in Malaysia. The SC announced a

new list of Shariah-compliant securities authorized by SAC. According to FTSE Russell (2018), FTSE Bursa Malaysia Hijrah Shariah Index includes 30 constituents. On the other hand, FTSE ST Singapore Shariah Index designed to capture SGX-listed companies that comply with Shariah that could be used as the foundation for investment products. In order to create a reliable Shariah-compliant index for the Singapore market, constituents are reviewed by a comprehensive set of Shariah principles. The FTSE FT Singapore Shariah Index includes 48 constituents at the launch (FTSE Russell, 2018).

2.2 Corporate Governance

2.2.1 Corporate Governance in Malaysia

The discussion on Corporate Governance in Malaysia should be started from the East Asian economic crisis in 1997. The countries being affected as well as other East Asian countries. Greater concern of the Corporate Governance efforts was placed to the public and private sector in these countries.

Yusoff (2012) argued that the crisis was due to structural weaknesses in the domestic financial institutions supported by unsound macroeconomic policy and moral hazard. The vulnerability in the banking sector was attributed to poor risk management and excessive lending. Poor risk management was reflected by weak corporate governance and limited investment in risk management technology.

The main sources of the Corporate Governance reforms agenda in Malaysia are from the:

i. Malaysian Code on Corporate Governance (MCCG) by the Finance Committee on Corporate Governance (Yusoff ,2010)

The report fundamental principles concentrated with four segments which were board of directors, director's remuneration, stakeholders and transparency and inspection.

ii. Capital Market Master Plan (CMP) by Securities Commission (Yusoff, 2010)

CMP was established to carry on investigation throughout Malaysian capital market. The efficiency in cash flow mobility and active allocation of funds giving out the high degree of confidence to investor or marketers, as well as the vision by the CMP.

iii. Financial Sector Master Plan (FSMP) by Bank Negara Malaysia (Yusoff, 2010)

FSMP is now working on a more solid but elastic fundamentally and competitive systems that has the tendency of contributing to the economic and technology growth in general.

2.2.2 Corporate Governance in Singapore

The Monetary Authority of Singapore or known as MAS was set up in the year 1970 and in the year 1997, it was tasked with making Singapore a major financial hub. In the Companies Act, MAS made significant changes to the regulatory framework and established the Code of Corporate Governance in Singapore which formed the Corporate Governance Committee in 2001 after the

Asian Financial Crisis, which brought to light that a major re-evaluation of the present system was needed.

The framework for regulation of corporate governance in Singapore was supported by the corporate law and securities regulatory board. These were stated in the common law rules and also the statutory enactments which are the companies ACT (CAP50) and also the Securities and Futures Act (CAP 289) (Phan, 2014).

The Corporate Governance Committee issued The Code on 21st March 2001 to motivate businesses that are listed in Singapore to bring better principles of CG to the shareholders of the business (Monetary Authority of Singapore, 2001). The Code was taken into effect on the 1st of January 2003 and was gradually applied to all general assemblies and meetings by the companies (Monetary Authority of Singapore, 2005).

All listed companies in Singapore were obligated to report their CG practices by referring to the specific standards and regulations of the code of CG 2018 (Monetary Authority of Singapore, 2018). Listed companies had to comply with all the principles that were set out by the Code. In the circumstance of a change in practices, a comprehensive explanation must be presented in the annual report of the organization.

2.3 Review of the Literature

2.3.1 Dependent Variables

2.3.1.1 Return on Assets

A company's performance was indicated by the higher percentage of return of assets, as a sign of higher returns on its investments. Calculated by ways of the liquidity ratio a company's ability to pay off its short-term liabilities was contrasted with its current liabilities (Hidayat and Utama, 2012). Return on Asset (ROA) has an important and beneficial effect on a corporate value (Sutrisno, 2010). Thus, the company able to increase its growth rate as there were more funds for that (Pakpahan, 2010).

Joanna (2018) indicated that return on assets is a ratio that explains how the assets are measured by sales volume. CG has significant positive relationships with ROA in accordance with (Chong, Ting and Cheng 2016). However, some studies from Bually, Hamdan & Zureigat, 2017; Ng et al., 2016; Thuraisingam, 2013; Veklendo (2017) have shown no significant CG and ROA effects.

2.3.1.2 Return on Equity

According to Joanna (2018), return on equity (ROE) is a ratio where the owner's capital was measured that shows the percentage of net income was earned. The company generated higher return when the company generated higher profits. The company's ability to earn a return on the investment affect the shares obtained by the company. Profits made by the company will first be used to fund any debt interest and preferred shares. Only common investors will then be issued. (Pakpahan& Rosma, 2010).

According to Sutrisno (2010), ROE has insignificant positive effects on the corporate value. This resulted from the research indicated that the company was also adopted debt as the external capital and retained earnings and depreciation funds as the internal capital, not solely depends issuing new shares. Past CG studies show that the CG mechanisms and ROE have a positive impact. (Heenetigala, 2011; Oguz& Dincer, 2016; Chong et al., 2018). However, CG

do not have a statistically significant relationship with ROE (Coskun and Sayilir, 2012). Vu and Nguyen (2017) showed that there was a negative impact between BS and ROE.

2.3.1.3 Tobin's Q

In 1969, James Tobin was the first person to introduce a market based measurement which was identified as Tobin's Q (Okiro, 2014). The measurement measured the sum of the total market value of the company against the liabilities over the sum of the book value with the company's liabilities (Hidayat and Utama, 2012). Tobin's Q was used to measure the firm's potential value as it reflected the current and potential performance of the company (Kim & Kim, 2018). Tobin's Q was used by some researchers to test different financial phenomenon, the firms decisions and also to measure the firms performance (Saibaba & Ansari, 2012; Doan & Nguyen, 2018; Fu, Parkash & Singhal, 2016; Sucuahi & Cambarihan, 2016; Sudiyatno, Puspitasari & Kartika, 2012).

According to Shahwan (2015), there was no significant association between the practices of CG and firm performance as measured by Tobin's Q while board composition and board committees had a significant relationship with performance measured by Tobin's Q (Heenetigala, 2011). Studies have concluded that BS was successfully tallied with the company's performance when it was measure with Tobin's Q by Fauzi and Locke 2012. However, Gurusamy (2017) indicated that BS had negative insignificant impact with firm performance.

2.3.2 Independent Variables.

2.3.2.1 No of Muslim Directors

Refer to Dale-Olsen et al. (2013); Luckerath-Rovers (2013), boards of directors (BODs) as the leaders who are responsible for decision making and strategic goals setting. The size of the board of directors was improved by the CG criteria, independence and diversity (Ahmed, 2013).

Islam was in lined with the tawhidic(faith) approarch and adhere to the principles of vicegerency (khalifah) and brotherhood (ukhuwwah) which proposed an outgrowth to the social and environmental responsibilities. Social justice was stressed under the principles of brotherhood, where treated all Muslims as brothers and had mutual care among each other (Khan & Karim, 2010). By having Muslim on board of directors who uphold the principle of vicegerency taken the responsibility as Allah's representative were react positively to CSR (Zainal, Zulkifli, Saleh, 2013). The study by Hafizah & Nurul & Sakinah (2015) indicated that the presence of Muslim directors has positively and significant relationship with CSR engagement.

Based on the past studies, it was hypothesized that:
H1A: Having a NOMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H1B: Having a NOMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H1C: Having a NOMD has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.2 No of Non-Muslim Directors

A diverse board of directors can help improves the company's decision-making process and policies. Past studies have found out that diversity in ethnic in a firm has a positive and brought so many benefits to the firm (Hassan, Rohail, Marimuthu& Satirenjit, 2015). Diversified Corporate boards proposed significant impact on firm performance and firm value creation (Hassan, Rohail & Marimuthu, 2016). Company could gain competitive advantage from diversity (Abdullah, 2013, Lückerath-Rovers, 2013).

Ethnic diversity among the Board of directors with ethnic diversity able to perform their responsibilities in better way (Hassan, Rohail, Marimuthu& Satirenjit, 2015). Ethnic diversity doesn't affect the firm's performance in Malaysia (Apadore, Kogilavani& Marjan, 2013). Ethnic diversity is negatively correlated with firm performance measured in ROA, ROE, Tobin's Q but not significant (Hassan, Rohail & Marimuthu, 2016). Ethnic diversity and Tobin's Q in Malaysia have a positive and significant relationship (Shukeri et al. 2012).

Based on the past studies, it was hypothesized that:
H2A: NONMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H2B: NONMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H2C: NONMD has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.3 Board Size

Size of the board was one of the panel features for determining the quality of the firm. Refer to the study by Amer, Ragab and Ragheb (2012), board size is linked to ROE and to ROA positive and substantially negatively when comes to Tobin's Q. The size of the board is firmly and positively related to the ROA

and the Return on Equity (ROE), but to Tobin's Q is negative and insignificant. (Gurusamy, 2017). A positive relationship between board size and Tobin's Q for non- financial firms (Oguz and Dincer, 2016). Arora and Sharma (2016) found that the size of the board is related to ROA. The size of the board has no major effect in terms of ROE and ROA results (Chaghadari and Chaleshtori, 2011).

According to Oguz and Dincer (2016), the productive BS will consist of at least seven to eight members with a maximum number of 10. There was positive relationship between board size and activism by institutional shareholders (Chugh, Meador & Kumar, 2011). The board size increases are far less successful in controlling management, which triggered management free riding problems and delayed decision-making among directors (Hidayat & Utama, 2012). Hafizah & Nurul & Sakinah (2015) determined that firm size significantly affected to CSR reporting where the larger firm size contributed more efforts on CSR.

The Governance Code suggested, in describing the Board size criteria in Malaysia, that the effect on the performance of the Board should be considered. Nevertheless, there are no suggested board numbers unless a board is too big or too small (Saleh, Zulkifli, Muhamad, 2010).

Based on the past studies, it was hypothesized that:
H3A: BS has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H3B: BS has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H3C: BS has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.4 Muslim CEO

Chief Executive of Officer (CEO) defined as the person in charged in the management who was the most senior executives or administrative officer in an organisation (Faccio, Marchica & Mura, 2016). Saidu (2019) concluded that CEO has shown to have a positive relationship with both return on equity (ROE) and ROA.

According to Hafizah, Nurul & Sakinah (2015), having a Muslim CEO in the company, he will be able to ensure the company is following the Islamic concept of Corporate Social Responsibility and procedures are followed as he is the highest rank executive in the corporate board of the company. Abd-Mutalib, Hafizah & Yahya, Huda&Taib, Sakinah (2015) said that the coverage of CSR is strongly and substantially affected by Muslim administrators. A bond between Islam and CSR had been identified that there is a bond between Islam and CSR but limited facts have been identified that Muslim leaders have an impact on the corporate board and also the company's CSR.

Based on the past studies, it was hypothesized that:
H4A: Having a MCEO has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H4B: Having a MCEO has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H4C: Having a MCEO has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.5 No of Muslim Independent Directors

There was an implied but apparent rule that should be three and above independent non-executive directors, that having their own business in

management recommended by MCCG. In Part 1 of the MCCG (2017), the Principles Provision A II suggested that, with the purpose of preventing small groups of people, the board be governed by decisions made in relation to a sufficient number of executive directors and non-executive managers (also representative non-executive leaders). Beyond this, Muslims independent directors that uphold the principle of brotherhood (ukhuwwah) are responsible to stress on the importance of social justice.

In the study carried out by Black, Kim, Jang and Park (2015), more independent directors and more productive companies are linked directly with that measured by Tobin's Q. Board independency had no significant impact on ROE and ROA (Chaghadari and Chaleshtori, 2011). Payal and Singh (2017) research has shown that NOID is a strong but minor link with company performance, at the meanwhile, there was a negative association from NOID and firm's performance (Fuzi, Halim and Julizaerma, 2015).

Based on the past studies, it was hypothesized that:
H5A: Having a NOMID has no significant influence with firm performance (ROA) in Malaysia and Singapore.
H5B: Having a NOMID has no significant influence with firm performance (ROE) in Malaysia and Singapore.
H5C: Having a NOMID has no significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.6 Muslim Chairman

The main purpose of a Chairman is to ensure that all the board's members successfully execute the goals and strategies of the organization. The board of directors was the one who appoints the chairman to preside over all the meetings to ensure all information is conveyed accurately ("The Role of the Chairman,"

2014). The chairman is in-charge of overseeing and promoting the highest standards when it comes to corporate governance within the board of directors and the chairman is to be the leader of the board in any discussions of any proposals from the firm's executive team.

The Muslim Chairperson, Abd-Mutalib, Hafizah & Yahya, Huda&Taib, Sakinah (2015), said the positive and important impact of this coverage on CSR must also ensure that the company operates on the benefit and profit of its investors as well as on the Qur'an's social and environmental issues.

Based on the past studies, it was hypothesized that:
H6A: Having a MC has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H6B: Having a MC has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H6C: Having a MC has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.3.2.7 No of Directors Holding Professional Accounting Qualification

Diverse educational background enables to perform better decision making. There would be competitive advantage as the directors possessing both the functional and firm-specific knowledge and skills. A firm that has a number of well-educated executives is likely to benefit itself in being able to come up with better ideas in order to benefit the firm. According to Ahmad, J& Saad (2013), having well educated individuals in a firm helps increase the firm's political awareness and also its standing on the level of corporate social accountability. Information on board educational background can be obtained from the annual report of the company under the heading "Director's profile" or "Profile of directors".

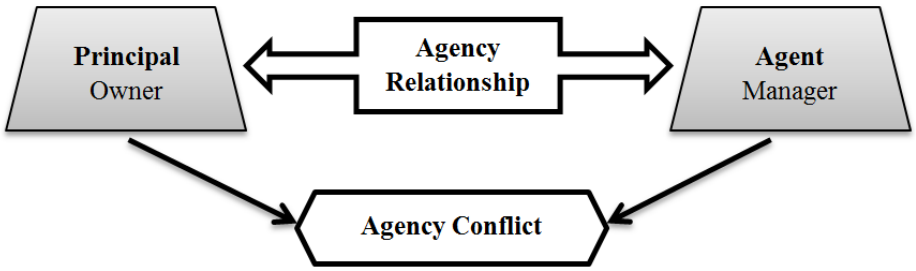
Such systems were designed to ensure that directors, as company directors, could effectively understand and carry out their duties (Esa, Zahari, 2016). The importance of education for the directors was emphasized by the Malaysian code of corporate governance, it recommends all directors to have specific qualities and professionalism in the field that they are in (Al-Janadi, Rahman, 2013).

Based on the past studies, it was hypothesized that:
H7A: NODHPAQ has a significant influence with firm performance (ROA) in Malaysia and Singapore.
H7B: NODHPAQ has a significant influence with firm performance (ROE) in Malaysia and Singapore.
H7C: NODHPAQ has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

2.4 Theoretical Perspective of Corporate Governance

2.4.1 Agency Theory

Figure 2.4.1 Diagram of Agency Theory



Source: Developed for the research

Agency theory by Jensen and Meckling (1976) and made a straightforward assumption that human beings act at their own benefits, known as opportunism, aiming the agency relationship on agent and principal. Contractually, agent is the representative in business where maximizing the organization interest, regardless of self-interest (Eisenhardt,1989) where the principal act as the initial flow of the business by giving the authority, and that is how an agency relationship is formed. (Jensen & Meckling, 1976).

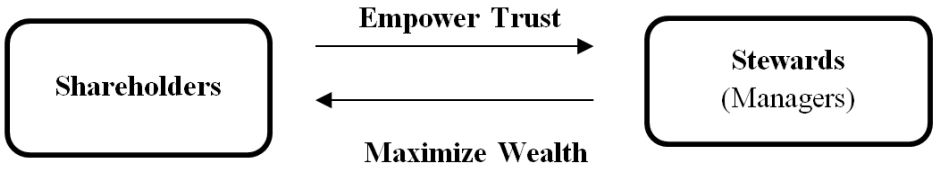
Different in level of risk tolerance and attitude between safety but low returns and risky but high returns (Oguz & Dincer, 2016). Agency problem must be resolved and for sure incurred an agency cost that neutralize the interest of agent to be bound with stakeholders' interest supported by Roberts (2015). Agency costs are defined as the amount of cost of monitoring, partnering and residual losses (Jensen and Meckling, 1976).

Naturally, agents must also have incentives working in contingencies and taking care of principal's interest (Saeid & Sakine, 2015). Refer to Manawaduge (2012), both management and the interests of investors will put the two structures in line. Board composition are focusing on past researches as the main duty was to maximize shareholders' value (Zhang, Cheong, Rasiah, &

Zhang, 2016). Thus, by referred to the framework, board was explained as a monitoring mechanism while agents are as managers, principals are owners.

2.4.2 Stewardship Theory

Figure 2.4.2 Diagram of Stewardship Theory



Source: Developed for the research

According to Donaldson (1990), the principle of stewardship suggested that when management operates by being good corporate asset stewards, the rationale could be maximized for the shareholder's benefit. (Davis, Schoorman & Donaldson, 1997). No matter the size of a company that was publicly or privately held, there was a procedure in place to monitor the performance and planning for the future.

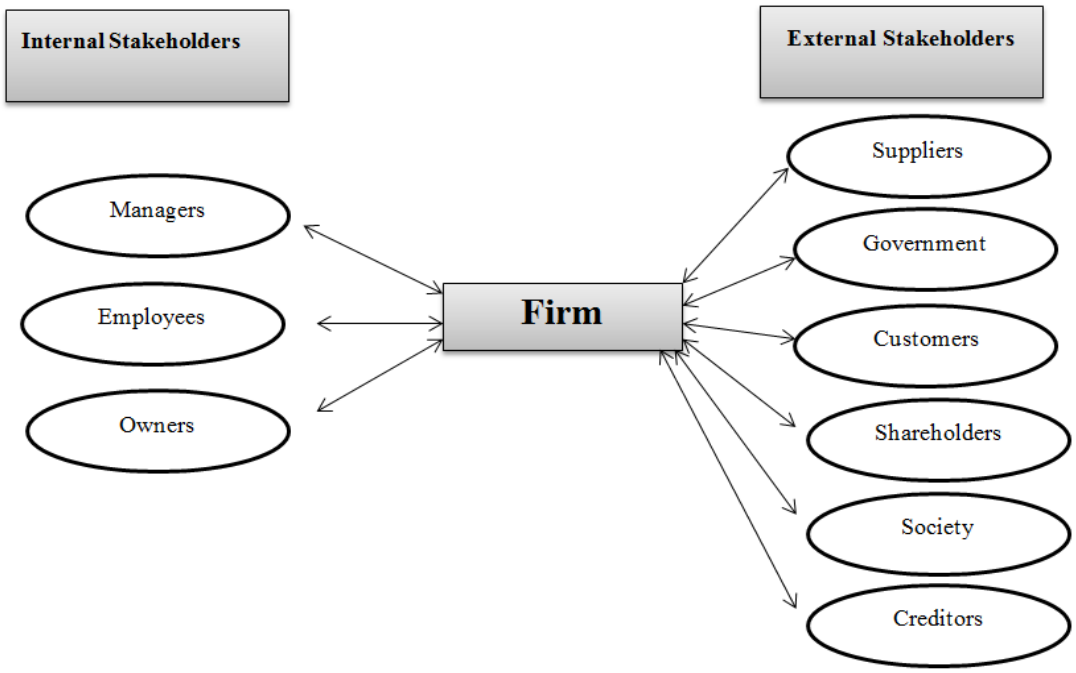
A steward was interpreted as someone who responsible to take care of the needs of others. A company executive under the stewardship theory was responsible for the well-being and interests of the owners and shareholders of the company or firm and can make decisions on behalf that beneficial to the company (Chemweno, 2016). What they seek include a sense of worth, good reputation and a feeling of satisfaction under the company (Simpson ,2016).

Steward may do not necessarily to do this to benefit their own financial interest (Muth & Donaldson, 1998). The stewards merged their ego and sense of worth

with the successes and reputation of the firm. In contrast, where the principal's and manager's interests are compatible, the philosophy of management stressed more an alignment of priorities between the parties in CG than the agent's interests. (Okiro ,2014).

2.4.3 Stakeholder Theory

Figure 2.4.3 Diagram of Stakeholder Theory



Source: Developed for the research

This theory proved the face that the corporate management was taken account of the interests of each stakeholder in every aspect of it governing process of the firm (Okiro, 2014). This theory stated that the corporate management of the company should be actively trying to reduce and prevent conflicts of interests between its stakeholders as it would not be beneficial for the firm (Heenetigala, 2011).

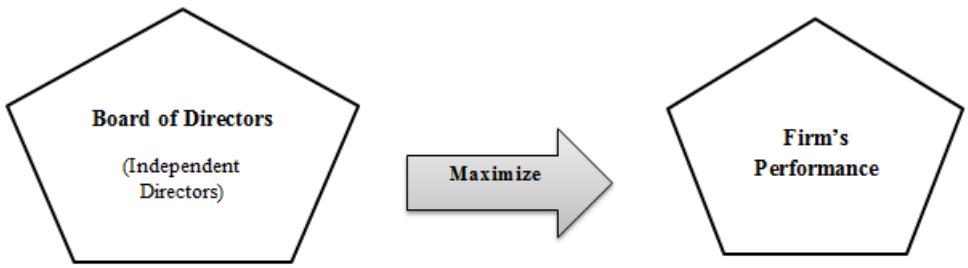
1. Internal stakeholders – Internal stakeholders were individuals who directly involved with the corporate governance process, such as the corporate directors and also its employees.

2. External stakeholders – External stakeholders were people who were not directly involved with the corporate governance process of the firm. They were usually the creditors, auditors, customers, supplies and also some government agencies who took interests in the firm.

Firms are encouraged to manage the organizations to be beneficial to all its stakeholders (Okiro, 2014). Edward Freeman who was the first person who introduced this theory and recognized it as an important element of the corporate social responsibility (CSR) (Freeman & McVea, 2001). Nowadays most companies focus on its CSR as they claim its already part of their firm's strategy. Even though most companies nowadays implement CSR to their strategy, some companies use it as a public relations stunt to benefit its business, but some companies are still genuine with its conscience to the public (Habbash, 2010).

2.4.4 Resource Dependency Theory

Figure 2.4.4 Diagram of Resource Dependency Theory



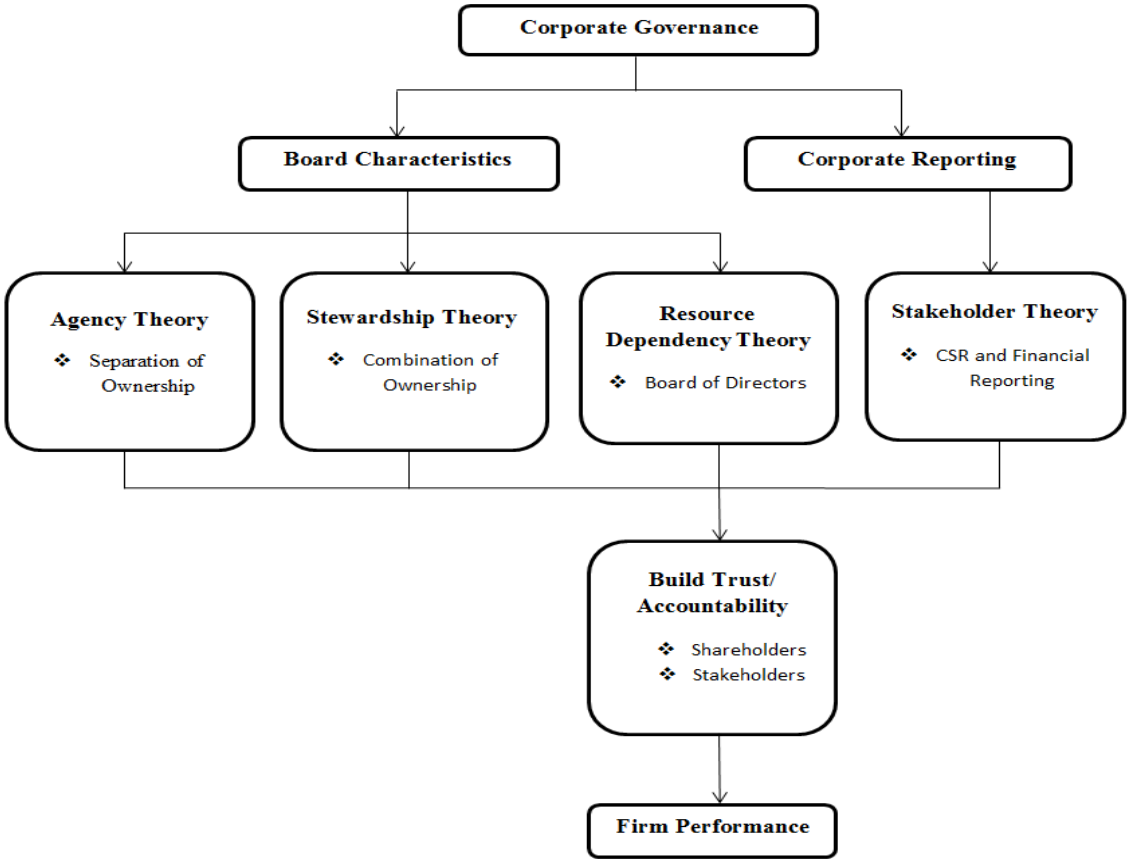
Source: Developed for the research

Resource dependence theory is a theory that defines how a firm is affected by external resources that are used to conducts the firm's business, such as environmental linkages (Nguyen, Locke & Reddy, 2015). According to Simpson (2016), The concept of the dependence on resources is important as resources are necessary for the organization to operate and work properly in order to achieve above-average returns for tangible and intangible assets such as human resources, data, finance, technology and telecommunications.

Resources that the firm needs to operate its business may be scarce or under the manipulation of an uncooperative individuals (Sarpong-Danquah, Gyimah, Afriyie & Asiamah, 2018). Refer to Shropshire (2010), firms typically change their strategies and procedures to adapt to the changes in power relationship with other companies. If many resources were controlled by the government, directly or indirectly, appointing directors that had key influences and links to the key policymakers and government is crucial to the company (Sarpong-Danquah, Gyimah, Afriyie & Asiamah, 2018).

2.5 Research Framework

Figure 2.5: Research Framework of Corporate Governance and Companies Performance

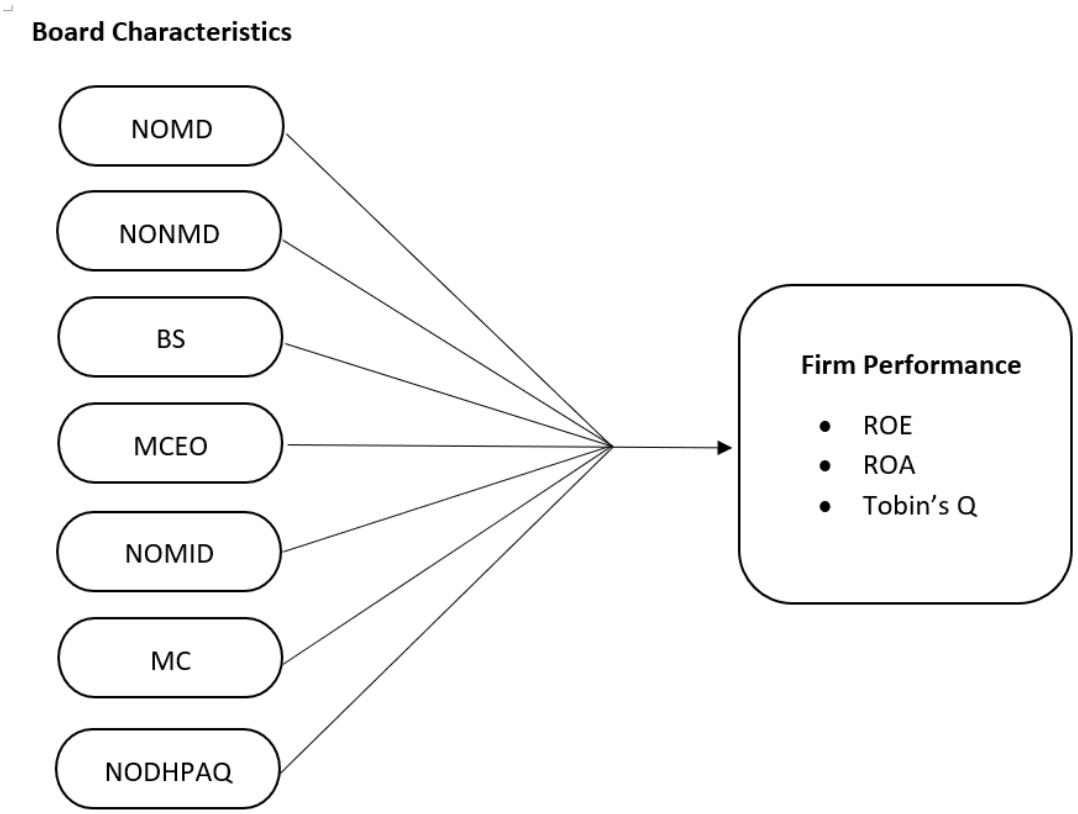


Source: Developed for the research

Four Corporate Governance theories was used to create a research framework. Three of the four corporate governance theories reflect the characteristics of the Board, which includes agency, stewardship and also dependency theories, The stewardship theory is a combination of the ownership of the company and the powers of the stewards as the managers were the one that increased the firm's profitability and increasing their wealth (Heennetigala, 2011).

2.6 Conceptual Framework

Figure 2.6: Board Characteristics that Influence Companies Performance Among Shariah Compliant Companies in Malaysia and Singapore



Source: Developed for the research

The theoretical structure above was established in conjunction with the research objectives. The IVs consisted of the NOMD, NONMD, BS, MCEO, NOMID, MC, NODHPAQ board features that assessed the firm's success by ROE, ROA and Tobin Q. These DVs are intended to establish whether CG affects the company's performance in Malaysia and Singapore, which are in compliance with Shariah.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

The research method used for the analysis was described in this chapter. Seven parts covered research design, data collection method, design of sampling, research method, and analyzes of data.

3.1 Research Design

This research aimed to evaluate whether the effects of CG in Malaysia and Singapore on the business performance of Shariah Compliance firms, which looks from an Islamic perspective data collected from 2013 to 2018 for six years. This study studied the relationship between the quality of Shariah-compliant companies, i.e. the ROE, ROA and Tobin's Q. Bloomberg and the annual shariah-compliant companies reports for the periods 2013-2018 were collected in this analysis. For six years, a complete data collection has been obtained. Any missing data was substituted with "0" in order to perform the review of the panel results. In this study, a cross-sectional analysis of six years of relationship between the DVs and IVs was used.

3.2 Data Collection Method

3.2.1 Secondary Data

This research was conducted by using secondary data gathered through the summarized and collated of existing research. The annual reports were obtained

from the official websites of those companies covered from 2013 to 2018. The data for ROE, ROA and Tobin's Q were extracted from Bloomberg. The data collected from these sources were reliable as the annual reports of all Shariah compliance were audited.

3.3 Sampling Design

3.3.1 Target Population

The target population of this research included all Shariah compliance companies in Malaysia Hijrah Shariah Index and FTSE ST Singapore Shariah Index as the financial data are available. Consequently, the total target population for this research were 30 Shariah-compliant companies in Malaysia and 48 Shariah compliant companies in Singapore.

3.3.2 Sampling Frame

A sampling frame is a list of all the units of population of interest which prior to select sample for the research (DiGaetano, 2013). A sampling frame in this research would be from the list of Hijrah Shariah Index by the Shariah Advisory Council on Bursa Malaysia and FTSE ST Singapore Shariah Index on Singapore Stock Exchange (SGX).

3.3.3 Sampling Element

Sampling element known as a single member of any given population could be selected in the sampling process (Zikmund, Babin, Carr and Griffin, 2013). There were not entire population were used in this research. 30 Shariah compliant companies were being selected in each country for Malaysia and Singapore. This was due to the insufficient information regarding to the list of companies in FTSE ST Singapore Shariah Index.

3.3.4 Sampling Technique

Sampling technique used in conducting this research for Malaysia was census where the constituents from the whole population were studied (Erba, Ternes, Bobkowski, Logan & Liu, 2017). On the other hand, sampling technique used in conducting this research for Singapore was sample whereas only some of the sample elements were studied from a population. Refer to Martinez- Mesa, Gonzalez-Chica, Duquia, Bonamigo, & Bastos (2016), the sample is a subset that must be representative which have common characteristics that are equally true to the entire target population in order to generalise conclusion.

3.3.5 Sampling Size

A research must have large enough sample condition where the adequate sample size was statistically significant to make inference about the population (Canals, & Canals, 2019). In reference to Roscoe (1975), the general rule of thumb for the large enough sample size is that ‘n’ equal or more than 30 and less than 500. In panel data analysis, cross sectional yearly data was used in this study. There were 180 firm year observations in each country, Malaysia and Singapore. Furthermore, sample size of 30 were included to run Multiple Linear Regression using SPSS.

Table 3.3.5a: The Number of Firm Year Observations in Malaysia and Singapore for Six Years Periods

	Firm Year Observations 2013 to 2018
Malaysia	180
Singapore	180

Source: Developed for the research

Table 3.3.5b: The sample Size in Malaysia and Singapore for Six Years Period

	Size Sample					
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
Malaysia	30	30	30	30	30	30
Singapore	30	30	30	30	30	30

Source: Developed for the research

3.4 Research Instruments

Data and financial statements from the annual reports and Bloomberg for 2013 - 2018 were collected in this study. Information not available for the IVs in Bloomberg have been obtained from official companies' websites.

3.5 Constructs Measurement

3.5.1 Origin of Construct

There were 3 DVs and 7 IVs adopted in this research. Table 3.5.1a for DVs and Table 3.5.1b for IVs were shown.

Among the 7 IVs, there were 2 dummy variables which were MCEO and MC. If there was Muslim CEO, it would be coded "1", and if there was no Muslim CEO, it would be coded "0". Moreover, if the there was Muslim Chairman, it would be coded "1" while when there was no Muslim Chairman, it would be coded "0".

Table 3.5.1a: Table of Dependent Variables

DVs	Formulas	Adopted from
ROA	Net Income / Total Assets	Bually, Hamdan & Zureigat, 2017 Oguz & Dincer (2016) Chong, Ting and Cheng (2016)

ROE	Net Income / Shareholders' Equity	Joanna (2018) Vu & Nguyen (2017)
Tobin's Q	Total Market Value of Company + Liabilities / Total Book Value + Liabilities	Kim & Kim (2018) Okiro (2014)

Source: Developed for the research

Table 3.5.1b: Table of Independent Variables

IVs	Formulas	Adopted from
NOMD	Number of Muslim directors	Dale-Olsen et al. (2013) Luckerath-Rovers (2013)
NONMD	Number of non- Muslim directors	Shukeri et al. (2012) Hassan, Rohail & Marimuthu (2016)
BS	Total number of directors	Saleh, Zulkifli, Muhamad (2010) Amer, Ragab and Ragheb (2012)
MCEO	0= No muslim CEO 1=muslim CEO	Faccio, Marchica & Mura (2016) Saidu (2019)

NOMID	Number of Muslim independent directors	Black, Kim, Jang and Park (2015)
MC	0= No Muslim chairman 1= Muslim chairman	Abd-Mutalib, Hafizah & Yahya, Huda&Taib, Sakinah (2015)
NODHPAQ	Number of directors holding professional accounting qualification	Al-Janadi, Rahman (2013). Esa, Zahari (2016).

Source: Developed for the research

3.5.2 Scale Measurement

Scale measurement is a method used to categorized or quantify the value assigned to variables (Zikmund et al, 2013). The scales of measurement applied in this research to explain all the DVs and IVs were nominal, interval and ratio as each value on the scales defined unique meaning corresponding to the variables. There were dummy (MCEO and MC), interval (ROE, ROA and Tobin's Q), and ratio (NOMD, NONMD, NOMID, BS, NODHPAQ) scale of measurement in this study.

3.6 Data Processing

In accordance to Sekaran & Bougie (2010), the process of data entering, data editing and data transforming were involved in the data processing. First phrase of data processing was the data entry. Bloomberg and its annual report for the year 2013 to

2018 have taken data from DVs (ROE, ROA, Tobin's D) and IVs (NOMD, NONMD, BS, NOMID, MCEO, MC, NODHPAQ). From Microsoft Excel, data from Bloomberg and the annual variables statements are transmitted to EViews version 10 and SPSS version 21. Data editing was required for the identification and revision of incorrect and incoherent software following transfers of information (Sekaran & Bougie 2010).

3.7 Data Analysis

3.7.1 Descriptive Analysis

Descriptive analysis produced short descriptive coefficients that allow associations between variables to be defined (Vetter, 2017). In order to sum up the data collected, descriptive statistics are presented in quantitative. The average and standard deviation for DVs and IVs was described using a descriptive table. In the meantime, the number and percentage of MCEO and MC companies implementing was represented by a frequency table.

3.7.2 Inferential Analysis

Inferential analysis was used to reach conclusions by making inference to the population characteristics from sample data drawn (Zikmund, Babin, Carr, J, & Griffin, 2010). Inferential analysis encompasses significance tests on making assumptions to be used in research questions. Panel data analysis was conducted as the tools applied in this research. A self- determination was taken to run the MLR besides panel data analysis.

3.7.2.1 Panel Data Analysis

Panel data analysis is a statistical method for the determination of two-dimensional panel data, typically cross-sectional and longitudinal, which have been collected over time and are used over time across the same single agents (Zhu, 2012). Panel data, also known as time series, cross-sectional data and longitudinal data and cross-sectional time series analysis, are mixed. (Studenmund, 2016). If data are taken from multiple samples in different time periods or when different variables are measured in different times, data are not intentional as panel data (Studenmund, 2016). RE model was adopted when the probability value was more than 0.05 (Studenmund, 2016).

Referring to Studenmund (2016), the general equation for panel data analysis was:

$$y_{it} = \beta_1 x_{it1} + \beta_2 x_{it2} + \ldots + \beta_k x_{itk} + \varepsilon_{it}$$

Below were the equations of panel analysis for each DVs:

ROA_{it}	$\beta_0 + \beta_1\ NOMD_{it} + \beta_2\ NONMD_{it} + \beta_3\ BS_{it} + \beta_4\ MCEO_{it} + \beta_5\ NOMID_{it} + \beta_6\ MC_{it} + \beta_7\ NODHPAQ_{it} + \varepsilon_{it}$

ROE_{it}	$\beta_0 + \beta_1\ NOMD_{it} + \beta_2\ NONMD_{it} + \beta_3\ BS_{it} + \beta_4\ MCEO_{it} + \beta_5\ NOMID_{it} + \beta_6\ MC_{it} + \beta_7\ NODHPAQ_{it} + \varepsilon_{it}$

TOBIN'S Q_n	$\beta_0 + \beta_1\ NOMD_n + \beta_2\ NONMD_n + \beta_3\ BS_n + \beta_4\ MCEO_n + \beta_5\ NOMID_n + \beta_6\ MC_n + \beta_7\ NODHPAQ_n + \varepsilon_n$

β = Beta

ε = A classical error term

i = Observation number in a cross-sectional data set

t = Observation number in a time-series data set

CHAPTER 4: RESEARCH RESULTS

4.0 Introduction

The interpretation and pattern of the findings linked by the hypothesis and research question were shown in this chapter. The descriptive review was performed, and panel data observed.

4.1 Descriptive Analysis

4.1.1 Dependent Variables

ROA, ROE and Tobin's Q were used in this study to evaluate company performance. ROA is net earnings divided by total assets; ROE has been net earnings over total equity; Tobin's Q represents the total market value of the company that has been combined to liabilities divided by the total book value plus liabilities.

Table 4.1.1a: Descriptive Statistics 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	30	26.20	66.38	6.10	6.15	8.46	9.67
2014	30	23.67	54.10	5.63	5.42	8.20	10.09
2015	30	21.58	51.91	5.36	5.16	6.90	8.08
2016	30	24.39	57.31	7.72	13.88	7.32	7.54

2017	30	23.22	52.63	5.67	6.12	6.63	6.64
2018	30	20.44	48.95	3.83	6.96	6.09	6.98
Avg	180	23.25	55.21	5.72	7.28	7.27	8.17

S.D.: Standard Deviation
Avg: Average
Source: Developed for the research

For Malaysia, the means of ROA for the year 2013 to 2018 were 26.20, 23.67, 21.58, 24.39, 23.22 and 20.44 respectively, while the S.D. were 66.38, 54.10, 51.91, 57.31, 52.63 and 48.95 respectively. From year 2013 to 2018, the means of ROE were 6.10, 5.63, 5.36, 7.72, 5.67 and 3.83 respectively, while the S.D. were 6.15, 5.42, 5.16, 13.88, 6.12 and 6.96 respectively. The means of Tobin's Q for the year 2013 to 2018 were 8.46, 8.20, 6.90, 7.32, 6.63 and 6.09 respectively, while the S.D. were 9.67, 10.09, 8.08, 7.54, 6.64 and 6.98 respectively.

Table 4.1.1b: Descriptive Statistics 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	30	7.06	4.61	28.62	87.96	1.50	1.04
2014	30	5.91	5.74	19.30	51.35	1.49	1.03
2015	30	5.65	5.06	16.80	39.41	1.44	1.01
2016	30	5.20	4.57	14.71	31.82	4.41	16.75
2017	30	5.65	5.01	12.66	16.81	1.38	0.78
2018	30	4.52	5.55	8.78	14.48	1.30	0.72
Avg	180	5.66	5.09	16.81	40.31	1.92	3.55

S.D.: Standard Deviation
Avg: Average
Source: Developed for the research

For Singapore, the means of ROA for the year 2013 to 2018 were 7.06, 5.91, 5.65, 5.20, 5.65 and 4.52 respectively, while the S.D. were 4.61, 5.74, 5.06, 4.57, 5.01 and 5.55 respectively. The means of ROE were 28.62, 19.30, 16.80, 14.71, 12.66 and 8.78 respectively, while the S.D. were 87.96, 51.35, 39.41, 31.82, 16.81 and 14.48 respectively for the year 2013 to 2018. From year 2013 to 2018, the means of Tobin's Q were 1.50, 1.49, 1.44, 4.41, 1.38 and 1.30 respectively, while the S.D. were 1.04, 1.03, 1.01, 16.75, 0.78 and 0.72 respectively.

4.1.2 Independent Variables

Table 4.1.2a: Descriptive Statistic for MCEO and MC in Malaysia

Malaysia		**MCEO**		**MC**	
Year	**Sample**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
2013	30	15(50)	15(50)	9(30)	21(70)
2014	30	15(50)	15(50)	9(30)	21(70)
2015	30	15(50)	15(50)	7(23.3)	23(76.7)
2016	30	15(50)	15(50)	8(26.7)	22(73.3)
2017	30	16(53.3)	14(46.7)	8(26.7)	22(73.3)
2018	30	16(53.3)	14(46.7)	7(23.3)	23(76.7)
Avg	180	92(51.1)	88(48.9)	48(26.67)	132(73.33)

Avg: Average
Source: Developed for the research

In this research, MCEO and MC were dummy variables. The number of Shariah compliant in Malaysia that appointed MCEO were 15 for year 2013 to 2016 and 16 in 2017 to 2018. The number of Shariah compliant in Malaysia that practiced non-MC were 21 for year 2013 to 2014, 23 in 2015, 22 for year 2016 to 2017 and 23 in 2018.

Table 4.1.2b: Descriptive Statistic for MCEO and MC in Singapore

Singapore		MCEO		MC	
Year	**Sample**	**Yes (%)**	**No (%)**	**Yes (%)**	**No (%)**
2013	30	2(6.7)	28(93.3)	2(6.7)	28(93.3)
2014	30	2(6.7)	28(93.3)	1(3.3)	29(96.7)
2015	30	2(6.7)	28(93.3)	4(13.3)	26(86.7)
2016	30	1(3.3)	29(96.7)	1(3.3)	29(96.7)
2017	30	2(6.7)	28(93.3)	1(3.3)	29(96.7)
2018	30	1(3.3)	29(96.7)	1(3.3)	29(96.7)
Avg	180	11(5.57)	170(94.43)	10(5.53)	170(94.47)

Avg: Average
Source: Developed for the research

In this research, MCEO and MC were dummy variables. The number of Shariah compliant in Singapore that appointed MCEO were 2 for year 2013 to 2015, 1 in 2016, 2 in 2017 and 1 in 2018. The number of Shariah compliant in Malaysia that practiced non-MC were 28 in 2013, 29 in 2014, 26 in 2015 and 29 for year 2016 to 2018.

Table 4.1.2c: Descriptive Statistic for NOMD, NONMD and BS in Malaysia

Malaysia		NOMD		NONMD		BS	
Year	**Sample**	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
2013	30	3.77	2.75	5.73	2.91	9.47	2.92
2014	30	4.47	3.43	5.33	2.90	9.73	2.90
2015	30	3.97	3.01	5.50	2.84	9.50	2.62
2016	30	4.10	3.07	5.63	3.21	9.77	2.82
2017	30	4.20	3.49	5.53	3.20	9.70	2.74
2018	30	4.17	3.05	5.57	3.15	9.73	2.73
Avg	180	4.11	3.13	5.55	3.04	9.65	2.79

S.D.: Standard Deviation

Avg: Average

Source: Developed for the research

For the period of 2013 to 2018, the average mean for NOMD was 4.11. For this variable, the highest S.D. was 3.49 in 2017 and the lowest S.D. was 2.75 in 2013. The average mean of NONMD for the year 2013 to 2018 was 5.55. The highest S.D. for NONMD was 3.21 in 2016, while the lowest S.D. was 2.84 in 2015. For the 6-years period, the average mean for BS was 9.65 and in 2013, this variable has the highest S.D., which was 2.92.

Table 4.1.2d: Descriptive Statistic for NOMD, NONMD and BS in Singapore

Singapore		**NOMD**		**NONMD**		**BS**	
Year	**Sample**	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
2013	30	0.37	0.76	10.07	2.16	10.47	1.98
2014	30	0.30	0.65	9.93	2.07	10.17	1.97
2015	30	0.37	0.81	10.23	2.33	10.63	2.19
2016	30	0.27	0.58	10.10	2.04	10.33	2.04
2017	30	0.30	0.70	10.20	2.31	10.53	2.33
2018	30	0.37	0.76	9.93	2.21	10.33	2.19
Avg	180	0.33	0.71	10.08	1.85	10.41	2.12

S.D.: Standard Deviation

Avg: Average

Source: Developed for the research

For the period of 2013 to 2018, the average mean for NOMD was 0.33. For this variable, the highest S.D. was 0.81 in 2015 and the lowest S.D. was 0.58 in 2016. The average mean of NONMD for the year 2013 to 2018 was 10.08. The highest S.D. for NONMD was 2.33 in 2015, while the lowest S.D. was 2.04 in 2016. The average mean for BS was 12.16 and in 2017, this variable has the highest S.D., which was 2.33.

Table 4.1.2e: Descriptive Statistic for NOMID and NODHPAQ in Malaysia

Malaysia		NOMID		NODHPAQ	
Year	**Sample**	**Mean**	**S.D.**	**Mean**	**S.D.**
2013	30	2.03	1.38	2.33	1.06
2014	30	2.30	1.70	2.57	1.19
2015	30	2.00	1.44	2.67	1.18
2016	30	2.23	1.52	2.73	1.11
2017	30	2.47	1.83	2.57	1.07
2018	30	2.50	1.63	2.70	1.29
Avg	180	2.26	1.58	2.59	1.15

S.D.: Standard Deviation

Avg: Average

Source: Developed for the research

For the period of 2013 to 2018, the average mean for NOMID was 2.26. For this variable, the highest S.D. was 1.83 in 2017 and the lowest S.D. was 1.38 in 2013. The average mean of NODHPAQ for the year 2013 to 2018 was 2.59. The highest S.D. for NODHPAQ was 1.29 in 2018, while the lowest S.D. was 1.06 in 2013.

Table 4.1.2f: Descriptive Statistic for NOMID and NODHPAQ in Singapore

Singapore		NOMID		NODHPAQ	
Year	**Sample**	**Mean**	**S.D.**	**Mean**	**S.D.**
2013	30	0.13	0.43	1.93	0.87
2014	30	0.13	0.35	1.87	1.14
2015	30	0.13	0.43	2.17	1.02
2016	30	0.13	0.35	2.23	1.07

2017	30	0.13	0.35	2.17	0.87
2018	30	0.17	0.46	2.07	0.98
Avg	180	0.14	0.4	2.07	0.99

S.D.: Standard Deviation
Avg: Average
Source: Developed for the research

For the period of 2013 to 2018, the average mean for NOMID was 0.14. For this variable, the highest S.D. was 0.46 in 2018 and the lowest S.D. was 0.35 in 2014. The average mean of NODHPAQ for the year 2013 to 2018 was 2.07. The highest S.D. for NODHPAQ was 1.14 in 2014, while the lowest S.D. was 0.87 in 2013 and 2017.

4.2 Panel Data Analysis

4.2.1 ROA 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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOMD	-0.076304	0.173676	-0.439348	0.6610
NONMD	0.288764	1.131956	0.255101	0.7989
BS	0.634559	1.151834	0.550911	0.5824

MCEO	-6.017207	9.163358	-0.656660	0.5123
NOMID	-0.306798	1.408261	-0.217856	0.8278
MC	2.529857	4.472104	0.565697	0.5723
NODHPAQ	-1.024288	1.262679	-0.811202	0.4184
C	21.62084	14.32817	1.508975	0.1331

Effects Specification	S.D.	Rho
Cross-section random	59.56375	0.9758
Idiosyncratic random	9.376261	0.0242

Weighted Statistics			
R-squared	**0.009976**	Mean dependent var	1.491099
Adjusted R-squared	**-0.030316**	S.D. dependent var	9.113166
S.E. of regression	9.250272	Sum squared resid	14717.62
F-statistic	**0.247587**	Durbin-Watson stat	1.157812
Prob(F-statistic)	0.972403		

Unweighted Statistics			
R-squared	0.008811	Mean dependent var	23.25034
Sum squared resid	531730.9	Durbin-Watson stat	0.032047

According to Table 4.2.1.1, the equation was formed as the following:

ROA	21.621 – 0.076 NOMD + 0.289 NONMD + 0.635 BS – 0.172 MCEO – 0.307 NOMID + 2.530 MC – 1.024 NODHPAQ + 14.328ε

The equation above presented that NONMD, BS, MC have a positive relationship with ROA while NOMD, MCEO, NOMID, NODHPAQ have a negative effect on ROA.

Random Effect Model was applied to run ROA. Referring to the results, all the IVs were not significant on ROA as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 0.1% of variation in ROA. The Adjusted R-squared was -0.03 and the F-statistic was 0.248.

4.2.1.2 Hausman Test for ROA in Malaysia

Table 4.2.1.2: Hausman Test Result 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	2.408714	7	**0.9338**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

Based on the statistic of Hausman test, it showed that the P-value was 0.934, which was greater than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOMD	1.022867	1.154321	0.886120	0.3768

NONMD	0.682370	1.078200	0.632879	0.5277
BS	-0.192454	1.052853	-0.182793	0.8552
MCEO	-1.691552	1.421168	-1.190254	0.2356
NOMID	-1.773335	0.928717	-1.909447	**0.0509**
MC	0.367608	1.471151	0.249878	0.8030
NODHPAQ	-0.263859	0.391501	-0.673968	**0.0501**
C	1.332854	2.423745	0.549915	0.5831

Effects Specification	S.D.	Rho
Cross-section random	4.393492	0.7068
Idiosyncratic random	2.829864	0.2932

Weighted Statistics			
R-squared	**0.049575**	Mean dependent var	1.439969
Adjusted R-squared	**0.010894**	S.D. dependent var	2.803703
S.E. of regression	2.788389	Sum squared resid	1337.320
F-statistic	**1.281654**	Durbin-Watson stat	1.399731
Prob(F-statistic)	0.262017		

Unweighted Statistics			
R-squared	0.120612	Mean dependent var	5.662278
Sum squared resid	4085.415	Durbin-Watson stat	0.458188

According to Table 4.2.2.1, the equation was formed as the following:

ROA	1.333 + 1.023 NOMD + 0.682 NONMD – 0.192 BS - 1.692 MCEO – 1.773 NOMID + 0.368 MC – 0.264 NODHPAQ + 2.424ε

NOMD, NONMD, MC indicated a positive relationship with ROA while BS, MCEO, NOMID, NODHPAQ presented a negative relationship with ROA based on the equation above.

Random Effect Model was applied to run ROA. Referring to the results, NOMID, NODHPAQ were significant on ROA where the P-values were 0.0509 and 0.0501 respectively, which were lesser than 0.10. However, NOMD, NONMD, BS, MCEO, MC were not significant on ROA as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 4.96% of variation in ROA. The Adjusted R-squared was 0.011 and the F-statistic was 1.282.

4.2.2.2 Hausman Test for ROA in Singapore

Table 4.2.2.2: Hausman Test Result for ROA 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	1.995184	7	**0.9601**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

Based on the statistic of Hausman test, it showed that the P-value was 0.960, which was greater than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

4.2.3 ROE 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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOMD	0.067540	0.096306	0.701308	0.4841
NONMD	-0.316488	0.453542	-0.697813	0.4862
BS	0.300479	0.474523	0.633223	0.5274
MCEO	1.016715	2.212920	0.459445	0.6465
NOMID	-0.555983	0.667746	-0.832626	0.4062
MC	2.672265	2.044581	1.306999	0.1930
NODHPAQ	-0.497285	0.688654	-0.722112	0.4712
C	5.606680	3.331710	1.682823	0.0942

Effects Specification	S.D.	Rho
Cross-section random	4.170860	0.2874
Idiosyncratic random	6.568356	0.7126

Weighted Statistics			
R-squared	**0.039481**	Mean dependent var	3.106523
Adjusted R-squared	**0.000390**	S.D. dependent var	6.555833
S.E. of regression	6.554553	Sum squared resid	7389.493
F-statistic	**1.009988**	Durbin-Watson stat	2.123077
Prob(F-statistic)	0.425928		

Unweighted Statistics			
R-squared	0.103483	Mean dependent var	5.744378
Sum squared resid	9889.602	Durbin-Watson stat	1.586359

According to Table 4.2.3.1, the equation was formed as the following:

ROE	5.607 + 0.068 NOMD - 0.316 NONMD + 0.300 BS + 1.017 MCEO – 0.556 NOMID + 2.672 MC – 0.497 NODHPAQ + 3.332ε

The equation above showed that NOMD, BS, MCEO, MC have a positive relationship with ROE while NONMD, NOMID, NODHPAQ have a negative effect on ROE. Random Effect Model was applied to run ROE.

Referring to the results, all the IVs were not significant on ROE as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 3.948% of variation in ROE. The Adjusted R-squared was 0.0004 and the F-statistic was 1.001.

4.2.3.2 Hausman Test for ROE in Malaysia

Table 4.2.3.2: Hausman Test Result 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	6.277854	7	**0.5077**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

According to the statistic in Hausman test, the P-value was 0.508, which was more than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

4.2.4 ROE 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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30

Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOMD	2.177369	12.12427	0.179588	0.8577
NONMD	3.080700	11.28788	0.272921	0.7852
BS	-0.212627	11.05434	-0.019235	0.9847
MCEO	-3.263096	14.93245	-0.218524	0.8273
NOMID	-3.205928	9.753857	-0.328683	0.7428
MC	-0.501931	15.50657	-0.032369	0.9742
NODHPAQ	-3.302575	4.025683	-0.820376	0.4131
C	-5.155456	24.52442	-0.210217	0.8337

Effects Specification	S.D.	Rho
Cross-section random	40.55815	0.6480
Idiosyncratic random	29.88971	0.3520

Weighted Statistics			
R-squared	**0.011746**	Mean dependent var	4.861155
Adjusted R-squared	**-0.028474**	S.D. dependent var	28.99360
S.E. of regression	29.40348	Sum squared resid	148705.2
F-statistic		Durbin-Watson stat	0.520430
Prob(F-statistic)	0.956352		

Unweighted Statistics			
R-squared	0.047065	Mean dependent var	16.87283
Sum squared resid	377689.6	Durbin-Watson stat	0.204905

According to Table 4.2.4.1, the equation was formed as the following:

ROE	-5.155 + 2.177 NOMD + 3.081 NONMD – 0.213 BS – 3.263 MCEO – 3.206 NOMID – 0.502 MC – 3.303 NODHPAQ + 24.524ε

NOMD, NONMD indicated a positive relationship with ROE while BS, MCEO, NOMID, MC, NODHPAQ presented a negative relationship with ROE based on the equation above. Random Effect Model was applied to run ROE.

Referring to the results, all the IVs were not significant on ROE as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 1.175% of variation in ROE. The Adjusted R-squared was -0.029.

4.2.4.2 Hausman Test for ROE in Singapore

Table 4.2.4.2: Hausman Test Result 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	1.449548	7	**0.9840**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

According to the statistic in Hausman test, the P-value was 0.984, which was more than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

4.2.5 Tobin's Q 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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30
Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.

NOMD	-0.047246	0.054101	-0.873294	0.3837
NONMD	0.336220	0.346112	0.971420	0.3327
BS	0.003459	0.348238	0.009934	0.9921
MCEO	-2.521024	2.359291	-1.068552	0.2868
NOMID	0.141500	0.451091	0.313683	0.7541
MC	0.466301	1.414408	0.329679	0.7420
NODHPAQ	-0.332375	0.413459	-0.803889	0.4226
C	7.253220	3.128124	2.318713	0.0216

Effects Specification	S.D.	Rho
Cross-section random	7.635688	0.8538
Idiosyncratic random	3.159701	0.1462

Weighted Statistics			
R-squared	**0.023407**	Mean dependent var	1.204481
Adjusted R-squared	**-0.016338**	S.D. dependent var	3.121238
S.E. of regression	3.146632	Sum squared resid	1703.022
F-statistic	**0.588924**	Durbin-Watson stat	1.140290
Prob(F-statistic)	0.764375		

Unweighted Statistics			
R-squared	0.093936	Mean dependent var	7.230833
Sum squared resid	10832.25	Durbin-Watson stat	0.179274

According to Table 4.2.4.1, the equation was formed as the following:

TOBIN'S Q	7.253 – 0.047 NOMD + 0.336 NONMD + 0.003 BS – 2.521 MCEO + 0.142 NOMID + 0.466 MC – 0.332 NODHPAQ + 3.128ε

The equation above showed that NONMD, BS, NOMID, MC have a positive relationship with TOBIN'S Q while NOMD, MCEO, NODHPAQ have a negative effect on TOBIN'S Q. Random Effect Model was applied to run TOBIN'S Q.

Referring to the results, all the IVs were not significant on TOBIN'S Q as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 2.341% of variation in TOBIN'S Q. The Adjusted R-squared was -0.016 and the F-statistic was 0.589.

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	5.580081	7	**0.5895**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

According to the statistic in Hausman test, the P-value was 0.590, which was more than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

4.2.6 Tobin's Q 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)

Sample: 2013 2018
Periods included: 6
Cross-sections included: 30

Total panel (balanced) observations: 180
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NOMD	-0.014324	0.115864	-0.123631	0.9018
NONMD	0.049903	0.109531	0.455608	0.6493
BS	-0.015995	0.105640	-0.151413	0.8798
MCEO	0.123699	0.142358	0.868928	0.3861
NOMID	0.021211	0.093189	0.227611	0.8202
MC	0.036746	0.145872	0.251907	0.8014
NODHPAQ	-0.060113	0.042992	-1.398227	0.1639
C	1.190585	0.306442	3.885189	0.0001

Effects Specification	S.D.	Rho
Cross-section random	0.935404	0.9183
Idiosyncratic random	0.278954	0.0817

Weighted Statistics			
R-squared	**0.022756**	Mean dependent var	0.170956
Adjusted R-squared	**-0.017249**	S.D. dependent var	0.272511
S.E. of regression	0.274916	Sum squared resid	12.92394
F-statistic	**0.568828**	Durbin-Watson stat	0.604586
Prob(F-statistic)	0.780545		

Unweighted Statistics			
R-squared	0.036357	Mean dependent var	1.411788
Sum squared resid	138.7679	Durbin-Watson stat	0.056307

According to Table 4.2.6.1, the equation was formed as the following:

TOBIN'S Q	1.191 – 0.014 NOMD + 0.050 NONMD – 0.016 BS + 0.124 MCEO + 0.021 NOMID + 0.037 MC – 0.060 NODHPAQ + 0.306ε

NONMD, MCEO, NOMID, MC indicated a positive relationship with TOBIN'S Q while NOMD, BS, NODHPAQ presented a negative relationship with TOBIN'S Q based on the equation above. Random Effect Model was applied to run TOBIN'S Q.

Referring to the results, all the IVs were not significant on TOBIN'S Q as the P-values were greater than 0.05 and 0.10. Thus, the seven IVs could be explained by 2.276% of variation in TOBIN'S Q. The Adjusted R-squared was -0.017 and the F-statistic was 0.569.

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: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.183017	7	**0.9490**

Hausman test was done for the model between the Fixed Effect Model and the Random Effect Model, which was most fitting. Based on the test, the following hypothesis was formed:

H0: Random Effect Model is the most appropriate model
H1: Fixed Effect Model is the most appropriate model

Based on the statistic of Hausman test, it showed that the P-value was 0.949, which was greater than 0.05. Thus, H1 was rejected and do not reject H0. In conclusion, Random Effect Model was the most appropriate model.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.0 Introduction

Chapter 5 will discuss on the hypothesis testing summary, summary of tests on descriptive and inferential analysis, discussion on findings, limitations in research, and recommendations for future 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 6 Years	**Overall 6 Years**
(Constant)	0.133	0.583
NOMD	0.661	0.377
NONMD	0.799	0.528
BS	0.7582	0.855
MCEO	0.512	0.236
NOMID	0.828	0.051
MC	0.572	0.803
NODHPAQ	0.418	0.050

Source: Developed for the research

5.1.2 Hypothesis Testing Summary of ROE Results

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

	ROE	
	Malaysia	**Singapore**
	Overall 6 Years	**Overall 6 Years**
(Constant)	0.094	0.834
NOMD	0.484	0.858
NONMD	0.486	0.785
BS	0.527	0.985
MCEO	0.646	0.827
NOMID	0.406	0.743
MC	0.193	0.974
NODHPAQ	0.471	0.413

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 6 Years	**Overall 6 Years**
(Constant)	0.022	0.0001

NOMD	0.3837	0.9018
NONMD	0.3327	0.6493
BS	0.9921	0.8798
MCEO	0.2868	0.3861
NOMID	0.7541	0.8202
MC	0.7420	0.8014
NODHPAQ	0.4226	0.1639

Source: Developed for the research

5.1.4 The Summary of Hausman Specification Test

Table 5.1.4: The summary of Hausman Specification Test

Model	**The Hausman Specification Test**	
	Malaysia	**Singapore**
ROA	REM	REM
ROE	REM	REM
TOBIN'S Q	REM	REM

REM= Random Effect Model

Source: Developed for research

5.1.5 Hypothesis Test Summary

Table 5.1.5: The Summary of Hypothesis Tests in Malaysia and Singapore

Research Hypothesis	**Panel Data Analysis**		**MLR**	
	Malaysia	**Singapore**	**Malaysia**	**Singapore**

	6 Years	**6 Years**	**6 Years**	**6 Years**
$H1_A$: Having a NOMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	R	R	R
$H1_B$: Having a NOMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H1_C$: Having a NOMD has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.	R	R	R	R
$H2_A$: NONMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	R	R	R
$H2_B$: NONMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H2_C$: NONMD has a significant influence with firm performance	R	R	R	R

(Tobin's Q) in Malaysia and Singapore.				
$H3_A$: BS has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	R	R	R
$H3_B$: BS has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H3_C$: BS has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.	R	R	R	R
$H4_A$: Having a MCEO has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	R	R	R
$H4_B$: Having a MCEO has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H4_C$: Having a MCEO has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.	R	R	R	R

$H5_A$: Having a NOMID has no significant influence with firm performance (ROA) in Malaysia and Singapore.	DNR	**R	DNR	DNR
$H5_B$: Having a NOMID has no significant influence with firm performance (ROE) in Malaysia and Singapore.	DNR	DNR	DNR	DNR
$H5_C$: Having a NOMID has no significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.	DNR	DNR	DNR	DNR
$H6_A$: Having a MC has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	R	R	R
$H6_B$: Having a MC has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H6_C$: Having a MC has a significant influence with firm performance	R	R	R	R

(Tobin's Q) in Malaysia and Singapore.				
$H7_A$: NODHPAQ has a significant influence with firm performance (ROA) in Malaysia and Singapore.	R	**DNR	R	R
$H7_B$: NODHPAQ has a significant influence with firm performance (ROE) in Malaysia and Singapore.	R	R	R	R
$H7_C$: NODHPAQ has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.	R	R	R	R

DNR = Do Not Reject, R = Reject

** Correlation is significant at the 0.1 level

* Correlation is significant at the 0.05 level

Source: Developed for the research

Hypothesis 1

$H1_A$: Having a NOMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.

$H1_B$: Having a NOMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.

$H1_C$: Having a NOMD has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore do not support H1A, H1B and H1C. Therefore, there was lack of evidence to reject null hypothesis of H1A, H1B and H1C. Besides, the MLR results also indicated that it rejected H1A, H1B and H1C in Malaysia and Singapore. Thus, it could show that NOMD has no significant influence with firm performance in Malaysia and Singapore. This conclusion was similar with the past studies such as (Zainal, Zulkifli& Saleh ,2013).

Hypothesis 2

$H2_A$: NONMD has a significant influence with firm performance (ROA) in Malaysia and Singapore.

$H2_B$: NONMD has a significant influence with firm performance (ROE) in Malaysia and Singapore.

$H2_C$: NONMD has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore rejected H2A, H2B and H2C. Therefore, there was lack of evidence to reject null hypothesis of H2A, H2B and H2C. Besides, the MLR results also indicated that it rejected H2A, H2B and H2C in Malaysia and Singapore. Hence, it could show that NONMD has no significant influence with firm performance in Malaysia and Singapore. This conclusion was similar with the past studies such as (Apadore & Marjan, 2013).

Hypothesis 3

$H3_A$: BS has a significant influence with firm performance (ROA) in Malaysia and Singapore.

$H3_B$: BS has a significant influence with firm performance (ROE) in Malaysia and Singapore.

$H3_C$: BS has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore rejected H3A, H3B and H3C. Therefore, there was insufficient evidence to reject null hypothesis of H3A, H3B and H3C. Besides, the results from MLR also indicated that it rejected H3A, H3B and H3C in Malaysia and Singapore. Therefore, it could show that BS has no significant influence with firm performance in Malaysia and Singapore. This conclusion was similar with the past studies such as (Chaghadari and Chaleshtori, 2011)

Hypothesis 4

$H4_A$: Having a MCEO has a significant influence with firm performance (ROA) in Malaysia and Singapore.

$H4_B$: Having a MCEO has a significant influence with firm performance (ROE) in Malaysia and Singapore.

$H4_C$: Having a MCEO has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore rejected H4A, H4B and H4C. Therefore, there was lack of evidence to reject null hypothesis of H4A, H4B and H4C. Besides, the MLR results also indicated that it rejected H4A, H4B and H4C in Malaysia and Singapore. Thus, it could show that MCEO has no significant influence with firm performance in Malaysia and Singapore. This conclusion was similar with the past studies such as (Saidu, 2019).

Hypothesis 5

$H5_A$: Having a NOMID has no significant influence with firm performance (ROA) in Malaysia and Singapore.
$H5_B$: Having a NOMID has no significant influence with firm performance (ROE) in Malaysia and Singapore.
$H5_C$: Having a NOMID has no significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore support H5B and H5C. Thus, there was sufficient evidence to reject the null hypothesis of H5B and H5C. Nevertheless, the results from both countries rejected H5A. Therefore, there was lack of evidence to reject null hypothesis of H5A. Consequently, it could show that NOMID has no significant influence with firm performance in ROE and TOBIN'S Q in Malaysia and Singapore. This conclusion was similar with the past studies such as (Saidu, 2019).

Hypothesis 6

$H6_A$: Having a MC has a significant influence with firm performance (ROA) in Malaysia and Singapore.
$H6_B$: Having a MC has a significant influence with firm performance (ROE) in Malaysia and Singapore.
$H6_C$: Having a MC has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, both results of Malaysia and Singapore rejected H6A, H6B and H6C. Therefore, there was lack of evidence to reject null hypothesis of H6A, H6B and H6C. Besides, the results from MLR also indicated that it rejected H6A, H6B and H6C in Malaysia and Singapore.

Hence, it could show that MC has no significant influence with firm performance in Malaysia and Singapore. This conclusion was similar with the past studies such as (Saidu, 2019).

Hypothesis 7

$H7_A$: NODHPAQ has a significant influence with firm performance (ROA) in Malaysia and Singapore.
$H7_B$: NODHPAQ has a significant influence with firm performance (ROE) in Malaysia and Singapore.
$H7_C$: NODHPAQ has a significant influence with firm performance (Tobin's Q) in Malaysia and Singapore.

According to the panel data analysis results, results of Malaysia rejected H7A, H7B and H7C. Therefore, there was lack of evidence to reject null hypothesis of H7A, H7B and H7C. Hence, it could show that NODHPAQ has no significant influence with firm performance in Malaysia. Nonetheless, the results in Singapore support H7A. Thus, there was sufficient evidence to reject the null hypothesis of H7A. However, the results rejected H7B and H7C. Therefore, there was lack of evidence to reject null hypothesis of H7B and H7C. Besides, the MLR results also indicated that it rejected H7A, H7B and H7C in Malaysia and Singapore. Hence, it could show that NODHPAQ has no significant influence with firm performance in Malaysia while NODHPAQ has significant influence with the firm performance (ROA) in Singapore which supported by the past studies such as (Al-Janadi, Rahman, 2013; Esa, Zahari, 2016; Ahmad, J& Saad, 2013).

5.2 Summary of Test

5.2.1 Descriptive Analysis

The descriptive table describe the mean and standard deviation for the time frame of 6 years of the companies. The descriptive test and frequency table described the relationship between CG practices and Shariah- compliant companies' performance.

5.2.1.1 Dependent Variables

The descriptive statistics indicated how the company performance being influenced by the board characteristics. The mean for ROA in Malaysia decreased from 26.20 in 2013 to 20.44 in 2018 while the ROA in Singapore decreased from 7.06 in 2013 to 4.52 in 2018. Moreover, the mean for ROE in Malaysia dropped from 6.10 in 2013 to 3.83 in 2018 whereas in Singapore, ROE dramatically dropped from 28.62 in 2013 to 8.78 in 2018. The mean for Tobin's Q fluctuated from 8.46 in 2013 to 6.09 in 2018 in Malaysia, while in Singapore, it dropped from 1.50 in 2013 to 1.30 in 2018.

5.2.1.2 Independent Variables

The descriptive analysis showed that 50% of Shariah- compliant companies in Malaysia were practicing MCEO in 2013 and increased to 53.3% in 2018. However, the descriptive analysis reported that 6.7% of Shariah- compliant companies in Singapore were practicing MCEO in 2013 and decreased to 3.3% in 2018.

The descriptive analysis of MC indicated that 30% of Shariah- compliant companies in Malaysia were practicing MC in 2013 and slightly dropped to 23.3% in 2018. However, the descriptive analysis reported that 6.7% of

Shariah- compliant companies in Singapore were practicing MC in 2013 and decreased to 3.3% in 2018.

The mean for NOMD in Malaysia increased slightly from 3.77 in 2013 to 4.17 in 2018 while the NOMD in Singapore remained constant from 2013 to 2018. These presented that Malaysia begin to appoint more Muslim directors in the companies' management.

From the descriptive analysis of NONMD in Malaysia, the mean declined slightly from 5.73 in 2013 to 5.57 in 2018 whereas the mean in Singapore also decreased slightly from 10.07 in 2013 to 9.93 in 2018. These showed that the Shariah- compliant companies became more board diversify in the companies' management.

The descriptive analysis of BS concluded that the board size of Shariah-compliant companies in Malaysia and Singapore consist of 9 to 10 members. According to Oguz & Dincer, the recommended effective BS should be with the maximum 10 members.

The mean for NOMID in Shariah- compliant companies in Malaysia and Singapore were increased steadily. The mean in Malaysia rose from 2.03 in 2013 to 2.50 in 2018 while the mean in Singapore increased from 0.13 in 2013 to 0.17 in 2018.

The conspectus of mean of Malaysia and Singapore Shariah- compliant companies for NODHPAQ presented an increase from 2013 to 2018. In Malaysia, the mean grew from 1.06 in 2013 to 1.29 in 2018 whereas the mean in Singapore increased from 0.87 in 2013 to 0.98 in 2018. The increased in the result showed that the companies pay more attention on the qualification of the directors from an accounting aspect.

5.2.2 Inferential Analysis

5.2.2.1 Panel Data Analysis on the overall 6 Years Analysis

The 6 years observations of the panel data analysis do not support the relationship between corporate governance and Shariah- compliant companies' performance. The panel data analysis indicated that the independent variables (CG) were not significant in influencing the Malaysia and Singapore Shariah-compliant companies' firm performance within the 6 years period.

5.3 Discussion on Findings

The results presented that the board characteristics applied such as NOMD, NONMD, BS, MCEO, NOMID, MC and NODHPAQ did not influence the performance of Malaysia and Singapore Shariah compliant companies. The results were presented based on ROA, ROE, and TOBIN'S Q as the DVs.

The results in Malaysia and Singapore indicated that NOMD is not significant at 5% or 10% level and thus does not have influence company performance. The research findings were similar with the past studies from Zainal, Zulkifli& Saleh (2013).

The findings in Malaysia and Singapore presented that NONMD is not significant at 5% or 10% level and thus does not have influence company performance. The research results were similar with past studies from Apadore & Marjan (2013).

Moreover, the findings in Malaysia and Singapore presented that BS is not significant at 5% or 10% level and thus does not have influence company performance. The research findings were supported by the past studies from Chaghadari and Chaleshtori (2011).

The findings in Malaysia and Singapore indicated that MCEO is not significant at 5% or 10% level and thus does not have influence company performance. The research findings were consistent with the past studies from Saidu (2019).

The findings in Malaysia and Singapore presented that NOMID is not significant at 5% or 10% level and thus does not have influence company performance. The research findings were similar with past studies from Payal and Singh (2017); Fuzi, Halim and Julizaerma (2015).

The findings in Malaysia and Singapore indicated that MC is not significant at 5% or 10% level and thus does not have influence company performance. The research findings were similarly with the past studies from Saidu (2019).

Lastly, the findings in Malaysia presented that NODHPAQ is not significant at 5% or 10% level and thus does not have influence company performance. The results indicated that the NODHPAQ will not influence the company performance. However, the result in Singapore showed that NODHPAQ has significant influence with (ROA) at 10% which consistent with past studies from Al-Janadi, Rahman (2013); Esa, Zahari (2016); Ahmad, J& Saad (2013).

5.4 Limitations in Research

Limitations were faced while doing this research. First, there were only three DVs were applied as proxies to measure the companies' performance which were ROA, ROE and TOBIN'S Q. Moreover, there were lack of information accessibility for the data in Singapore where the list of companies for Singapore Shariah Index was not available through the SGX. There was also short time frame applied in this research which only six years started from 2013 to 2018. Besides, there were lack of pass studies based on the performance measurement of Shariah companies. Finally, the data collection

methods were only acquired through secondary method which were annual reports and Bloomberg.

5.5 Recommendations for Future Research

By referring to the limitations in this research, recommendations are given to the future research. The research might involve different types of performance measurement rather than ROE, ROA and Tobin's Q. Furthermore, the research time frame could be longer that up to 10 years to be observed. Besides, further studies on the comparisons of companies' performance based on the board characteristics are recommended. Lastly, both qualitative and quantitative research could be implemented for future research where the future researchers may distribute questionnaire and having interview with the top management to obtain more comprehensive results for their results.

5.6 Conclusion

In conclusion, this research has studied the board characteristics and company performance between Shariah- compliant companies in Malaysia and Singapore. Numerous past studies and literature were reviewed, data collected and EViews and SPSS software were adopted in this research in order to investigate if board characteristics influence the overall performance of Shariah- compliant companies from an Islamic perspective. The results from this study revealed that board characteristics do not have an influence on firm performance in Malaysia and Singapore's Shariah-compliant companies. Limitations in this research and recommendations for future research were included as useful insights for potential investors in Malaysia and Singapore.

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Appendix A

Results of Multiple Linear Regression Analysis

MLR Results for ROA

Malaysia	ROA					
	Multiple Linear Regression					
	2013	2014	2015	2016	2017	2018
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Constant	0.125	0.128	0.089	0.114	0.087	0.158
NOMD	0.910	0.578	0.616	0.630	0.720	0.889
NONMD	0.902	0.607	0.612	0.616	0.735	0.892
BS	0.923	0.616	0.556	0.598	0.742	0.939
MCEO	0.451	0.506	0.596	0.623	0.713	0.512
NOMID	0.987	0.838	0.921	0.958	0.815	0.642
MC	0.942	0.805	0.739	0.617	0.736	0.814
NODHPAQ	0.468	0.442	0.835	0.687	0.192	0.939

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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

Singapore	ROA					
	Multiple Linear Regression					
	2013	2014	2015	2016	2017	2018
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Constant	0.892	0.818	0.349	0.989	0.184	0.794
NOMD	0.711	0.470	0.567	0.958	0.961	0.486
NONMD	0.659	0.654	0.494	0.930	0.251	0.706
BS	0.829	0.785	0.514	0.963	0.393	0.769

MCEO	0.109	0.933	0.968	0.223	0.860	0.843
NOMID	0.866	0.672	0.320	0.861	0.781	0.341
MC	0.772	0.885	0.812	0.970	0.194	0.563
NODHPAQ	0.279	0.298	0.912	0.308	0.180	0.834

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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

MLR Results for ROE

Malaysia	**ROE**					
	Multiple Linear Regression					
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
	Sig.	**Sig.**	**Sig.**	**Sig.**	**Sig.**	**Sig.**
Constant	0.484	0.378	0.178	0.251	0.196	0.267
NOMD	0.863	0.753	0.488	0.645	0.841	0.603
NONMD	0.793	0.692	0.548	0.639	0.818	0.642
BS	0.755	0.660	0.489	0.627	0.841	0.623
MCEO	0.527	0.395	0.882	0.839	0.265	0.640
NOMID	0.789	0.517	0.700	0.573	0.880	0.494
MC	0.124	0.557	0.102	0.598	0.190	0.816
NODHPAQ	0.171	0.173	0.744	0.855	0.290	0.766

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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

Singapore	ROE					
	Multiple Linear Regression					
	2013	2014	2015	2016	2017	2018
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Constant	0.994	0.804	0.398	0.926	0.973	0.635
NOMD	0.986	0.963	0.881	0.978	0.846	0.495
NONMD	0.816	0.924	0.794	0.933	0.627	0.652
BS	0.888	0.988	0.795	0.868	0.723	0.746
MCEO	0.551	0.912	0.813	0.723	0.820	0.731
NOMID	0.719	0.965	0.813	0.986	0.943	0.629
MC	0.961	0.757	0.909	0.895	0.786	0.455
NODHPAQ	0.212	0.288	0.291	0.264	0.653	0.473

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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

MLR Results for TOBIN'S Q

Malaysia	TOBIN'S Q					
	Multiple Linear Regression					
	2013	2014	2015	2016	2017	2018
	Sig.	Sig.	Sig.	Sig.	Sig.	Sig.
Constant	0.016	0.018	0.037	0.015	0.025	0.074
NOMD	0.970	0.303	0.549	0.473	0.472	0.464
NONMD	0.964	0.329	0.524	0.444	0.508	0.486
BS	0.963	0.362	0.467	0.444	0.485	0.516
MCEO	0.159	0.185	0.390	0.335	0.528	0.179
NOMID	0.397	0.693	0.551	0.672	0.733	0.492

MC	0.582	0.612	0.404	0.170	0.493	0.750
NODHPAQ	0.918	0.859	0.595	0.538	0.139	0.417

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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

Singapore	**TOBIN'S Q**					
	Multiple Linear Regression					
	2013	**2014**	**2015**	**2016**	**2017**	**2018**
	Sig.	**Sig.**	**Sig.**	**Sig.**	**Sig.**	**Sig.**
Constant	0.958	0.721	0.131	0.333	0.625	0.387
NOMD	0.906	0.169	0.881	0.837	0.359	0.686
NONMD	0.733	0.405	0.583	0.632	0.452	0.678
BS	0.881	0.558	0.588	0.684	0.457	0.702
MCEO	0.403	0.425	0.870	0.766	0.431	0.457
NOMID	0.718	0.360	0.825	0.861	0.252	0.391
MC	0.863	0.529	0.782	0.816	0.300	0.678
NODHPAQ	0.235	0.409	0.522	0.306	0.150	0.470

Sig. = Significance

** Correlation is significant at the 0.1 level (2-tailed)

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