

OWNERSHIP STRUCTURE AND FIRM
PERFORMANCE IN MALAYSIA: IN TRADING
SERVICES SECTOR

BY

CHAN KOK WEI
CHONG SEW FONG
CHUAH CARRIE
TING CHI YAN

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DECLARATION

We hereby declared that:

- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing this research project.
- (4) The word count of this research report is 21395 words.

Name of Student:

Student ID:

Signature:

1. Chan Kok Wei

10ABB05622

2. Chong Sew Fong

10ABB06937

3. Chuah Carrie

10ABB00846

4. Ting Chi Yan

10ABB04651

Date:

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LIST OF ABBREVIATIONS

10MP	Tenth Malaysia Plan
GDP	Gross Domestic Product
E&E	Electrical and electronic
ROA	Return on Asset
ROE	Return on Equity
CEO	Chief Executive Officer
SOE	State-owned enterprise
CLRM	Classical Linear Regression Model
OLS	Ordinary Least Square
VIF	Variance Inflating Factor
AIC	Akaike Info Criterion
SIC	Schwarz Criterion
ARCH	Autoregressive Conditional Heteroscedasticity
CLT	Central Limit Theorem
DW	Durbin-Watson
JB	Jarque Bera
KSE	Korean Stock Exchange
SSE	Shanghai Stock Exchange
UK	United Kingdom

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PREFACE

This research paper is to be conduct upon the fulfillment of requirement for the course structure of Bachelor of Business Administration (HONS) Banking and Finance. Our supervisor on the project is Miss Chia Mei Si. The final year project is made solely by the authors yet it is based on the research of others and the resources are quoted as in references.

In this study, our main objective is to determine the relationship between ownership structure and firm performance in Malaysia. Moreover, we are more focus on our study into trading and services sector in Malaysia. Not only that, we zoom in our study in more focus on the relationship between managerial ownership structure with firm performance and also the relationship between non-managerial ownership structure with firm performance in Malaysia. In another words, we wanted to look into the result on whether or not different in ownership structure will bring any effect on the firm performance.

The most challenging things when we carrying this research is that we cannot obtain the full and complete report for the particular company. Due to this reason, we forced to take off the company that cannot obtain the complete information. In a nutshell, we strongly believe that the knowledge that we gain in this research will be useful for our future career.

ABSTRACT

Corporate governance is pay more attention than ever in today's context. There are global issues that cannot be neglected or it would affect the company performance badly if there are no any precaution actions were taken. For instance, Asian Financial Crisis that happen during 90's, U.S. mortgage Loan Crisis in 2008 until the recent event such as Euro Debt Crisis that happen in 2012. Company are aware of such incident will defer its growth particularly firm performance. Immerging of worldwide brands also add more competition to existing business that push the owner of company to put more effort in enhancing their management in every aspect. Success in corporate governance would definitely determine the performance of a company due to wise utilization of work force, supply chain management, manufacturing procedure and many more. It has proven to be an inevitable role to offer specific planning for company to follow in realizing best production and vision in hope of firm survival.

The objective of this research is to determine the relationship between ownership structure and firm performance in Malaysia in trading and services sector. The variables that included in this research are firm age, firm size, leverage, return on assets (ROA), return on equity (ROE) and Tobin's Q. 70 trading and services sector firms were selected and carefully analyzed to identify the relationship of ownership structure and firm performance by conducting a series of test in Eviews. Multiple Linear Regression is one example of techniques being implied in this research. The result and implications were explained details in conclusion of this study.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

In this first chapter of the study, the researcher will explain the background of firm performance mainly in trading and services sector that listed in Bursa Malaysia. The paper will also include a brief idea on managerial ownership and non-managerial ownership. Besides, this research will include the agency problem as well in the first chapter. Next, it will follow by the problem statement for the research in which how the ownership affect the performance of a firm in the trading services sector. Later on, research objectives of the study will be list in the chapter, follow by research question, hypothesis and significance of this study. Last will be the chapter layout and the conclusion as well.

1.1 Research Background

1.1.1 Performance of trading and services sector in Malaysia

Trading and services sector has become one of the important key elements in global economy development, it continues to grow vigorously and become a fastest growing sector in the world Gross Domestic Product (GDP). In Malaysia, there are around 1500 trading and services companies. Due to the global grow rapidly, and the advancement of technology used in the company core activates, it contribute to the acceleration of this sector, hence government are putting a greater emphasis on trading and services

sector in their country economics planning (Bryan, Ooi, & Christianna 2007). Therefore, there is become more concern about the ownership structure in the company in order to get higher firm performance and thus, lead to the improvement of the country's economics. Yusoff (2005) stated that Malaysia has gone through a rapid process of trade liberalization and globalization and the trade of import and export of USA, Japan and Singapore have greater impact towards the economic growth of Malaysia.

In the Tenth Malaysia Plan (10MP), Malaysia Prime Minister has focus on national key economics area that include palm oil & related product, oil & gas, wholesale & retail, financial services, education, tourism, electrical and electronic, information and communications technology, business services, private healthcare, agricultures and larger Kuala Lumpur (Tenth Malaysia Plan 2011-2015, 2010). Malaysian's companies provide services are gaining recognition among the global business community and a foothold in foreign countries from securing and completing projects ranging from highways to bridges.

Furthermore, Malaysia is an open economy that export account about 118% of the gross domestic product. According to Datuk Seri Mustapha Mohamed, Malaysian country is a relatively small domestic market, so the international trade is the one that can support the economic growth of the country. As can see in the figure 1.1 below, during the year 2008, the average of GDP annual growth rate of Malaysia is around 4.875%, which grow with constant. However, during the year 2009, Malaysia has undergone the lower growth rate, which is -7.6% because there was a global crisis in 2009 that affected the growth rate reduced around average -1.675. In year 2010, Malaysia GDP growth rate has recovered back to the normal rate and average of GDP annual growth rate is around 7.55%. In the year 2011, the average of GDP Malaysia is around 5.625%. To increase more the GDP growth rate, government will expand the Malaysia firm into export markets that can improve international branding of leading exporters and build capacity.

Figure 1.1: Malaysia GDP Growth Rate (2008-2012)

Source: Department of Statistics Malaysia

Besides, another trading is through import and export that can support the economic growth of the country. The total trade in Malaysia has a significantly increase by each year. As the diagram shown in figure 1.2 below, the total trade of import and export in Malaysia is around RM 1182.81 Billion and highest record prior to global recession at RM 143.21 Billion in year 2008. There was a financial crisis in year 2009 which affect the total trade decreases at RM 987.18 Billion. The total trade in the third quarter of 2009 was lower by 20.6% compared with same quarter last year. This is also affect Malaysia growth rate reduced due to decrease export of electrical and electronic products (E&E), jewellery and clothing, iron and steel products, crude petroleum. There are around RM 1167.65 Billion of the trade balance in year 2010 and RM 1268.78 Billion in year 2011 (The Official Portal of Malaysia External Trade Development Corporation, 2013). When comes to year 2012, there are significantly increase with RM 1.31 trillion.

Figure 1.2: Malaysia's Trade with the World (2000-2011)

Malaysia's Trade with the World (2000-2011)

Year	Total Exports (RM Billion)	Total Imports (RM Billion)	Total Trade (RM Billion)	Balance of Trade (RM Billion)
2000	373.27	311.46	684.73	61.81
2001	334.28	280.23	614.51	54.05
2002	357.43	303.09	660.52	54.34
2003	397.88	316.54	714.42	81.35
2004	481.25	399.63	880.89	81.62
2005	536.23	432.87	969.10	103.36
2006	589.24	478.15	1,067.39	111.09
2007	604.30	502.04	1,106.34	102.26
2008	663.01	519.80	1,182.82	143.21
2009	552.52	434.67	987.19	117.85
2010f	638.82	528.83	1,167.65	109.99
2011	694.55	574.23	1,268.78	120.32

Source: The official portal of Malaysia External Trade Development Corporation

Thus, the trading and services sector play an important role in Malaysia's economy, which will affect the country's gross domestic product (GDP). Therefore, the companies that are list in Bursa Malaysia are increase focusing in the corporate governance in order to improve their companies' return. This research was attempt to determine the relationship between ownership structure of companies with firm performance that are listed in Bursa Malaysia in trading and services sector and the firm's performance.

1.1.2 Managerial ownership

Managerial ownership is the accumulated shares owned by chief executive officers (CEO) included restricted shares but not included stock options and

indicated as percentage of firms total shares outstanding (Zhou, 2001) or the percentage of shares held by officers and directors (Salehi & Baezgar, 2011). It may reduce the agency costs because of the separation of control and ownership. Furthermore, Fahlenbrach and Stulz (2009) mention managerial ownership has costs for managers due to prevent them from holding a diversified portfolio and their money for consumption. When managerial ownership increases, it shows that volatility will decrease and hedging opportunities will increase connected with the development of financial market (Holderness, Kroszner & Sheehan, 2009).

Managerial ownership can define as manager whom has the power to take and make decision about the company strategies and policies (Chen & Yu, 2012). Managerial ownership has a positive effect and it increases up to 80% on firm performance. Gorton and Schmid (1999) also stated that when a firm performance decline will influence the shareholders due to the efficiency wages.

1.1.3 Non-Managerial ownership

In this research, the non-managerial categories other ownership rather than managerial ownership as non-managerial ownership for example, corporate governance, dispersed ownership, family firm ownership, ownership concentration and blockholders ownership.

Shleifer and Vishny (1997) stated that corporate governance is the method in which supplier of finance to corporations is guarantee that earning a profit on their investment in a company. However, a company can be includes their management, capital suppliers of debt holders, equity holders, board of director of each firm and stakeholders. Beside this, the corporate

governance systems are bringing trouble of weakened fundamentals and poor economic performance toward the crisis stricken countries at the year of 1997 (Kim, 2006).

Dispersed ownership is a shares owned by individuals which managed by institutions investor such as mutual fund and pension fund (Chen, Harford & Li, 2007). The ownership is widely dispersed which stand for there is no group or individual with voting rights or non-voting rights to control the management or increase profit maximization (Leech & Leahy, 1991). Dispersed ownership in the large companies have not proceeded to the point of eliminating all strong stock interests while the most common condition is that wide ownership of the bulk of the stock with a substantial minority held by a single interest (Means & Berle, 1932).

Family ownerships can classify as business group control that relate with one or more families (Majluf & Silva, 2008). A family firm is a firm that founding family members to hold a higher position which is Board of Director. The new start-up of family firm can increase employment and promote economic growth or technology progress (Zahra, 2005). A firm's goal and family's goals are control by a concentrated group of family members (Zahra, Hayton & Salvato, 2004). According to Jabeen and Shah (2011), the founding family will invest a huge portion of their personal wealth in their company and hold greater shares toward themselves. Mostly a family firm is better than the non-family firms are because they have a stronger family relationship toward their individuals but the governance bodies and management in these firms are less effective or lower standard (Martinez, Stohr & Quiroga, 2007). To be a successful firm, family member will manage their relationship become closely so that they can achieve their goal easily and pursue their strategies to their member to earning profit. In the Western Europe, founded family firm will continue to hold the equity stakes after they have retired from the management position (Burkart, Panunzi & Shleifer, 2003).

In U.S., ownership concentration refers to percentage of shares held by owner relative to total shareholding of firm (Ongore, 2011). According to Majluf and Silva (2008), ownership concentration can also define as the voting right of majority shareholder which the shareholders of that firm ability to vote for their director of the firm and this may affect a firm performance.

Blockholders ownership is the owner who has a larger amount of company shares or bonds. These owners are able to influence by the company who have the voting rights toward the owners. An individual or family must be a largest shareholder in the company who able to control shareholders and holding at least 20% of voting rights (Isakov & Weisskopf, 2009). Beside this, individuals must be a part of founding family or shaped the company with a long period of time (Isakov & Weisskopf, 2009). Blockholders can be a government as controlling shareholder in Switzerland with federal, regional or municipal.

1.1.4 Agency Problem

Managers and shareholder's interest is not fully aligned which can reduce the firm values (Ruan, Tian & Ma, 2011). At certain level, if the management owned the equity, the further of managerial ownership may provide the managers an adequate share to pursue their own benefits without worry for a decreasing in the firm value (Ruan, Tian & Ma, 2011).

The problem of corporate governance which guaranteed the flows of bigger amounts of capital to firms and actual repatriation of profits to providers of finance have solved by mostly the advanced market economies but this is

not mean that they are solved perfectly or the corporate governance mechanisms cannot be improved (Shleifer & Vishny, 1997).

The ownership concentration is through larger share holdings takeovers and finance which is a general way of control that helps most of the investors to get back their money. Major investors can solve the problems effectively but also inefficiently redistribute wealth from other investors toward them (Shleifer & Vishny, 1997). According to Edmans and Manso (2010) stated that traditional theories mention about ownership concentration is vital for effective governance in a company since there are only large investors have incentives to monitor the manager.

Considerable costs can lead a shareholder create an incentive contract that aligns the interest of manager with the interest shareholders so that to bear the costs of monitoring and controlling management a firm, a shareholder need to hold a large share of firm capital. Through this case, blockholders may act as agent to monitoring management and enjoying private benefit and influence the strategic direction of the company (Mourier, 2010). However, the conflict of interest may occur due to the blockholders not coincide with small shareholders (Mourier, 2010).

Shareholders are disperse to enforce value maximization; the company's assets are deploy to benefit managers rather than shareholders (Shleifer & Vishny, 1988). Drakos and Bekiris (2010) stated that the relationship between economic and ownership variables can cause an endogeneity problem because they investigated the effect on the value maximization process more with regard to the direction of the causality. Demsetz and Villalonga (2001) are aware of the need to find out the relationship between ownership structure and company's performance taking into consideration of not only the endogeneity problem but also different dimensions of ownership structures. Therefore, Demsetz (1983) argue that firms undergo

speedy may change a firm ownership structure toward their profitability. Beside this, most of the shareholders will manage well toward their firm performance by monitoring the completely firm management and searching information. However, it may not be occur when small shareholders hold dispersed property rights because the cost might be higher (Majluf & Silva, 2008).

Family firm is better than non-family firm is because they are same individual and has a stronger relationship toward the owner and manager but their management will be ineffective and lower level professionalism (Martinez, Stohr & Quiroga, 2007). Individual firms and family firms brought a negative impact to the firm performance that conflict appear which Villalonga & Amit, (2006) stated that if the large shareholders are family or individual, it related the larger incentives for expropriation and monitoring. However, the owner and manager conflict is reducing because large shareholders have larger incentives to control managers. Furthermore, Berle and Means (1932) said that the separation of ownership would get a conflict of interest problem between shareholders and manager. This is because ability of shareholders to control the completely firm managements will be less (Salehi & Baezegar, 2011).

Rose (2005) shows that there is exist an insufficient information among managers and shareholders which will formed moral hazard problem because the shareholders cannot identify whether a good performance is due to their afford or luck. Some of the shareholders and managers will rely on the data which dispersed ownership merged with a common law traditions. Usually a manager will appoint owners depends on their previous reputation and performance in order to increase shareholders value and company profitability.

The greater managerial ownership was benefit to shareholders due to can increase the firm performance. However, if the managerial ownership has a significant increase may affect it enable managers to eradicate themselves so that lower the firm valuation (Fahlenbrach & Stulz, 2009). Managerial ownership has costs for managers because it prevent them from holding diversifies portfolio and used their money for consumption (Fahlenbrach & Stulz, 2009). Beside this, Shleifer and Wolfenzon (2002) show that firm size is limited by the wealth of managers so that to prevent this happen, firms may use debt financing to solve the problem. Thus, when a debt financing was over use may cause a firm having risky and bankruptcy. Ownership concentration faced a problem toward the firm performance that the easy to fail into consideration investment preferences of owners and how they affect the firm strategies (Ongore, 2011).

1.2 Problem Statement

The connection between ownership structures on firm performance has become crucial and ongoing topic in the corporate world. The topic well contribution of Berle and Means (1932) theses, where they suggest that might be a negative correlation between diffuseness of shareholdings and firm performance. Although this research has been widely researched, however the empirical evidence has provided a mixed result. The Berle and Means (1932) view has been challenged by Demsetz (1983) where he argue that the ownership structure of a company may be used as endogenous result of decision that reflect the effect of shareholders. According to Demsetz and Villalonga (2001), they claimed that the conflict result might stem from differences aspect to the measurement of sample period, variable, estimating technique. In the Drakos and Bekiris (2010) thesis, they stated that the problems linked to corporate control are due to the ownership. To a certain degree, they believe that there will be a conflict between manager and owner of the company. Managers who is the first target are to maximize their own utility while

the owner of the company making decision process in favor of higher profit. Therefore, the main objective in their research is to find out the direction and the nature of systematic relationship between managerial ownership and firm performance by using a sample firm quoted in Athens Stock Exchange. However, the sample firm taken is not taking into consideration of Asian Country.

The structures of share ownership have a vital role in determine a firm's performance. It is because if there is widely dispersed of ownership, there is no individual with the voting right or the incentive to exercise and enforce profit maximization (Leech & Leahy, 1991). Therefore, a firm performance is affect by the managerial discretion to pursue other goals. However, the relationship between ownership structure and company performance remain a long-standing topic in corporate world. In the study of Alex, Ayse & Eason (2009) found that there is convex, concave and linear relationship between state ownership and company's performance in China's privatized firms. Another study from Oluwatayo & Amole (2012) was based on architectural firms. From the journals that have been review, most of the researchers have done about the relationship between corporate ownership structure and the firm performance in China, Italy, and Canada etc. However, to the best of knowledge, less research have been done on the Asian country. Thus, to further clarify the reliability of the past researcher, this research is carry out determine the relationship between ownership structure and firm performance in Malaysia based on trading and services sector that is listed in Bursa Malaysia.

1.3 Research Objective

According to Ongore (2011), the Kenya country has experienced trouble times about its corporate governance practices in the last two decades, causes in generally corporate profits across the economy. Besides, Gomez (2005) mention that over a

past decade however, witnessed significant transformation in corporate governance structure, leading to increase scholarly interest in the role of board of director in manage corporate performance. Therefore, this research is to investigate the relationship between ownership structure and firm's performance of listed firms in Malaysia mainly in trading and services sector.

1.3.1 General Objective

The main objective of this research is to determine the relationship between ownership structure and corporate performance from the firms listed in Bursa Malaysia in trading and services sector.

1.3.2 Specific Objective

- a) To determine whether the firm age was influence by managerial ownership structure.
- b) To determine whether the firm size was influence by managerial ownership structure.
- c) To identify whether debt to asset ratio (Leverage) was influence by managerial ownership structure.
- d) To investigate whether or not the return on asset was influence by managerial ownership structure.
- e) To examine whether the return on equity was influence by managerial ownership structure.

- f) To explore the relationship between Tobin's Q and the managerial ownership structure.
- g) To determine does the firm age was influence by non-managerial ownership structure.
- h) To determine does the firm size was influence by non-managerial ownership structure.
- i) To determine does debt to asset ratio (Leverage) was influence by non-managerial ownership structure.
- j) To investigate whether or not the return on asset was influence by non-managerial ownership structure.
- k) To examine does the return on equity was influence by non-managerial ownership structure.
- l) To explore the relationship between the Tobin's Q and non-managerial ownership structure.

1.4 Research Question

- a) Are the increase in firm age affect by the managerial ownership structure?
- b) Are the large firm size will affect by the managerial ownership structure?
- c) Are the higher debt to asset ratio (leverage) will affect by the managerial ownership structure?
- d) Are the return on asset affect by the managerial ownership structure?
- e) Are the return on equity affect by the managerial ownership structure?
- f) Are the firm performance as measured by Tobin's Q affect by the managerial ownership structure?

- g) Are the increase in firm age affect by the non-managerial ownership structure?
- h) Are the larger firm size affect by the non-managerial ownership structure?
- i) Are the higher debt to asset ratio (leverage) affect by the non-managerial ownership structure?
- j) Are the return on asset affect by the non-managerial ownership structure?
- k) Are the return on equity affect by the non-managerial ownership structure?
- l) Are the Tobin's Q affect by the non-managerial ownership structure?

1.5 Hypothesis of the study

This study was mainly determine the relationship between ownership structure and firm's performance in trading and services sectors in Malaysia. The variables that used in this study were firm age, firm size, leverage, return on assets (ROA), return on equity (ROE) and also Tobin's Q.

1.5.1 Managerial ownership structure affects the firm performance in trading and services sector in Malaysia

1.5.1.1 Firm Age

H₀: There is no significant relationship between managerial ownership structure and firm age

H₁: There is significant relationship between managerial ownership structure and firm age.

1.5.1.2 Firm Size

H₀: There is no significant relationship between managerial ownership structure and firm size.

H₁: There is significant relationship between managerial ownership structure and firm size

1.5.1.3 Leverage

H₀: There is no significant relationship between managerial ownership structure and leverage.

H₁: There is significant relationship between managerial ownership structure and leverage.

1.5.1.4 Return on Asset (ROA)

H₀: There is no significant relationship between managerial ownership structure and return of asset

H₁: There is significant relationship between managerial ownership structure and return of asset.

1.5.1.5 Return on Equity (ROE)

H₀: There is no significant relationship between managerial ownership structure and return of equity

H₁: There is significant relationship between managerial ownership structure and return of equity.

1.5.1.6 Tobin's Q

H₀: There is no significant relationship between managerial ownership structure and Tobin's Q.

H₁: There is significant relationship between managerial ownership structure and Tobin's Q.

1.5.2 Non-managerial ownership structure affects the firm performance in trading and services sectors in Malaysia

1.5.2.1 Firm Age

H₀: There is no significant relationship between non-managerial ownership structure and firm age.

H₁: There is significant relationship between non-managerial ownership structure and firm age

1.5.2.2 Firm Size

H₀: There is no significant relationship between non-managerial ownership structure and firm size.

H₁: There is significant relationship between non-managerial ownership structure and firm size

1.5.2.3 Leverage

H₀: There is no significant relationship between non-managerial ownership structure and leverage

H₁: There is significant relationship between non-managerial ownership structure and leverage

1.5.2.4 Return on Asset (ROA)

H₀: There is no significant relationship between non-managerial ownership structure and return of asset

H₁: There is significant relationship between non-managerial ownership structure and return of asset.

1.5.2.5 Return on Equity (ROE)

H₀: There is no significant relationship between non-managerial ownership structure and return of equity

H₁: There is significant relationship between non- managerial ownership structure and return of equity.

1.5.2.6 Tobin's Q

H₀: There is no significant relationship between non-managerial ownership structure and Tobin's Q.

H₁: There is significant relationship between non-managerial ownership structure and Tobin's Q.

1.6 Significance of the Study

In Malaysia, ownership structures for each of the company maybe various. Hence, this study focuses on how the ownership structures of a company affect their company performance. The significance of this study is to help the Malaysia's trading and services sector's firms to have a better understanding on how the ownership structure that will bring the most influence to the firm performance. This study will bring the firm to a higher-level growth by attracting the investor to invest into the company. Indirectly, the country's Gross Domestic Product (GDP) will increase as the increase of foreign direct investment due to the better performance of firm in Malaysia. Thus, this research was significant in helping the company in Malaysia to increase their company revenue and boost the country GDP.

Besides, the importance of conducting this study is to provide empirical evidence on the firm's performance based on their company ownership especially for the listed company in Malaysia mainly in trading and services sector. Hence, this study's outcome might help the company Board of Director to deal with their ownership structure in future. Essentially, this study will provide direction to future researcher in studying the ownership structure towards their performance of company in different sector of listed firm with the useful data and methodologies; it will be serving as a foundation for future research.

1.7 Chapter Layout

The layout of this study is as follows: -

Chapter 1 provide an overview of the research topic by explaining the background of the sector. It then will follow by the introduction of the study, research

background of the area, problem statement arises in the research paper, research objective of this study, research questions, general and specific objectives, hypothesis of the study, significance of study towards outsider, chapter layout and lastly is conclusion regarding the chapter 1.

Chapter 2 will be further explain the relationship of each of the variable and results based on the previous studies. Later on, the researcher will include the introduction, review of previous researcher literature, review of theoretical models, which created by previous researcher, previous theoretical framework, proposed theoretical conceptual framework, hypothesis development of this study and last but not least, the conclusion of chapter 2.

Chapter 3 will then demonstrates how the researcher carry out the collection of data method and analysis method. In here, things that include will be the introduction, research design for this research, data collection method that include secondary data, sampling design before carry out the test, research instrument, constructs measurement, data processing, data analysis for later chapter and ended with conclusion.

Chapter 4 will be the secondary data information that collected from Annual report from the selected companies and the information will be analyze in this chapter along with the further explanation using Eviews 7.

Chapter 5 will discuss about the summary of statistical analysis which done in previous chapter, discussion on the major findings after carry out the test, the implication for other users and limitation of the study in this paper, together with the recommendation for future researcher and the conclusion of the chapter.

1.8 Conclusion

The problem statement of this research, objectives in the study, research question have been cover in this early of the chapter. However, the answer of the research questions will be conduct in the next chapter of literature review. Other than that, the hypothesis of the study, significance of study, chapter layout also been covered in this chapter. In next chapter will be further elaborate the research that have been conducted to determine the relationship between ownership structure and firm performance in Malaysia.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

The researcher will include the review of relevant journals or articles based on the previous studies that have done by the previous researchers. The journals or articles that have reviews were related to the ownership structure and firm performances. Thus, the theoretical framework will be carried out in order to identify the significant relationship between ownership structure and firm's performance where the variables consist of firm age, firm size, debt to asset (leverage), return on asset (ROA), return on equity (ROE), and Tobin's Q that have been done by the past researchers.

2.1 Review of literature

2.1.1 Ownership Structure

By using a sample from Arab firms that are more than 300 firms representatively, Omran, Bolbol and Fatheldin (2008) stated that ownership structure does not have significant effect on their company performance although it is less concentrated ownership.

Besides, Kapopoulos and Lazaretou (2007) stated that the larger the ownership concentration owned by outside of the investors would cause a better performance. In other word, a lower profit of a firm requires a high-diffused ownership. Thus, the higher the degree of shares in shareholders, it leads effectively of management behavior and resulting of the better performance of a firm. This result was similar with the result that done by Drakos & Bekiris (2010) where they shows that high level of managerial ownership has a positive relationship with the firm's performance. The high level of managerial ownership will align the interest of external managers and shareholders in the firms. Thus, the larger shareholders will prefer to build the reputation of company so that it increases the value of company and reduces the agency problems. In addition to that, Florackis, Kostakis and Ozkan (2009) also represent that there are significant positive relationship between executive ownership structure and firm performance in U.K. firms during the period 2000-2003.

Silva and Majluf (2008) explained that due to the reason that family ownership will highly involve in management, so that it also will improve the company performance. Thus, the higher firm's performance is due to the family involvement in that company. Yen and Andre (2007) found out that high levels of ownership have the positive corporate performance of acquiring firms in English-origin countries other than the U.S. Other than that, In Western Europe, Maury (2006) show that family-controlled firms is more outperform than nonfamily control firms, which means passive family control firms does not have an affect on the profitability of their company from the sample of 1672 non-financial firms. This result indicate that family control reduce agency problems and increase the efficiency of the firms so that improve profitability of a firm.

In addtion, during the period of 1994-2000, Villalonga and Amit (2006) found that there is a better performance for family firms compared to non-family firms using a sample of publicly traded U.S. firms that listed in

Fortune 500 at least one year. This result further investigate by Bouzgarrou and Navatte (2013) and they shows that the firm's performance from family firms is better than the firm's performance from non-family firms by using a set of data from 1997 to 2006 on 239 French listed companies. Family firms have high level of control so it leads a higher operating performance. Then, Ben-Amar and Andre (2006) also examined the results by using a sample of 327 Canadian public companies over the 1998-2002 periods. They indicate that family firms can produce a larger positive return than non-family firms do. Beside this, Chang (2003) used a sample of group-affiliated public firms in Korea to determine the relationship between ownership structure and company's performance. He highlight that family portion of inside ownership has better performance to ensure more effective monitoring of managers.

In contrast, the results that was done by Perrini, Rossi and Rovetta (2008) were different. By using the data set of all companies traded on Italian market between the year 2000 to 2003, they point out that a superior firm performance was lead by the outside investors which have larger ownership concentration or inside shareholders. They verified that non-family control companies do perform well than family control companies.

Other than that, from the research of Barzegar and Babu (2008) using 50 companies that were list on the Tehran Stock Exchange during the year 2001 to 2003 showed that firms with diffused ownership have performed better than concentrated ownership. In theoretical perspective, Chen and Yu (2012) stated that the greater managerial ownership will increased incentive alignment.

Elyasiani and Jia (2010) found the evidence of the higher institutional shareholding does enhance firm performance. Stability of institutional

ownership will resulting better firm performance and it encourage institutional onwership to extend their shareholding in the future.

2.1.2 Firm Age

Firm age is measure as the natural logarithm of the number of year of the firm establishment (Arosa, Iturralde & Maseda, 2010). It also defined as the number of years separating the firm's creation from its privatization assets. Davis & Harveston (2002) show that well-established firm are more likely to combine information about international operations and conduct infrastructure to enter international markets. Mikkelson, Partch and Shah (1997) stated that firm age had a significant proportion of post listing performance (Moshirian, Nguyen & Tan, 2007). To new industries must have a long-term period so that Bernardo and Chowdhry (2002) stated that the younger firms have less opportunities and less capability to enter new industries. Firm age should have a positive relationship toward corporate diversification (Chen & Yu, 2012).

Brockmann and Simmonds (1997) examine that managerial ownership has a positive correlated with age because of level of experience that the manager's process. Amran and Ahmand (2010) found that firm age has a positively related with the firm performance due to the older firms operated in the business tend to has a higher firm value so that has a better firm performance.

The longer period of the firm has a stronger personal tie than the new industries. Therefore, Majumdar (1997) conclude that older firms have more profitable and less productivity because of superior management of the licensing process and operational reasons that to meet customer demand.

Beside this, older firms have more experience in the market and recognize by existing customers.

Kumar (2003) said that older firms have more experience on economic of scale so that they can enjoy superior performance than the younger firms. Therefore, Kumar (2003) concluded that firm age has a strong positive impact on firm performance because in the infant industries are trying existence of new product, by consumer may increase over the age of producing firm so that will lead a positive effect on firm performance. Not only that, infant industry's reputation might enhanced will lead to a positive impact on firm performance (Kumar, 2003).

The firm age has a negative impact toward firm performance due to the some firms are operating in more competitive environment (Moreno & Ortega-Argiles, 2009). A firm's age determines the experience and the knowledge of the firm accumulate in results to have a better management (Galende & De La Fuente, 2003). This imply that firm age has a positive relationship toward firm performance but Mansfield (1964) and Acs and Audretsch, (1991) stated that some of the research are unable to confirm any positive influence between firm age and performance.

2.1.3 Firm Size (Total Asset)

According to Maury (2006), he defined the firm size by measured the logarithm of the total assets for the company. This research use the firm size as one of the variable because want to capture the effect of the 'value-maximizing size of the firm'. In other words, the larger the firm size, it requires more investment from shareholders, so it also implied more diffuse ownership structure (Kapopoulos & Lazaretou, 2007).

Barzegar and Babu (2008) show that there are significant negative relationship between the firm's performance and the firm size at 90% level. This can be explain that the managers in those small companies have more power and control over the strategic and operation activities than the managers that worked in large companies. This result was consistent with Ng, Yuce and Chen (2009) where they examined that there are negative relationship between firm size and its performance from 4315 firms in China during 1996-2003 related to state ownership. Firm size is an important element to determine the result of firm's performance due to the larger the firm size, the more problem of agency costs, problem adapting to a new economic and more government bureaucracy.

Not only that, Kapopoulos and Lazaretou (2007) defined the firm size as book value of total assets and the result shows that there is negative and insignificant relationship between firm size and company's performance. However, the relationship between firm size and company's performance become significant when exclude utilities and financial institutions from all total samples size of firms. Bouzgarrou and Navatte (2013) also found the same result with Kapopoulos and Lazaretou (2007) where they investigated that firm size has negative significant impact on long-term performance of family size where they use a sample of 239 acquisitions undertaken by French listed companies within the period of January 1997 to December 2006.

Villalonga and Amit (2006) said that non-family firms are normally have bigger firm size. However, their result shows that the firm size is not significant with the ownership structure where family firms are higher growth than non-family firms on all Fortune-500 firms from the year 1994 to 2000.

Omran, Bolbol and Fatheldin (2008) said that the larger the size of a firm, the better the performance of the firms from Arab countries. This is because larger size firm lack the competition compared with small size firm so that it can outperform than small-size firms. Manufacturing firms are one of the examples of big size firm and it achieved better performance compared to financial institutions (small size firms). This result was consistent with Kumar (2003) where he also found that firm age and firm size have a positive effect on the firm performance.

2.1.4 Leverage

Maury (2006) measured the leverage by total debt divided by total assets which is consistent to the measurement done by (Wei & Varela, 2003). This measurement is also consistent with An, Jin and Simon (2006) where he measured the leverage by the ratio of total debt to equity. The researchers include the leverage as independent variable because high values of leverage should be related with lower fractions of shares owned by the larger shareholders, so the ownership structure of the firm will become more diffused (Kapopoulos & Lazaretou, 2007).

The research that done by Barzegar and Babu (2008) shows that the companies with higher debt to asset ratio (leverage) have lower returns. Therefore, there is significant inverse relationship between debt to asset ratio (leverage) and firm performance. This result were found consistent with the research that done by Kapopoulos and Lazaretou (2007) where they found that the yield evidence of inverse relationship between leverage on profitability. Due to the reason that some firms among the 175 listed Greek firms need to pay the interest rate of bank's borrowing, this debt-to-ratio reduce the firm's performance.

Ng, Yuce and Chen (2009) also have the same result of the higher the leverage will lead to a worse firm's performance in China due to the reason of most of China firms face the problem of debt servicing costs and heavy financial risk. Not only that, they also found that the leverage is insignificantly related to state ownership. Moreover, Bouzgarrou and Navatte (2013) also indicated that firm leverage is negatively related to long-term performance of family firms from a sample of 239 listed companies in French from 1997 to 2006.

Besides that, Silva and Majluf (2008) argue that non-family firms have less leverage compared to family firms and they also do have lower voting rights concentration. This means that there is higher leverage ratio for family firms compared to non-family firms. From a sample of publicly traded Chilean firms during the period 2000 to 2003, they found that within the 48.5% of family firms, the family has a positive effect on firm's performance as long as they have exceed 67.8% of the voting rights in company.

With an increase of insider ownership, the leverage of the following year will tend to decrease. This means that the higher of insider ownership, leverage ratio of the 12 newspaper companies that are publicly-traded during the year 1988 to 2000 of the following years will reduce (An, Jin & Simon, 2006).

2.1.5 Return on Asset (ROA)

Return on Assets (ROA) is calculated as $(\text{net income before preferred dividends}) + (\text{interest expense on debt} - \text{interest capitalized}) * (1 - \text{tax rate})$. Then, all divided by the last year's total assets times 100 (Maury, 2006). However, the calculation of ROA by Villalonga and Amit (2006) is different

from Maury (2006) where they defined the return on assets (ROA) by ratio of operating income after depreciation to total assets. This calculation was similar with An, Jin and Simon (2006) where she obtained the return on assets by dividing net profits over the total assets.

By using 304 of sample companies from different sectors of economy in Arab countries (Egypt, Jordan, Oman and Tunisia), Omran, Bolbol and Fatheldin (2008) were done the research and the results was shows that there is insignificant relationship between ownership structure and return on asset (ROA).

However, the research that done by Elyasiani and Jia (2010) show that there are mutual and significant positive relationship between institutional ownership and performance. Moreover, the studies that done by Barzegar and Babu (2008) also shows that there is a significant positive relationship between performance (ROA) and institutional share ownership. This studies was also consistent with the previous studies that done by Brickley, Ronald, and Clifford (1988) and McConnell and Servaes (1990). Moreover, Ng, Yuce and Chen (2009) explained that return on assets is significantly positive affected by the degree of state ownership in China. The results show that mixed control group has lower ROA performance than private control and state ownership has a positive relationship with firm's performance.

Besides, Maury (2006) provide an evidence on benefits with different ownership structure which is family control compared to nonfamily control. The result shows that the ROA of family control firms increase by about 16% compared to non-family control firms. This result can be explained that family management will affect the firm's profitability significantly. This results was in line with Ben-Amar and Andre (2006) where they also defined ownership structure as family or non-family control ownership structure. They reported that non-family firms generate less returns compared to

family firms. In other words, the performances of family control firms are better than non-family control firms from a set of 327-sample size in Canadian public companies over the 1998-2002 periods.

Similar with other researchers, Li, Moshirian, Nguyen and Tan (2007) define the ownership structure as CEO ownership in the firm and their result shows that ROA decrease more severe in low CEO ownership firms compared to high CEO ownership firms. This means that managerial ownership and firm performance has a positive and important relationship by a sample of Chinese State-owned enterprise (SOEs) privatized through the year of 1992 to 2000.

However, research that have done by An, Jin and Simon (2006) was contrast with the others researchers where they shows that institutional ownership brings negative impact on firm performance. They used return on assets (ROA) as a measurement of firm performance by using a sample of 12 publicly traded newspaper companies from 1988 to 2000.

2.1.6 Return on Equity (ROE)

The Return on Equity (ROE) is defined as net income before preferred dividends minus preferred dividend requirement all over by last year's common equity times 100 (Maury, 2006). However, the calculation of Return on Equity (ROE) by Perrini, Rossi and Rovetta (2008) is different from Maury (2006) where they were using the ratio of net income to net worth. This is similar with An, Jin and Simon (2006) where he obtained the return on equity by dividing the net profits over shareholder equity.

Chen, Hou and Lee (2012) examine that ROA and ROE can measure the profitability and quality of earnings of the firms. According to Omran, Bolbol and Fatheldin (2008) stated that neither ROA nor ROE is correlated with ownership concentration. This result was consistent with the findings of Demsetz and Lehn (1985) where they also found that there is insignificant relationship between ownership structure and firm performance. Not only that, they also found that the relationship between ROE and concentrated ownership is insignificant by using the top 50 companies that are listed in Tehran Stock Exchange during the year 2001 to 2003 in the country of Iran.

Maury (2006) shows that there is positive relationship between family control firm and the ROE. However, this result is insignificant compared to ROA. Valenti (2011) tested that firm with qualify directors have a positive relationship between ROE and firm performance due to the directors with their high qualification knowledge will have a better organization or improve the company structure.

An, Jin and Simon (2006) said that the increased institutional ownership will lead to a decrease in ROE given that other things hold constant. The result of return on assets yield the same with Return on Equity. This means that ROE and ROA was negatively associated with the previous year's institutional ownership.

In additional, Chen, Hou and Lee (2012) stated that when the insider managerial shareholders or directors shareholders increase, the firm performance of ROA and ROE have greater impact to increase. Furthermore, to have a better firm performance, the agency conflicts will be reduce when the insider managerial shareholders or directors shareholders increase.

2.1.7 Tobin's Q

According to Wei and Varela (2003), the technique used to calculate Tobin's Q is the sum of book value of long-term debt, market value of equity and book value of short-term debt is divided by the book value of total assets. This calculation is the same as the Lcxiere and Martinb (1997). The measurement of Tobin's Q as firm's performance was consistent with Barzegar and Babu (2008) where they also defined Tobin's Q as total sum of market value of equity and book value of debt over book value of assets.

Most of the studies like Demsetz and Lehn (1985), Barzegar and Babu (2008), Maury (2006) use Tobin's Q as a measurement of firm performance to identify the relationship between ownership structure and company's performance due to this ratio can show the ability and efficiency of the management team to generate income from their asset base.

According to the research that done by Barzegar and Babu (2003), they found that Tobin's Q and concentrated ownership have negative relationship that is significantly at 90% level.

On the other hand, market performance measure (Q-ratio) was affect by the ownership concentration since that they are positive and highly significant relationship and this result was found by Omran et al. (2008) in Arab countries. If a firm has a high reputational and low agency costs, the firm performance will be better. In addition to that, Kapopoulos and Lazaretou (2007) also implied that outside investor shareholdings positively affect the Tobin's Q ratio. In another word, the larger the ownership concentration owned by inside or outside investors, it would lead to a better of firm's performance in Greek in 2007. Cheung and Wei (2006) found an evidence

of that insider ownership and Tobin's Q are highly persistence since the presence of adjustment costs is significant in their relationship.

Moreover, based on the research that done by Maury (2006), it shows that the result of a good firm's performance is always controlled by family-controlled other than the firm that controlled by other types of owners. By using the data of western European firms, the results shows that, there is an increase about 7% of firm performance (Tobin's Q) for family control firms compared to nonfamily controlled firms.

By using a sample of publicly traded Chilean firms from the period of 2000 to 2003, Silva and Majluf (2008) confirm that the firm performance is based on ownership structure. Based on the research that they have done, they found that there are positive effect of firm institutional on firm's performance where the firm's performance as measure by Tobin's Q. Besides that, Li, Sun and Zou (2009) also suggested the relationship between multiple large shareholders has the significantly positive effect on Tobin's Q. They used a sample of 643 non-financial companies that were list on the Chinese stock exchanges to investigate the results.

In addition to that, Bouzgarrou and Navatte (2013) explained that the growth opportunities for family firms are higher than non-family firms. Thus, by using a sample of 239 listed companies in French from 1997 to 2006, both of them shows that the family firms has a high Tobin's Q and thus, a positive significant impact on its firm performance. Furthermore, the result is in line with Villalonga and Amit (2006) where they explained that Tobin's Q of family firms was higher than nonfamily firms Tobin's Q by using a set of data by all Fortune-500 firms from the year 1994 to 2000 to prove this statement.

2.2 Review of Relevant Theoretical Models

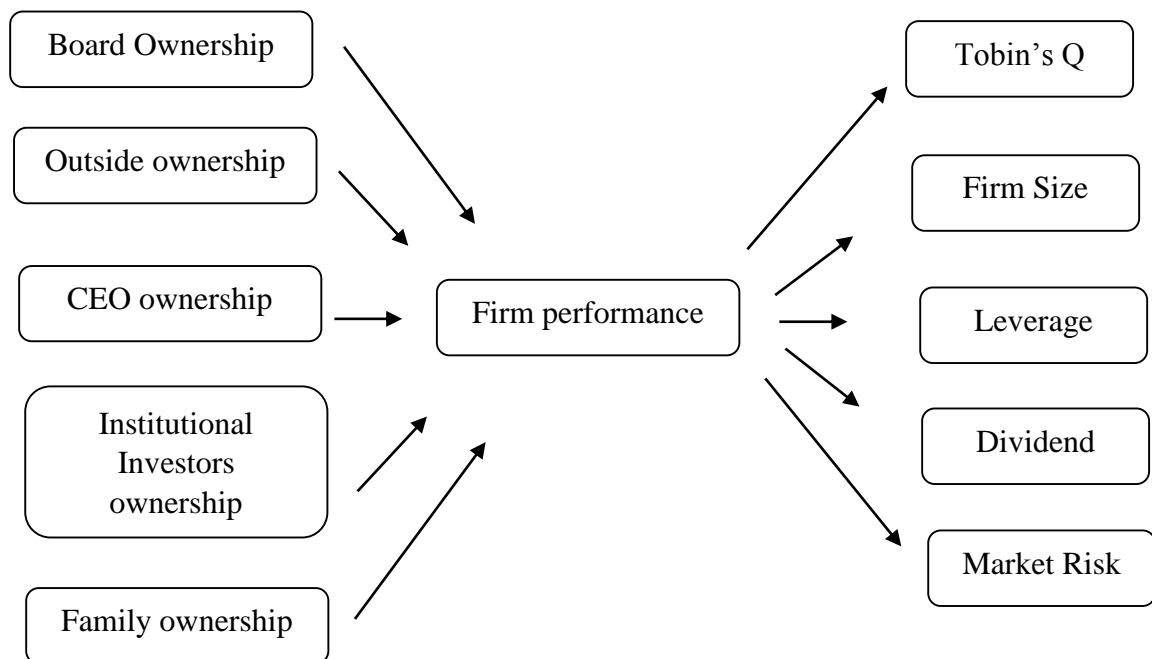
Based on the research by Morck, Shleifer and Vishny (1988), they found that there is non-monotonic relationship between managerial ownership and company performance, as defined by Tobin's Q. In addition to that, Drakos and F.V. (2010) found that when managerial ownership is use as the dependents variable. This will give a positive effect on the firm's value. This means that when the firm value is positive, this will also increase the level of managerial ownership in the company. Moreover, they also found that there is systematic relationship of ownership structure with the firm and the profitability. This result was consistent with Kapopoulos and Lazaretou (2007) where they also found that there is exists a linear positive relationship among the firm's profitability and the ownership structure of the company. Not only that, Ng, Yuce and Chen (2009) stated that higher state ownership firms are associated with higher performance of company due to the benefits from government support, or protection from industry subsidiaries.

According to Ng, Yuce and Chen (2009) stated that there is not only the ownership structure to influence company's performance but also ownership structure and the balance of power will influence the firm performance together. From the research that have been done by them, they found that the private ownership of the share has the high market to book value performance which means that there is high company performance when there is high proportion of shares own by the manager. Then, from the studied that done by Wei, Xie and Zhang (2004), they explained that there is an inverse relationship between the state ownership structure and firm valuation which means the higher state ownership structure cause higher agency costs and thus, cause the lower firm performance.

Based on the research by Drakos & Bekiris (2010) and Villalonga & Amit (2006), had using a sample of firms that was quote in the Athens Stock Exchange and they used it to determine the relationship between the managerial ownership and firm performance with endogenous variables. They include managerial ownership and

Tobin's Q as their endogenous variable. With the Drakos & Bekiris (2010) and Villalonga & Amit (2006) research, there are few variables that have used by them and also the past researchers like total assets, dividend payout ratio, firm size, standard return of monthly stock return and debt to asset ratio. The researcher found that research from them were more focus on the managerial ownership without ignoring the importance of other variables to a company ownership structure and using board ownership, institutional investor ownership, CEO ownership, free float and family ownership as their ownership variables. Their research indicate that when managerial ownership is used as endogenous, there will be a positive effect on firm performance.

Figure 2.1 shows the theoretical framework of ownership structure affect the firm's performance on Athens Stock Exchange between 2000 and 2004.

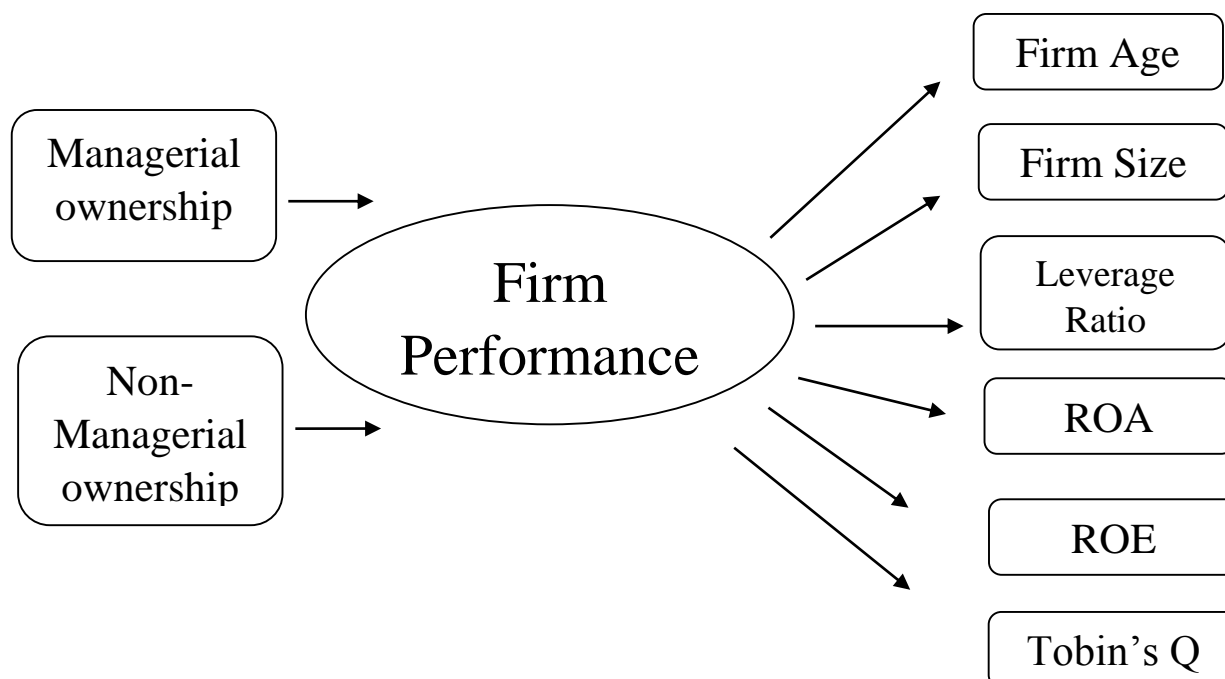


Source from:

Sources: Drakos, A., & Bekiris, F. (2010). Corporate performance, managerial ownership and endogeneity: A simultaneous equations analysis for the Athens stock exchange. *Research in International Business and Finance*, 24, 24-38.

2.3 Proposed Theoretical/Conceptual Framework

Figure 2.2 shows that the conceptual framework of ownership structure affect the firm's performance in trading and service sector in Malaysia



According to the research that have been done by Drakos & Bekiris (2010) as stated in chapter 2.3, this paper will use the variables from them to determine whether the firm performance is depends on the ownership structure in Malaysia's trading and services sectors. Besides, this study would also want to find out whether the managerial or non-managerial structure in the firm will affect the company performance in the same sector.

In the research model, there are two types of ownership structure which is managerial ownership and non-managerial ownership. The researcher would like to investigate whether there is exist any relationship between these two variables and other six variables which are firm age, firm size, leverage, return on assets (ROA),

return on equity (ROE) and also the Tobin's Q. This research proposed the framework which slightly different with the past research. Drakos & Bekiris (2010) includes the variables of dividend and market risk. However, this paper will include return on equity (ROE) and return on assets (ROA) instead of dividend and market risk. This is because according to Barzegar & Babu (2008) stated that the ratios of ROA and ROE are the most useful accounting ratios to measure the firm's profitability and the firm efficiency. Then, Villalonga & Amit (2006) also include firm age to their model in order to control in all of the regressions that follow. This is why this research include these three variables instead of dividend and market risk to determine whether these few variables have relationship with the ownership structure of the company.

2.4 Hypothesis Development

2.4.1 Managerial ownership structure

2.4.1.1 The relationship between ownership structure and firm age on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and firm age.

H₁: There is significant relationship between managerial ownership structure and firm age.

Hu & Zhou (2008) have use the firm age as one of the variable to determine the managerial ownership effect the performance. The sample that they used are from non-listed Chinese firms that contain 1500 Chinese firms from the year 1998 to 2000.

2.4.1.2 The relationship between ownership structure and firm size on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and firm size.

H₁: There is significant relationship between managerial ownership structure and firm size

Iannotta, Nocera & Sironi (2007) have use the total asset as one of the variable to determine the effect of total assets on company performance by using a set of sample that consist 181 large banks from 15 European countries from the year 1999 to 2004.

2.4.1.3 The relationship between ownership structure and leverage on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and debt to asset (leverage) ratio.

H₁: There is significant relationship between managerial ownership structure and debt to asset (leverage) ratio.

Barzegar & Babu (2008) using a sample of 50 companies that is listed on Tehran Stock Exchange within the year 2001 to 2003 to determine the relationship on both the debt to asset ratio (leverage) and the company performance.

2.4.1.4 The relationship between ownership structure and return on asset (ROA) on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and return of asset

H₁: There is significant relationship between managerial ownership structure and return of asset.

The performance variable was represent by return on assets to determine the relationship between family ownership and firm performance (Maury, 2006). She was using a sample from Western European corporations which consists of 1672 non financial firms to complete their research.

2.4.1.5 The relationship between ownership structure and return on equity (ROE) on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and return of equity

H₁: There is significant relationship between managerial ownership structure and return of equity.

Perrini, Rossi, & Rovetta (2008) were used return on equity in their model to measure company's performance. They are using a sample of 297 companies from all publicly traded Italian companies from the year 2000 to 2003. All the data they collected are come from Consob Database and the Datastream.

2.4.1.6 The relationship between ownership structure and Tobin's Q on trading and service sectors in Malaysia.

H₀: There is no significant relationship between managerial ownership structure and Tobin's Q.

H₁: There is significant relationship between managerial ownership structure and Tobin's Q.

Ng, Yuce & Chen (2009) also use Tobin's Q as one of the variable in represent the relative market value to determine whether or not there is relationship between Tobin's Q and the ownership structure of 4315 privatized Chinese firms

2.4.2 Non-Managerial Ownership Structure

2.4.2.1 The relationship between ownership structure and firm age on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and firm age.

H₁: There is significant relationship between non-managerial ownership structure and firm age

Hu and Zhou (2008) used firm age as independent variable to estimate the relationship between non-managerial ownership structure and firm performance with using a sample of non-listed Chinese firms in China.

2.4.2.2 The relationship between ownership structure and firm size on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and firm size.

H₁: There is significant relationship between non-managerial ownership structure and firm size

Florackis, Kostakis & Ozkan (2009) used firm size as independent variable to estimate the relationship between non-managerial ownership structure and firm performance a large sample of 1000 UK listed firms over the period 2000–2004.

2.4.2.3 The relationship between ownership structure and leverage on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and debt to asset (leverage) ratio.

H₁: There is significant relationship between non-managerial ownership structure and debt to asset (leverage) ratio.

Fahlenbrach & Stulz (2009) used leverage as independent variable to estimate the relationship between non-managerial ownership structure and firm performance with American firms from 1988 to 2003.

2.4.2.4 The relationship between ownership structure and return on asset (ROA) on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and return of asset

H₁: There is significant relationship between non-managerial ownership structure and return of asset.

Ben-Amar & Andre (2006) used return on asset as independent variable to determine the relationship between ownership structure and firm performance from a set of 327-sample size in Canadian public companies over the 1998-2002 periods.

2.4.2.5 The relationship between ownership structure and return on equity (ROE) on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and return on equity.

H₁: There is significant relationship between non-managerial ownership structure and return of equity.

Barzegar & Babu (2008) also used return on equity as independent variable to determine the relationship between ownership structure and firm performance by using the top 50 companies listed in Tehran Stock Exchange from year 2001 to 2003 in the country of Iran.

2.4.2.6 The relationship between ownership structure and Tobin's q on trading and service sectors in Malaysia.

H₀: There is no significant relationship between non-managerial ownership structure and Tobin's Q.

H₁: There is significant relationship between non-managerial ownership structure and Tobin's Q.

Li, Sun and Zou (2009) used Tobin's Q as independent variable to determine the relationship between ownership structure and firm performance of a sample of 643 non-financial companies, which listed on the Chinese stock exchanges.

2.5 Conclusion

This research consist of six independent variables which are firm age, firm size, leverage, return on assets, return on equity, and Tobin's Q. Based on the review of journal from past researcher that have done in this early chapter found that these variables have significant relationship with the ownership structure of the companies. Thus, in the next chapter will discuss about each indicators for each of the variables as well as the research methodology used in this study to determine the effect of firm performance by the ownership structure in trading and services sector in Malaysia

CHAPTER 3: METHODOLOGY

3.0 Introduction

In this early of the chapter will discuss about the research methodology applied to gather the data and information to perform this research project. The data was collect from Bursa Malaysia and annual reports for each of the company. Method employed to carry out this research project is E-views 7. Research design for this paper, data collection methods used, sampling design, research instrument, constructs measurement, data processing as well as data analysis will be conduct in this chapter as well.

3.1 Research Design

Before this research examine the types of research design, it is very important to understand the role and objective of this research design. Research design is the method or fundamental directions used to carry out this entire research project in order to solve the problem and find out the solution, data collection, and experimental design, statistical analyze and interpret the data (Congdon & Dunham, 1999). In order to finalize the data presentation, this paper will frame a question by developing an econometric equation to determine the entire research process.

The aim of this research is to determine the relationship between the ownership structure and firm's performance in trading and services sector that the companies

are list in Bursa Malaysia. From this research, a quantitative research is found to be more available because it can obtained from annual report of each selected companies. Quantity research is mathematical or numerical data and manipulation of observation, which collected in order to explain the phenomena and it could analyze by using mathematical method (Aliaga & Gunderson, 2002). Therefore, quantitative research plays an important role in emphasize on methodology, procedure and statistical measures of validity. It also relies on the measurement and analysis of statistical data to produce quantifiable conclusion.

In this research, the researcher acquire annual report of 70 companies in trading and services sector in Malaysia to find out their managerial or non-managerial ownership, firm age, firm size and to calculate their leverage, return on asset, return on equity, and Tobin's Q. All these data represent dependent and independent variables.

3.2 Data Collection Methods

Two ways of data collection methods in which include primary data and secondary data. In this research, the researcher are using secondary data to determine the relationship between the ownership structure and firm performance in trading and services sector. In this study, quantitative data such as balance sheet report and profit and loss report were collected. The researcher collected a secondary data from the annual report on the listed company in trading and services sector in Malaysia. Moreover, the data that used for this research project is cross-sectional data where there are 70 companies that are from annual report of each of the companies that are listed in Bursa Malaysia within the year from 2008 to 2012. Cross-sectional data is the observations from a sample that gather at the same time or in the same period (Biorn, 2013).

3.2.1 Secondary Data

Secondary data was collect to analyze and meet the requirement of the various research objectives. In this study, a literature review was provide to present the relationship between the independent and dependent variable. While the dependent variable is ownership structure and the independent variable consists of firm age, firm size, leverage, return on asset (ROA), return on equity (ROE) and Tobin's Q. The main sources of secondary data for this study are taken from articles, online information and journals, which are relevant to explain the factors affecting ownership of a company. After the researcher collect data from secondary resources from year 2008 to year 2012, and then manually calculate some of the independent variable.

3.3 Sampling Design

3.3.1 Target Population

Target population refers to researchers found out the information, object or elements that meet the research objective and deduction (Malhotra & Peterson, 2006). In this study, the target population is the trading and services sector firms that were listed in Bursa Malaysia. There are total 70 of trading and services sector firms that listed in Bursa Malaysia have been chosen as target for this research paper due to their availability of data to examine how the ownership structure affect the firm performance.

3.3.2 Sampling Technique

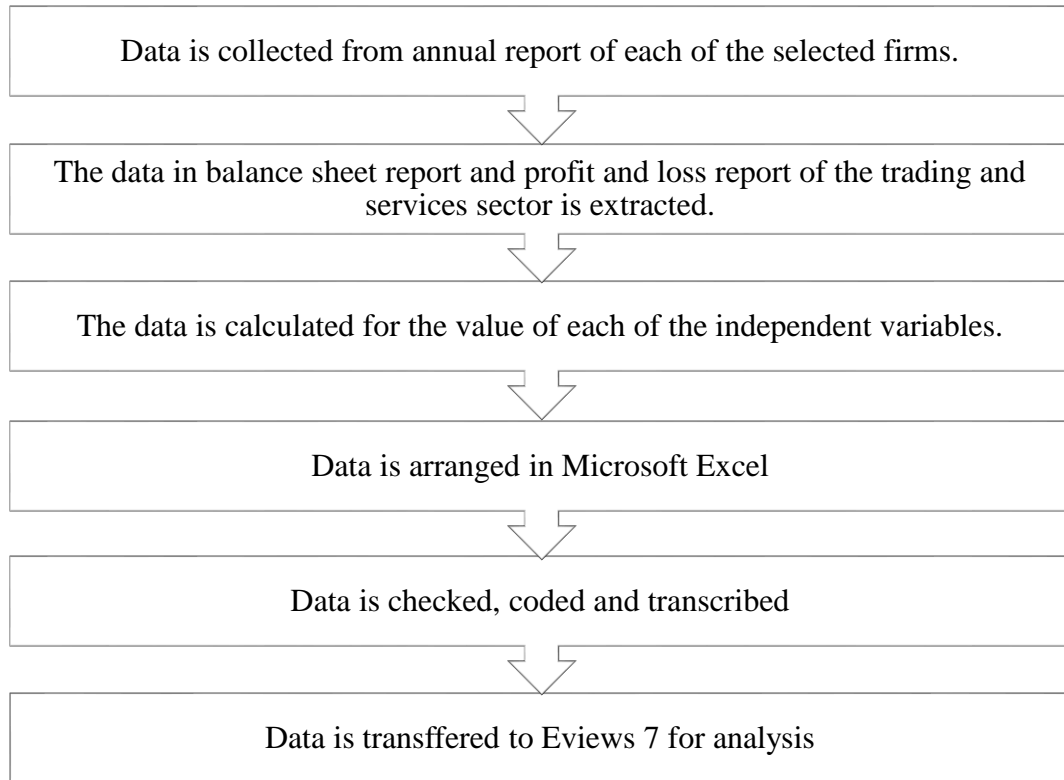
The firms are select from all the listed firms in Bursa Malaysia main market. This research project used simple random sampling techniques when selecting the listed firms of trading and services sector that listed in Bursa Malaysia.

3.3.3 Sampling Size

The meaning of sampling size is the number of units in a population is use to be studied. 70 trading and services sector firms from year 2008 to 2012 have been chosen to use as sample in this research project. This means the sample size is 350.

3.4 Data Processing

Figure 3.1: Data processing chart



Sources: Developed for the research

The above flow chart showed that the data processing of this research project. Firstly, the data of balance sheet report and profit and loss report of trading and services sector that listed in Bursa Malaysia is collect from annual report of each selected firms. The following step is extracted some useful data from balance sheet report, cash flow statement report, key accounts ratio report and profit and loss report. After that, the data calculated for the value of each independent variable and arranged in Microsoft Excel. Lastly, the data is check, coded and transcribed in order to avoid any errors before transferring to E-views 7 for data analysis.

3.5 Data Analysis

The data collected will transfer to E-views 7 for data analysis. E-views 7 is a popular software packages and it was use by previous researches to run the estimated data by multiple regressions model.

3.5.1 Multiple linear regressions model

Multiple linear regressions model is an extension from simple linear regression model. Simple linear regression model is to contain dependent variable (Y) and only one independent variable (X) however multiple linear regressions model contains one dependent variable (Y) and two or more independent variables (X) in an equation (Tranmer and Elliot, n.d.). Since this research project contain more than one independent variable, multiple linear regressions model is more suitable to find out the relationship between the ownership structure and firm performance. In order to obtain an accurate estimation in this research, six variables are add into the estimated model. The equation of the model as below:

$$\hat{Y} = \hat{\beta}_0 + \hat{\beta}_1 \text{LOGX}_1 + \hat{\beta}_2 \text{LOGX}_2 + \hat{\beta}_3 X_3 + \hat{\beta}_4 X_4 + \hat{\beta}_5 X_5 + \hat{\beta}_6 X_6$$

\hat{Y} refers to ownership structure of the trading and services sector that listed in Bursa Malaysia, $\hat{\beta}_0$ is the coefficient used to explain the rate it will affect firm performance. X_1 refers to firm age while X_2 refers to firm size, X_3 refers to leverage while X_4 refers to return on asset (ROA). X_5 refers to return on equity (ROE) whereas X_6 refers to Tobin's Q of each firm selected.

According to Brant (2007), one of the assumption of Classical Linear Regression Model (CLRM) point out that there is no relationship between

each of the parameters (β). If one of the parameter correlated with other, it will occur multicollinearity problem and bring bias observation to the researchers.

Ordinary least squares (OLS) estimator is the most basic estimation tool used by researchers in econometrics. OLS is a statistical method that uses to estimate the value of unknown parameters of the multiple linear regressions model that stated at above (Hayashi, 2000).

3.5.2 Multicollinearity

Multicollinearity occurs when the independent variables (X) in the model are correlated and has relationship with one another (Maddala, 2001). When the independent variables are highly inter-correlated, it may cause to very high standard errors, or low t-values and thus leading to wide confidence intervals for the parameters in the equation. The analysis of the regression will not be reliable and coefficients may not be estimate correctly.

There are different types of methods to detect multicollinearity (Gujarati and Porter, 2009). Firstly, multicollinearity problem can be detect by comparing the expected sign of independent variables in the model with prior expectation. If there are different expected sign of independent variables in the model and prior expectation there is suspect multicollinearity occur. Secondly, if the researchers find out the result of correlation between two variables to be more than 80% by using computing Pearson correlation, there may occur multicollinearity problem. This method is use in this research method. Lastly, if the model has multicollinearity problem, it consists of high R-square but only a few significant or no significant

independent variables and there is high-pair wise correlation between two independent variables.

If the multicollinearity is detected, Variance Inflating Factor (VIF) will be conducted in this research project. VIF can indicate how serious is the multicollinearity and its formula is $1 / (1 - R_{x1, x2}^2)$. A higher VIF caused by high pair wise correlation between two independent variables ($\text{Corr}(x1, x2) > 0.1$). There is no multicollinearity problem when VIF equal to 1. There is serious problem when VIF larger or equal to 10. There is not serious multicollinearity problem when VIF less than 10 and the model still can be consider. There is perfect multicollinearity problem when VIF equal to infinity. Table below is the interpretation of different level of VIF.

Interpretation of different level of VIF

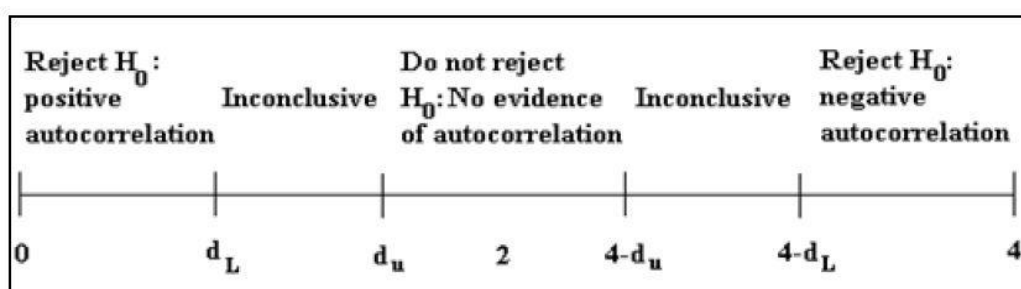
$VIF \geq 10$	Serious multicollinearity problem
$VIF < 10$	Multicollinearity problem not serious
$VIF = 1$	No multicollinearity problem
$VIF = \infty$	Perfect multicollinearity problem

3.5.3 Autocorrelation

Autocorrelation problem happens when error term at the period of t has relationship with the error term at period before t (Gujarati and Porter, 2009). It usually occurred in a time series data due to the importance of the sequence of the period. There are different types of methods to detect autocorrelation problem. In this research, the researcher will use the Durbin-Watson Test (DW).

It has positive autocorrelation problem if the result of DW test is $d < d_u$ or closer to 0 and it need to reject null hypothesis. If the result of DW test is between $d > d_L$ or closer to 4, it has negative autocorrelation so also need to reject null hypothesis. However, if the result is close to 2, the test is no autocorrelation problem so do not reject null hypothesis. If the result falls to other number, the test is inconclusive. If there is autocorrelation problem, Ordinary Least-Squares (OLS) are found inefficient.

Figure 3.2: Durbin-Watson Decision Rule



H_0 : The model has no autocorrelation problem

H_1 : The model has autocorrelation problem

Decision rule: Reject the H_0 if p-value is less than significant level. Otherwise, do not reject the H_0 .

If the null hypothesis is reject, then there is sufficient evidence to conclude that the model has autocorrelation problem.

Once reject the null hypothesis in the DW test, the researcher need to be further confirm the existence of autocorrelation problem by using Breusch-Godfrey Serial Correlation LM Test. Breusch-Godfrey Serial Correlation LM Test is used to determine higher order autocorrelation after Durbin-Watson test for first order autocorrelation (Rois, Basak, Rahman, and Majumder, 2012). Breusch-Godfrey Serial Correlation LM Test usually allow to test the stochastic regressors for example lagged values of the

dependent variable, higher order autoregressive processes and also single or higher order moving average processes.

Before conduct Breusch-Godfrey Serial Correlation LM Test, minimum lag length based on the minimum value of AIC (Akaike Info Criterion) and SIC (Schwarz Criterion) need to be found out. The null hypothesis of this test is there is no serial correlation whereas the alternative hypothesis is there is serial correlation. Decision rule is rejecting the H_0 if p-value is less than significant level. Otherwise, do not reject the H_0 .

H_0 : The model has no serial autocorrelation problem

H_1 : The model has serial autocorrelation problem

Decision rule: Reject the H_0 if p-value is less than significant level. Otherwise, do not reject the H_0 .

If the null hypothesis is reject, there is sufficient evidence to conclude that the model has autocorrelation problem.

If still reject null hypothesis, Newey-West test will be conduct to tolerance the autocorrelation problem. Newey-West test is use to test for unknown forms of autocorrelation as long as number of lags is allowed to increase with number of observations or data (Newey & West, 1987).

3.5.4 Heteroscedasticity

Heteroscedasticity problem happens when the variance of error term is not constant across the number of observations (Gujarati & Porter, 2009). ARCH (Autoregressive Conditional Heteroscedasticity) test is a popular test,

which used to test heteroscedasticity problem. The properties of ARCH test is misspecified conditional include omitted variables, structural change and parameter instability (Lumsdaine & Ng, 1999). ARCH test also need to find out the lowest value of lag length based on the minimum value of AIC (Akaike Info Criterion) and SIC (Schwarz Criterion). The null hypothesis of this test is there is no heteroscedasticity problem in the model whereas the alternative hypothesis is there is heteroscedasticity problem in the model. Decision rule is rejecting the H_0 if p-value is less than significant level. Otherwise, do not reject the H_0 . A model needs to avoid heteroscedasticity problem in order to obtain a precise result. A hypothesis test is carry out by using Eviews and p-value is obtain to detect heteroscedasticity problem. The model does not have heteroscedasticity problem if they obtained p-value more than 10% significant level.

H_0 : The model has no heteroscedasticity problem

H_1 : The model has heteroscedasticity problem

Decision rule: Reject the H_0 if p-value is less than significant level. Otherwise, do not reject the H_0 .

If the null hypothesis is reject, there is sufficient evidence to conclude that the model has heteroscedasticity problem.

If heteroscedasticity problem is detect, this research will continue to conduct another two tests include the Glejser test and Breusch-Pagan-Godfrey test to further existence of heteroscedasticity problem. Glejser test is popular test for heteroscedasticity (Glejser, 1969). The effect of Glejser test based on the presence of skewed error distributions (Furno, 2005). Breusch-pagon-godfrey test is very similar to White-Heteroscedasticity test and this test is use to check if certain variables cause heteroscedasticity problem occur.

However, if above three test are show the same result that the model have

heteroscedasticity problem, White-Heteroscedasticity test is used to tolerance this problem of an unknown form. White-Heteroscedasticity test is a common test and use Eviews to run it (White, 1980). This test easily to implement since does not need the observations with respect to the independent variable caused heteroscedasticity and does not rely on normally assumption (Gujarati & Porter, 2009).

3.5.5 Normality of the Error Term

The classical normal linear regression model (CLRM) assumes that the error term (μ) is normally distributed when there are uncorrelated and independently between two variables (Chen, 2003). In other word, the mean of residual from different model being zero since positive error term will offset the negative error term. The normality assumption of the large sample size model may not be very significant compared with small sample size model.

Moreover, there are two ways to examine normality of the error term. The first way to examine normality of the error term is through informal way by using scatter plot or line chart. Another way to detect normality of the error term is through the formal way, which is Jarque-Bera (JB) test. JB test is choose for this research project and it is a test that popular and wisely used by researchers (Bai & Ng, 2005). In order to find out JB test statistic value, it needs the value of skewness and kurtosis in the model. Besides that, JB p-value also can help JB test to get the result.

H₀: The error term are normally distributed

H₁: The error term are not normally distributed

Decision rule: Reject the H_0 if p-value for Jarque-Bera statistic is less than significant level. Otherwise, do not reject the H_0 .

If the null hypothesis is reject, there is sufficient evidence to conclude that the error terms are not normally distributed.

3.5.6 F-Test Statistic

F-test statistic is use to test for the overall significance of estimated regression model based on F distribution. F-test statistic is use to evaluate multiple parameters in one model and test the null that all of the coefficients are equal to zero (Blackwell, 2008). Moreover, this statistical test implements to evaluate whether model is correctly attach a set of data and helps to determine the behavior of population based on sample data. The null hypothesis of F-Test statistic is all of the coefficients are equal to zero. However, the alternative hypothesis is either one of the coefficient is not equals to zero. The significance level is set at 1%, 5% or 10% significant level. If the P-value is less than 0.01, 0.05 or 0.1, the null hypothesis will be rejected and conclude that the model is significant.

3.5.7 T-Test Statistic

T-test statistic is use to determine the means of the variables between two independent variables (Lucey, 2002). T-test also used to test the significance of individually variables. It also determine the chance of proposed sample to happen a desired event. The assumption of t-test is the samples are randomly and with no bias choose from population which is normally distributed and has unknown population variances (Park, 2009). The null hypothesis of t-test statistic is all of the coefficients are equal to zero.

However, the alternative hypothesis is the coefficient is not equal to zero. The significance level is set at 1%, 5% or 10% significant level. If the P-value is less than 0.01, 0.05 or 0.1, the null hypothesis will be rejected and conclude that the model is significant.

3.6 Conclusion

In this chapter, the researcher examined and discussed about the research design, data collection methods, sampling design, research instrument, and operational definitions of constructs, measurement scaled, data processing as well as data analysis. The results of the tests will be discuss in the following chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

In this chapter, the researcher will be focus on the analysis of data. The data extracted were obtain from annual report for each of the companies. As stated in chapter 3, after obtain the data, the data will be analyze using statistical software, Eviews7. Further in this section, relevant diagnostic testing to identify for any presence of econometric problems will be carry out using Eviews 7 as well. Eviews 7 is reliable to provide an accurate output in analyzing econometric problem such as multicollinearity, heteroskedasticity, and autocorrelation.

4.1 Multiple Regression Model

4.1.1 Managerial Ownership Model

Table 4.1: Managerial Ownership Model

$\hat{Y} = \hat{\beta}_1 + \hat{\beta}_2 LOGX_2 + \hat{\beta}_3 LOGX_3 + \hat{\beta}_4 X_4 + \hat{\beta}_5 X_5 + \hat{\beta}_6 X_6 + \hat{\beta}_7 X_7$							
$\hat{Y} = 0.7194 - 0.0252X_2 - 0.0789X_3 - 0.2359X_4 - 0.0277X_5 + 0.0116X_6 + 0.1812X_7$							
se:	0.7194	0.0722	0.0310	0.0767	0.0544	0.0219	0.1371
t:	2.2343	-0.3493	-2.5454	-3.0763	-0.5082	0.5328	1.3217
P:	0.0261	0.7271	0.0114	0.0023	0.6116	0.5945	0.1872
$R^2 = 0.0770$	$\overline{R^2} = 0.0609$		d.f = 350				
F-statistic = 4.77330							

Where se = standard error, t = t-statistic, p = probability, d.f. = degree of freedom

In appendix 3, clearly stated that Y = Managerial Ownership, X_2 = firm age, X_3 = firm size, X_4 = leverage, X_5 = Return on Asset, X_6 = Return on Equity, X_7 = Tobin's Q. According to table 4.1, the first independent variable is the firm age, and the variable after conducting the test found that firm age and the managerial ownership have a negative relationship. The second independent variable will be the firm size. The firm size also has a negative relationship with managerial ownership. Continue with the leverage, it has a negative relationship with the managerial ownership. Return on asset is negatively related with managerial ownership as well. However, for return on equity it has a positive relationship with the managerial ownership. The last independent variable will be the Tobin's Q, it also has a positive relationship with the managerial ownership.

4.1.2 Non-Managerial Ownership Model

Table 4.2: Non-Managerial Ownership

$\hat{Y} = \hat{\beta}_1 + \hat{\beta}_2 LOGX_2 + \hat{\beta}_3 LOGX_3 + \hat{\beta}_4 X_4 + \hat{\beta}_5 X_5 + \hat{\beta}_6 X_6 + \hat{\beta}_7 X_7$							
$\hat{Y} = 0.2806 + 0.0252X_2 + 0.0789X_3 + 0.2359X_4 + 0.0277X_5 - 0.0117X_6 - 0.1812X_7$							
se:	0.3220	0.0722	0.0310	0.0767	0.0544	0.0219	0.1371
t:	2.2343	0.3493	2.5454	3.0763	0.5082	-0.5328	-1.3217
p:	0.3840	0.7271	0.0114	0.0023	0.6116	0.5945	0.1872
$R^2 = 0.0770$	$\overline{R^2} = 0.0609$		d.f = 350				
F-statistic = 4.77330							

Where se = standard error, t = t-statistic, p = probability, d.f. = degree of freedom

In appendix 3, stated that Y = Non-Managerial Ownership , X₂ = Firm age, X₃ = Firm size, X₄ = Leverage, X₅ = Return on Asset, X₆ = Return on Equity, X₇ = Tobin's Q. From table 4.2, the first variable, which is firm age, has a positive relationship with non-managerial ownership. The firm size has a positive relationship between non-managerial ownership as well. Continue with leverage, it has a positive relationship in non-managerial ownership. Return on asset has a positive relationship in non-managerial ownership; however, for the return on equity, it has a negative relationship in non-managerial ownership. Lastly is the Tobin's Q is also has a negative relationship in non-managerial ownership.

4.2 Scale Measurement

4.2.1 Multicollinearity

Table 4.3: Correlation of variable

	MAN_1	LOG_FA	LOG_AS	LEV	ROA	ROE	TQ
MAN_1	1.000000	0.092524	0.211037	0.175881	0.045955	0.022382	0.081801
LOG_FA	0.092524	1.000000	0.317741	0.120505	0.028933	0.053290	0.028675
LOG_AS	0.211037	0.317741	1.000000	0.053840	0.151346	0.008451	0.360001
LEV	0.175881	0.120505	0.053840	1.000000	0.512132	0.271835	0.268144
ROA	0.045955	0.028933	0.151346	0.512132	1.000000	0.148783	0.009109
ROE	0.022382	0.053290	0.008451	0.271835	0.148783	1.000000	0.012692
TQ	0.081801	0.028675	0.360001	0.268144	0.009109	0.012692	1.000000

This research examine the existence of multicollinearity problem by using Pearson's correlation analysis. Table 4.3 shows that the Pearson correlation that is computed by Eviews to check for multicollinearity problem between each pair of the independent variable. Based on the result of correlation analysis for each pair of variable in table above, it can be see that there is no serious multicollinearity problem for all pair of independent variable because all the values are below the benchmark of 0.80 of serious multicollinearity (Gujarati & Porter, 2009). However, this research also use the variance inflation factor (VIF) to find the model is perfect multicollinearity or imperfect multicollinearity. If the VIF is more than 10, this means that there is high multicollinearity problem. However, if the VIF is less than 10, this means that there is low multicollinearity problem exist. The result shows in Table 4.5 shows that there is low multicollinearity problem in the model. In this both Pearson correlation and VIF test shows that, the model has a low

multicollinearity problem. Hence, the researcher can conclude that there is no serious multicollinearity problem occurs.

Table 4.4: R² in auxiliary model

	LOG_FA	LOG_ASS	LEV	ROA	ROE	TQ
LOG_FA	1	0.100959	0.014522	0.000837	0.002840	0.000822
LOG_ASS	0.100959	1	0.002899	0.022906	0.000071	0.129601
LEV	0.014522	0.002899	1	0.262279	0.073894	0.071901
ROA	0.000837	0.022906	0.262279	1	0.022136	0.000083
ROE	0.002840	0.000071	0.073894	0.022136	1	0.000161
TQ	0.000822	0.129601	0.071901	0.000083	0.000161	1

Table 4.5: Variance Inflation Factor (VIF)

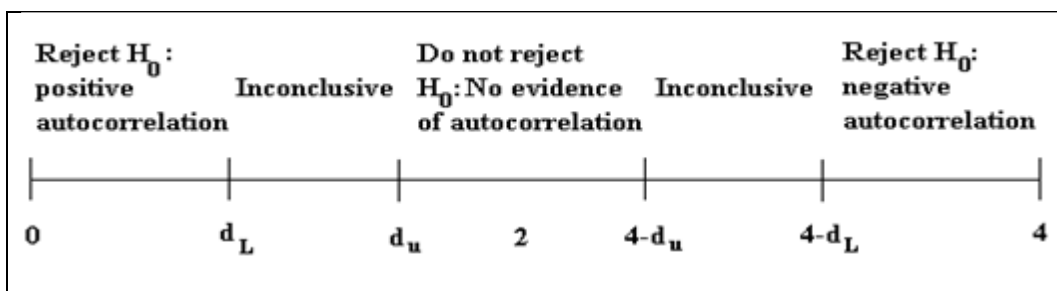
Variables	R ²	VIF = 1 / (1- R ²)
LOG_FA,LOG_ASS	0.100959	1.112296325
LOG_FA,LEV	0.014522	1.014735996
LOG_FA,ROA	0.000837	1.000837701
LOG_FA,ROE	0.002840	1.002848089
LOG_FA,TQ	0.000822	1.000822676
LOG_ASS,LEV	0.002899	1.002907429
LOG_ASS,ROA	0.022906	1.023442985
LOG_ASS,ROE	0.000071	1.000071005
LOG_ASS,TQ	0.129601	1.148898379
LEV,ROA	0.262279	1.355526005
LEV,ROE	0.073894	1.079790002
LEV,TQ	0.071901	1.077471261
ROA,ROE	0.022136	1.022637095
ROA,TQ	0.000083	1.000083007
ROE,TQ	0.000161	1.000161026

4.2.2 Autocorrelation

Table 4.6: Durbin-Watson value obtained from Eviews output.

Test statistic value
Durbin-Watson Test = 0.697866

Figure 4.1: Durbin-Watson Decision Rule



In order to check for the existing of autocorrelation problem, the researcher have run the diagnostic checking by using Durbin-Watson Test through the Eviews. Figure 4.1 shows the Durbin-Watson Test results. The null hypothesis is there is no autocorrelation problem in the model. The significant level to test the autocorrelation is 10%. In this Durbin-Watson Test, the researcher set 10% as significance level as the table of statistic did not have significance level of 5% with 6 independent variable. Based on table 4.6, this research will reject the null hypothesis if the Durbin-Watson value is lower than D_L (1.43) and greater than $4-D_L$ (2.57). Alternatively, this research will not reject H_0 if the Durbin-Watson value is between D_U (1.80) and $4-D_U$ (2.2). Otherwise, it is inconclusive. After carry out the test as table 4.4 shown, the Durbin-Watson test shown a value of 0.6979 that is lower than the D_L (1.43) hence the researcher reject the null hypothesis. This research have sufficient evidence to conclude that there is autocorrelation problem in the model at 10% significant level. The researcher further confirm the existence of autocorrelation problem by using Breusch-Godfrey Serial Correlation LM Test.

4.2.2.1 Breusch-Godfrey Serial Correlation LM Test:

Table 4.7: AIC and SIC value obtained from Eviews

Lag Length	AIC	SIC	p-value
1	0.141315	0.229496	0.0000
2	0.146558	0.245762	0.0000
3	0.139354	0.249581	0.0000
4	0.138830	0.259629	0.0000
5	0.122485	0.254757	0.0000
6	0.115687	0.258982	0.0000
7	0.112015	0.266332	0.0000
8	0.116650	0.281990	0.0000
9	0.122334	0.298696	0.0000
10	0.112411	0.299796	0.0000

Table 4.8: Breusch-Godfrey Serial Correlation LM test value obtained from Eviews

Test statistic value
Breusch-Godfrey Serial Correlation LM test statistic = 0.0000

The determination of optimal lag length is based on the minimum AIC (Akaike Info Criterion) and SIC (Schwarz Criterion). From the table 4.7, the researcher can see that lag length 1 is the minimum value of SIC if compare to other lag length. Hence, lag length 1 is chosen to conduct the Breusch-Godfrey Serial Correlation LM Test. Table 4.8 clearly shows that the P-value for the serial correlation LM test is 0.0000 which is lower than $\alpha = 0.05$. Therefore, the researcher reject null hypothesis and have sufficient evidence to conclude that there is autocorrelation problem in the model at 5% significance level. From this test, the researcher conclude that the model consists of autocorrelation problem at 5% because both the Durbin-Watson test and Breusch-Godfrey Serial Correlation LM Test shows that the same result that model consists of autocorrelation problem. If the autocorrelation problem did not solve, this will lead to the estimation result become biased, inconsistent and

inefficient. Therefore, the researcher use Newey-West Test to tolerance the autocorrelation problem.

4.2.2.2 Newey-West Test

Table 4.9: Newey-West test value obtained from Eviews

Test Statistic Value
Newey-West test statistic = 0.000109
R-Square = 0.077019
Adjusted R-Square = 0.060874

Table 4.9 is the test to tolerate autocorrelation problem. The R-square (0.077019) and adjusted R-square (0.060874) have been decreased after uses Newey-West Test to tolerance the autocorrelation problem. Besides, the original significant variable was also remaining significant at 5% significant level even their standard error, t-statistic and p-value have been change.

4.2.3 Heteroscedasticity

4.2.3.1 ARCH (Autoregressive Conditional Heteroscedasticity) Test

Table 4.10: AIC and SIC value obtained from Eviews

Lags	Akaike info criterion (AIC)	Schwarz criterion (SIC)
1	-0.768628	-0.746536
2	-0.760171	-0.726962
3	-0.758927	-0.714555
4	-0.753951	-0.698367
5	-0.765327	-0.698483
6	-0.768142	-0.689990
7	-0.766904	-0.677394
8	-0.762283	-0.661367
9	-0.753584 (MINIMUM)	-0.641212 (MINIMUM)
10	-0.761601	-0.637723

Table 4.11: Arch Test value obtained from Eviews

Test Statistic Value
Prob. Chi Square = 0.0000

This research continue for the diagnostic checking to check whether there is exist of heteroscedasticity problem or not. Thus, the researcher have run the ARCH Test. From the table 4.10, the model clearly stated that have the lowest AIC at lag length 9, so this research will use the lag length of 9 in the model. Then, the researcher run for the ARCH Test by using lag length 9 and the result from Eviews is show in table 4.11. After conducting heteroscedasticity problem using ARCH test, the p-value is 0.0000, which is smaller than 5% significant level. Therefore, this research have sufficient evidence to conclude that there is heteroscedasticity problem in the model at 5% significant level. In order to check further existence of heteroscedasticity problem, another three test, which include the glejser test and Breusch-Pagan-Godfrey test and White-Heteroscedasticity are used to test for the heteroscedasticity problem.

4.2.3.2 Glejser Test

Table 4.12: Glejser Test value obtained from Eviews

Test Statistic Value
Glejser Test Statistic = 0.0000

Table 4.12 is the Eviews result after the researcher carry out the Glejser test. The p-value of the Glejser test is 0.0000, which is lower than the 5% significant level. Hence, this research can conclude that have insufficient evidence to conclude there is no heteroscedasticity problem occur.

4.2.3.3 Breusch-Pagan-Godfrey Test

Table 4.13: Breusch-Pagan-Godfrey Test value obtained from Eviews

Test Statistic Value
Breusch-Pagan-Godfrey statistic = 0.0000

Table 4.13 shows that the result of Breusch-Pagan-Godfrey Test result. In this test, a null hypothesis of there is homoscedasticity is set. So the research will reject the null hypothesis if p-value less than 5% significance level. The p-value shows by Eviews is 0.0000 which is lesser than 5% significance level. Hence, it have sufficient evidence to conclude that there is heteroscedasticity problem. Due to both Glejser test and Breusch-Pagan-Godfrey test shows that the model have heteroscedasticity problem. This paper will tolerance the problem by using white-heteroscedasticity test.

4.2.3.4 White-Heteroscedasticity Test

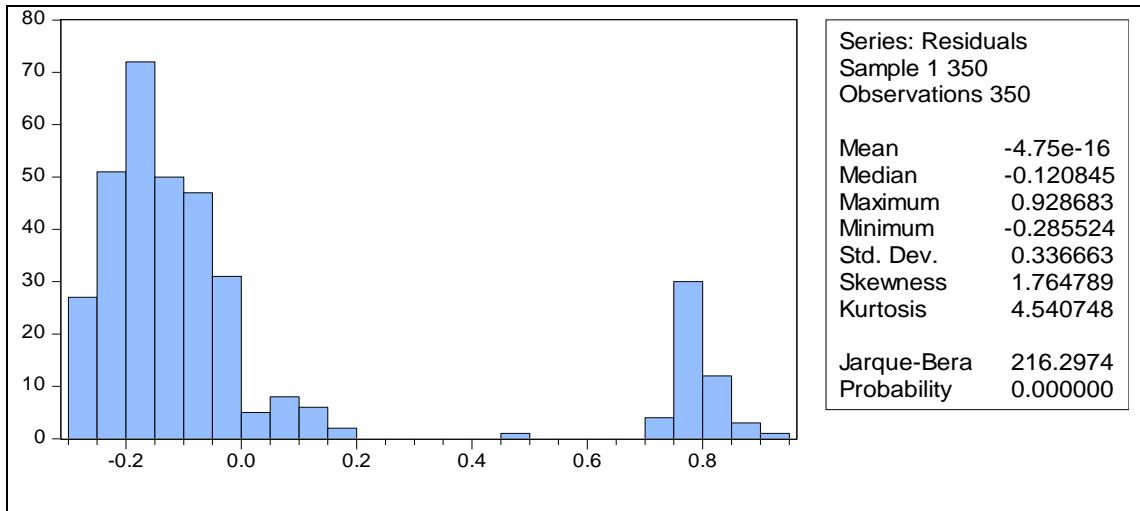
Table 4.14: White-Heteroscedasticity Test value obtained from Eviews

Test Statistic Value
Prob White Heteroscedasticity = 0.000496
R square = 0.159027
Adjusted R square = 0.088510

The researcher use the white-heteroscedasticity test to tolerance the heteroscedasticity problem. From the 4.14, the R square (0.159027) and adjusted R square (0.088510) have been increases. Besides, the original significant variable are also remain significant at 5% significant level even their standard error, t-statistic and p-value have changed. The p-value shows by Eviews is 0.0000 which is lesser than 5% significance level. Hence, this research have sufficient evidence to conclude that there is heteroscedasticity problem.

4.2.4 Jarque-Bera Normality of the Error term

Table 4.15: Eviews result of normality of error term



This research will continue the diagnostic checking of determine the normality of the error term by using Eviews to run the test. The table 4.15 shows the result of after conducting the Jarque-Bera Test. From table 4.15, the p-value shows 0.0000, which implies the hypothesis testing to reject null hypothesis at significant level of 0.10. This means that the error term is not normally distributed. However, according to Central Limit Theorem (CLT), when the sample size is large, that is more than 100, the error term are assume to be normally distributed. Although the model cannot fulfil the normality assumption, however, the model still can be use due to error term is homoscedastic and the means value of error term is zero so this research still able to continue the t test and f test in large sample. In the Gauss-Markov assumption, even without the normality assumption the OLS estimator are still best linear unbiased estimators. In here the researcher using a sample size of 350, hence it is consider large. Model still can be used for further investigation, the reason model cannot achieve the normality assumption of error term might due to omitted some important variable.

4.3 Inferential Analyses

4.3.1 Overall F-test

Table 4.16: Overall F-test result

$H_0: \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$

H_1 : At least one of the β_i is not equal to zero, $i = 1, 2, 3, \dots$

$\alpha = 0.05$

Decision Rules: Reject H_0 if p-value smaller than $\alpha=0.05$, otherwise do not reject H_0 .

P-value: 0.000109

Decision Making: Since the p-value (0.000109) is smaller than $\alpha=0.05$, the researcher reject H_0 .

Conclusion: There is sufficient evidence to conclude that the model is significant at 5% significant level.

In order to test for the significant of whole model, F-test is being used. The result computed by the Eviews was show in Table 4.16 above. The researcher use F-test to determine whether the whole model is significant at 5% significant level after include all of the independent variable in this model. Based on the Eviews output, both managerial and non-managerial ownership were carry out the same outcome. The null hypothesis as $\beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$. In this overall F-test, significant level of 5% is set. The P-value as stated in table 4.3 is 0.000109. As conclusion, due to the p-value is smaller than $\alpha= 0.05$, this research have sufficient evidence to conclude that the model is significant at 5% significant level.

4.3.2 Hypothesis Testing for Each of the Parameter (T-Test)

In this section, the researcher will carry out a t-test for each of the variable to test which of the parameter is significant for the model.

4.3.2.1 Managerial Ownership Model

4.3.2.1.1 T-test β_2 (Firm Age)

To test the significant relationship between managerial ownership and firm age, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_2 = 0$

$H_1: \beta_2 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha=0.05$. Otherwise, do not reject H_0 .

P-Value: 0.8413

Decision Making: Do not reject H_0 since p-value = 0.8413 is larger than $\alpha=0.05$.

Conclusion: This research have insufficient evidence to conclude that the firm age is significant at 5% significant level.

In this t-test, the null hypothesis is the firm age is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when the researcher reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the firm age is 0.8413, which is larger than 5% significance level; hence, the research stated insufficient evidence to conclude the firm age is significant at 5% significance level.

4.3.2.1.2 T-test β_3 (Firm Size)

To test the significant relationship between managerial ownership and firm size, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

H₀: $\beta_3 = 0$

H₁: $\beta_3 \neq 0$

Decision Rule: Reject H₀ if p-value is smaller than $\alpha=0.05$. Otherwise, do not reject H₀.

P-Value: 0.0145

Decision Making: Reject H₀ since p-value = 0.0145 is smaller than $\alpha = 0.05$.

Conclusion: This research have sufficient evidence to conclude that the firm size is significant at 5% significant level.

In this t-test, the null hypothesis is the firm size is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the firm size is 0.0145, which is smaller than 5% significance level; hence, the researcher make a conclusion stated sufficient evidence to conclude the firm size is significant at 5% significance level.

4.3.2.1.3 T-test β_4 (Leverage)

To test the significant relationship between managerial ownership and leverage, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_4 = 0$

$H_1: \beta_4 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.0131

Decision Making: Reject H_0 since p-value = 0.0131 is smaller than $\alpha = 0.05$.

Conclusion: This research have sufficient evidence to conclude that leverage is significant at 5% significant level.

In this t-test, the null hypothesis is the leverage is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the leverage is 0.0131, which is smaller than 5% significance level; hence, the researcher make a conclusion stated sufficient evidence to conclude the leverage is significant at 5% significance level.

4.3.2.1.4 T-test β_5 (ROA)

To test the significant relationship between managerial ownership and return on asset, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_5 = 0$

$H_1: \beta_5 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.5065

Decision Making: Do not reject H_0 since p-value = 0.5065 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that return on asset is significant at 5% significant level.

In this t-test, the null hypothesis is the return on asset is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the return on asset is 0.5065, which is larger than 5% significance level; hence, the researcher make a conclusion stated insufficient evidence to conclude the return on asset variable is significant at 5% significance level.

4.3.2.1.5 T-test β_6 (ROE)

To test the significant relationship between managerial ownership and return on equity, the researcher had carry out a hypothesis testing at $\alpha= 0.05$.

H₀: $\beta_6 = 0$

H₁: $\beta_6 \neq 0$

Decision Rule: Reject H₀ if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H₀.

P-Value: 0.2950

Decision Making: Do not reject H₀ since p-value = 0.2950 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that return on equity is significant at 5% significant level.

In this t-test, the null hypothesis is the return on equity is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the return on equity is 0.2950, which is larger than 5% significance level; hence, the researcher make a conclusion stated insufficient evidence to conclude the return on equity is significant at 5% significance level.

4.3.2.1.6 T-test β_7 (Tobin's Q)

To test the significant relationship between managerial ownership and Tobin's Q, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_7 = 0$

$H_1: \beta_7 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.0852

Decision Making: Do not reject H_0 since p-value = 0.0852 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that tobin q is significant at 5% significant level.

In this t-test, the null hypothesis is the Tobin's q is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the Tobin's q is 0.0852, which is larger than 5% significance level; hence, the researcher make a conclusion stated insufficient evidence to conclude the firm age is significant at 5% significance level. However, if the significance level is set at 10%, the independent variable with p-value of 0.0852, which is smaller than 10%, will be significant at 10% significance level.

4.3.2.2 Non-managerial ownership model

4.3.2.2.1 T-test β_2 (Firm Age)

To test the significant relationship between non-managerial ownership and firm age, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_2 = 0$

$H_1: \beta_2 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha=0.05$. Otherwise, do not reject H_0 .

P-Value: 0.8413

Decision Making: Do not reject H_0 since p-value = 0.8413 is larger than $\alpha=0.05$.

Conclusion: This research have insufficient evidence to conclude that the firm age is significant at 5% significant level.

In this t-test, the null hypothesis is the firm age is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the firm age is 0.8413, which is larger than 5% significance level. Hence, the researcher make a conclusion stated insufficient evidence to conclude the firm age is significant at 5% significance level.

4.3.2.2.2 T-test β_3 (Firm Size)

To test the significant relationship between non-managerial ownership and firm size, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_3 = 0$

$H_1: \beta_3 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha=0.05$. Otherwise, do not reject H_0 .

P-Value: 0.0145

Decision Making: Reject H_0 since p-value = 0.0145 is smaller than $\alpha = 0.05$.

Conclusion: This research have sufficient evidence to conclude that the firm size is significant at 5% significant level.

In this t-test, the null hypothesis is the firm size is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the firm size is 0.0145, which is smaller than 5% significance level; hence, the researcher make a conclusion stated sufficient evidence to conclude the firm size is significant at 5% significance level.

4.3.2.2.3 T-test β_4 (Leverage)

To test the significant relationship between non-managerial ownership and leverage, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_4 = 0$

$H_1: \beta_4 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.0131

Decision Making: Reject H_0 since p-value = 0.0131 is smaller than $\alpha = 0.05$.

Conclusion: This research have sufficient evidence to conclude that leverage is significant at 5% significant level.

In this t-test, the null hypothesis is the leverage is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the leverage is 0.0131, which is smaller than 5% significance level; hence, the researcher make a conclusion stated sufficient evidence to conclude the leverage is significant at 5% significance level.

4.3.2.2.4 T-test β_5 (ROA)

To test the significant relationship between non-managerial ownership and return on asset, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_5 = 0$

$H_1: \beta_5 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.5065

Decision Making: Do not reject H_0 since p-value = 0.5065 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that return on asset is significant at 5% significant level.

In this t-test, the null hypothesis is the return on asset is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the return on asset is 0.5065, which is larger than 5% significance level; hence, the researcher make a conclusion stated insufficient evidence to conclude the return on asset variable is significant at 5% significance level.

4.3.2.2.5 T-test β_6 (ROE)

To test the significant relationship between non-managerial ownership and return on equity, the researcher had carry out a hypothesis testing at $\alpha= 0.05$.

$H_0: \beta_6 = 0$

$H_1: \beta_6 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.2950

Decision Making: Do not reject H_0 since p-value = 0.2950 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that return on equity is significant at 5% significant level.

In this t-test, the null hypothesis is the return on equity is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the return on equity is 0.2950, which is larger than 5% significance level. Hence, the researcher make a conclusion stated insufficient evidence to conclude the return on equity is significant at 5% significance level.

4.3.2.2.6 T-test β_7 (Tobin's Q)

To test the significant relationship between non-managerial ownership and Tobin's Q, the researcher had carry out a hypothesis testing at $\alpha = 0.05$.

$H_0: \beta_7 = 0$

$H_1: \beta_7 \neq 0$

Decision Rule: Reject H_0 if p-value is smaller than $\alpha = 0.05$. Otherwise, do not reject H_0 .

P-Value: 0.0852

Decision Making: Do not reject H_0 since p-value = 0.0852 is larger than $\alpha = 0.05$.

Conclusion: This research have insufficient evidence to conclude that tobin q is significant at 5% significant level.

In this t-test, the null hypothesis is the Tobin's q is significant in the model. Decision rule will be reject the null hypothesis if p-value is smaller than 5% significance level. Otherwise, do not reject the null hypothesis. This means that when reject the null hypothesis, it can conclude that have insufficient evidence to prove the independent variable is significant in the model. After carry out t-test, the p-value of the Tobin's q is 0.0852, which is larger than 5% significance level; hence, the researcher make a conclusion stated insufficient evidence to conclude the firm age is significant at 5% significance level. However, if the significance level is 10%, the p-value (0.0852) is smaller than 10%, so the researcher have sufficient evidence to conclude that Tobin's q is significant at 10% significant level.

4.4 Conclusion

Table 4.17: Overall significant and non-significant variables

	Managerial Ownership	Non-Managerial Ownership
Independent variables	Significant / Insignificant	Significant/insignificant
Firm age	Insignificant	Insignificant
Firm size	Significant	Significant
Leverage	Significant	Significant
Return on Asset	Insignificant	Insignificant
Return on Equity	Insignificant	Insignificant
Tobin's Q	Insignificant (5%)	Insignificant (5%)
Tobin's Q	Significant (10%)	Significant (10%)

From the result in the early of the chapter, the firm size, leverage and Tobin's Q shows the significant relationship with both managerial and non-managerial ownership structure of the companies.

In contrast, the result were shows that in both managerial and non-managerial ownership, the firm age, return on asset and return on equity is insignificant to explain it affected by the ownership structure. This probably might due to the omitted variable of dummy financial crisis. However, this research did not include the dummy of financial crisis due to there was unable to identify which companies were affected by financial crisis. Moreover, indirectly, the financial crisis that happen on year 2008 will affect some of the companies and cause their net income to decrease and some were incur losses. In the data, the researcher calculated the return on asset and return on equity involve the figure of net income. From the company that took from trading and services sector in year 2008 to 2012, many of the companies are involving net losses in a particular years. This is why the outcome of the result is insignificant to explain the model.

Chapter 4 sums up the results and findings of the data analysis using Eviews 7. The result is discuss; interpreted and possible adjustment is made for the econometric problem occurred in the regression model. In the following chapter, the researcher will conclude the major findings in this research paper as well as the implication of study and recommendation for future researchers.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

Nowadays, the structure of corporate governance becomes get more attention by most of the company. This is because the corporate governance structure will affect their company's profitability and the performance. Thus, this study was examine that the variables that will be affected by the structure of ownership in the companies.

In previous chapter, the researcher have run the diagnostic checking, which are multicollinearity, autocorrelation, heteroscedasticity, Jarque-Bera Test, T-test, and F-test to determine the relationship between dependent variables and independent variable. In this chapter will be discuss on the results and major findings that have run on previous chapter and the outcomes that have been done by other journals. At the following of this chapter will also discuss the implications and limitations of this study. Lastly, at the end of the chapter the research would suggest some of the recommendations for future researcher on this study based on the limitation.

5.1 Summary of Statistical Analyses

In previous chapter, this research begin to test through the diagnostic checking. The reason to run the diagnostic checking is to examine whether or not the model fulfill the assumptions of the OLS regression model, which are Best, Linear, Unbiased and Estimator.

The first diagnostic checking is multicollinearity problem. Based on the adjusted R^2 on Table 4.1 and 4.2, the adjusted R^2 is 0.0609. This means that there is low multicollinearity problem exist in this model. Then, this research further examine the existing of multicollinearity problem by using Pearson Correlation Matrix. The result shows that all of the independent variables are less correlated with each other's. This means that there is also low multicollinearity problem exist in this model. This result was consistent with other test which is Variance Inflation Factor (VIF) where the VIF results shows that the VIF of all the independent variables have less than 10. This means that there is low multicollinearity problem exist in this model. Thus, this research can conclude that the model have no multicollinearity problems.

Then, the research continue the diagnostic checking by testing for the existing of autocorrelation problem. After run for the Durbin-Watson Test using Eviews, the results shows that there is autocorrelation problem exist in this model. The research further confirm the existing of autocorrelation problem by using Breusch-Godfrey Serial Correlation LM Test. After run the test, this research found that the autocorrelation problem still exists in this model. Thus, Newey-West Test will be used to tolerance the autocorrelation problem, the results shows that the R square and the adjusted R square have decreased, and the other variables sill remain as significance in this model.

Moreover, the researcher also test for the heteroscedasticity problem by using ARCH Test and the result was shows that there is heteroscedasticity problem exist in this model. To further confirm this, the researcher use Glejser Test, Breusch-Pagan-Godfrey Test and White-Heteroscedasticity Test. As a result, this three test's results also show that there is heteroscedasticity problem exist in this model. Overall, it can conclude that there is heteroscedasticity problem exist in the model.

By using the Jarque-Bera Test to test for the normality of error term, this research found that the error terms of the model are not normally distributed. However, according to Central Limit Theorem (CLT), when the sample size is large, that is more than 100, the error term are assume to be normally distributed. Although the model cannot fulfil the normality assumption, but the model still can be used because this research are using a sample size of 350, which is larger than 100-sample size. (Gujarati & Porter, 2009)

Other than that, the research have study the significant relationship between dependent variable and all independent variables as a whole by using the F-test statistic. From the result that have stated in previous chapter, the result of F-test that get was shows that the whole model is significant in this study at 5% significant level.

Moreover, the researcher also examine the significance relationship between each independent variables and dependent variable by using the T-test statistic. The researcher set the significant level at 5% and the results shows that firm size and leverage have significant relationship with both managerial and non-managerial ownership. Then, the Tobin's Q only become significant when the significant level at 10% at both managerial and non-managerial ownership. However, firm age, Return on Assets (ROA) and Return on Equity (ROE) shows the insignificant relationship with managerial and non-managerial ownership structure.

In the next section will discuss more specific on the major findings from statistical results and compare the outcomes that have been done by other researchers.

5.2 Discussions of Major Findings

5.2.1 Firm Age

Aging firms was expect to have higher profitability in their company compare to the younger firms. This is because they have more experience in operate and conduct their business compare to the new companies. This research include the firm age as one of the variables to determine whether the firm age has relationship with the ownership structure of the companies as well as the firm performance. Based on the previous chapter, the coefficient of the firm age is $\beta_2 = -0.0252$. This results show that there is insignificant negative relationship of the firm age with the ownership structure. This means that the firm age is not able to explain fully the ownership structure of the company.

This research result is align with Li, Moshirian, Nguyen, & Tan (2007) result. They also show that the firm age appears to have a positive but insignificant impact on the firm's operation performance. They use a sample of Chinese State-owned enterprise (SOEs) privatized from the year of 1992 to 2000 to prove the statement above. In the Fazilah (2011) research, he also found that the average of firm age nearly 30 years is insignificantly different between ownership, which is align with this research result. Not only that, according to Anderson & Reeb (2003), and Han & Suk (1998), their studies also shows that there is a negative relationship between firm age and performance as well.

5.2.2 Firm Size

From the research that have done on previous chapter, there is significant negative relationship between firm size and the ownership structure of the company, where $\beta = -0.0789$ and there is significant at 5% significant level. This result was in line with Omran, Bolbol, & Fatheldin (2008) where they found that there is negative relationship between firm size and ownership structure at 10% of significant level. In addition, they also said that the higher the firm size of the companies could have high maintaining the control on degree of stockholder's concentration and high costs of capital. Not only that, Himmelberg et al. (1999) stated that firm size could be negative affect their company performance because the monitoring cost and agency costs are much higher for larger firms. Demsetz & Lehn (1985) also found the same result with the study where they show that there is a negative relationship between the ownership structure and the firm size in 511 companies in US Corporations. McConnell & Servaes (1990) supported this argument where their research also shows that firm size and the firm performance are inversely correlated. Moreover, Ng, Yuce, & Chen (2009) stated that the firm size of a company is negatively affect the market performance and significant at 1% significant level from the year 1995 to 2003 using a sample of 4315 firms in privatized Chinese firms.

In contrast, NA & Ratti (2002) using the data in Korean Stock Exchange (KSE) from the period 1998 to 2000 to test the relationship of total assets and ownership structure and their results shows that the correlation between the ownership structure and the total asset or market value of equity is positive correlation. Not only that, Wei and Varela (2003) explained that when the larger the firm, the more strategic is in its industry and thus, the greater the shares of the state's holdings. They show this evidence by using the OLS methodology and using the data from China newly privatized firms from the year 1994 to 1996. This can be explain that the firm size is positively impact on the ownership structure of the companies.

However, this study was contrast with Perrini, Rossi, & Rovetta (2008) where they was shows that the firm size is insignificant relationship to the firm performance in their model by using the panel data for period 2000 to 2003 in Italian market.

5.2.3 Leverage

Leverage ratio is used to detect the effect of company's financial policy. Therefore, the research include the leverage in the model to test whether or not the leverage has relationship with the ownership structure. The coefficient of leverage that have conducted from previous chapter is $\beta_4 = -0.2359$. This result was shown that there is negative and significant relationship between leverage and the ownership structure. This results was consistent with the research that done by Perrini, Rossi, & Rovetta (2008). They said that leverage relates negatively to the firm's performance ($t = -1.96$, $p < 0.5$). This result was consistent with the idea where when the company's debts increase, this will affect the company's performance to decrease.

The result that have test on this study was also same as Florackis, Kostakis, & Ozkan (2009) where they also get the negative relationship with performance but they are statistically insignificant by using a sample of UK listed firms from the year of 2000 to 2004.

However, the result was contrast with Li, Moshirian, Nguyen, & Tan (2007) as they found that leverage has positive relationship with the firm's change in their performance by using the sample of Chinese State-owned enterprise (SOEs) over the period of 1992 to 2000.

5.2.4 Return on Assets (ROA)

The coefficient of Return on Assets (ROA) that have conducted from previous chapter is $\beta_5 = -0.0277$. This result shows that there is negative and insignificant relationship between ownership structure and firm performance.

This negative relationship was in line with Li, Moshirian, Nguyen, & Tan (2007) where they using the Return on Asset (ROA) in their model, they found a statistically significant decrease in the company's financial performance. This means that ROA decrease for both the high and low ownership structure. For instance, mean ROA was decrease by 10.86% in firms that is low CEO ownership but decrease only by 7.82% for the firms that has a high CEO ownership.

However, the return on assets is positively and strongly significant to Tobin's Q at 1% significant level from a sample of 4315 privatized Chinese firms from the year 1995 to 2003. They found that compared to other variables in their model, the beta coefficients for ROA are the largest among others (Ng, Yuce, & Chen, 2009).

Although the relationship between ROA and ownership of this research is align with previous study, however, we get an insignificant result. This might due to the financial crisist that happen in year 2008. (Kogid, Ching, & Jusoh, 2009). The financial crisis will affect the company performance and for the companies that we took in this research, most of the companies's net income incur losses for the particular year. The net losses that we get from the companies's annual report can used to explain that this model are different with other researchers and give an insignificant results in the study.

5.2.5 Return on Equity (ROE)

The coefficient of Return on Equity (ROE) from the test that that have done on previous chapter is $\beta_6 = 0.0116$. Then, the researcher found that there is positive and insignificant relationship on ownership structure and Return on Equity (ROE).

Qi, Wu, & Zhang (2000), found that the return on equity is negatively relationship to the state ownership through a sample of Shanghai Stock Exchange within the period of 1991 to 1996, which is contrast with the researcher result. In addition to that, An, Jin, & Simon, (2006) found that the increase in institutional ownership will cause the decrease in Return on Equity when the other variables is remained unchanged. This can be explain that there is negative relationship between ROE and the previous year's institutional ownership by using a sample of 12 publicly traded newspaper companies within the period of 1988 until the year of 2000

However, this research found that Xu & Wang (1999) say that the firm profitability is positively correlated to the proportion of the person that has legal shares by using the sample of pooled firm-level data from 1993 until 1995 of publicly listed companies in China. This study was in line with Jiang, Laurenceson, & Tang (2008) where they also found that the shares proportion that owned by government have positive relationship on firm performance as measure by Return on Equity (ROE) by using a sample of listed companies on Shanghai Stock Exchange (SSE) within the year in 2004.

However, Ng, Yuce, & Chen (2009) found a different result with the study where they found a convex relationship between the firm's performances as measure by return on equity (ROE) and state ownership. They are using a

sample of privatized Chinese firms from the period of 1996 to 2003 to test for the model.

Although the relationship between ROE and ownership of this research is consistent with previous researcher, however, the researcher get an insignificant result which same as the result that get from ROA. The reason for the research result to become insignificant is almost same as the reason for ROA which is due to the financial crisis that happen in year 2008. This research used the net income to measure the return on equity for the selected companies. However, most of the companies's net income incur losses for the particular year due to the financial crisis problem. This might affect the researcher result and give insignificant result in this study.

5.2.6 Tobin's Q

The research that have done was shows that the coefficient of Tobin's Q is $\beta_7 = 0.1812$. It shows that there is positive relationship between Tobin's Q and the ownership structure and is significant at 10% significant level. This result was consistent with most of the studies such as Demsetz & Lehn (1985), they said that there is a positive correlation between management ownership and Tobin's Q. McConnell & Servaes (1990) also said that there is strong curvilinear relationship between Tobin's Q and the ownership structure which measure by the fraction of shares owned by corporate insiders.

Moreover, Florackis, Kostakis, & Ozkan (2009) get the result of positive effect of managerial ownership at the levels that is lower than 15%, but this do not cause a strong effect at high levels of managerial ownership in the relationship between managerial ownership and company's performance.

In contrast, this study shows the different result compared with Wei, Xie, & Zhang (2004) and they found that by using a sample of 5284 firms from year 1991 to 2001, they shows that the state ownership is negatively related to their company performance and all are significant at 1% significant level. In addition to that, all the ownership structure is negatively significant influence by firm performance as measured by Tobin's Q at 1% significant level within 1998 to 2000 in Korea through the analysis of OLS regression and 2SLS. (NA & Ratti, 2002). Then, Shleifer & W. Vishny (1988) shows the presence of founding family in older firm has a negative effect on Tobin's Q from 371 Fortune 500 firms of cross-section during year 1980.

However, Oluwatayo & Amole (2013) suggest that the relationship between ownership structure and firm performance was found to be no significant relationship by using a sample of architectural firms from Nigeria. Then, a questionnaire survey of 92 architectural firms was carry out to test for this hypothesis.

5.3 Implications of the study

This study is very useful for the society such as investors, bankers and Board of Director. This research was playing a crucial role in making decision on finance range when the parties above were involve in corporate or in business transaction.

The researcher say that this study is useful for investors because most of the investors either domestic or foreign investors would like to look out the company's annual report and their firm performance before making a decision to invest in that particulars companies. The implication of firm's performance is financial ratio and we measure the financial ratio of the company by using Return on Assets (ROA),

Return on Equity (ROE), Tobin's Q as well as the leverage ratio. Not only that, this study was very useful for investors due to they can decide whether to invest in managerial ownership structure's company or invest in non-managerial ownership structure's company. The ownership structure will affect the company's performance and thus, affect investor's profitability as well. Thus, it was helpful for them to make decision on which type of structure of the company they should invest in.

Other than that, this study was applicable to banker because this is helpful to them when they are dealing with application of bank loans. The bank will try to avoid high probability of default risk on the loan that they lend to the corporate or company. Therefore, the bank will first examine the company's performance and their financial positions before the loan are grant to those companies. The indicator of firm performance can be measure by Return on Assets (ROA), Return on Equity (ROE), and also the leverage ratio. The bank can use these indicators to determine the profitability of the company and decide whether to grant the loan to managerial ownership structure of company or non-managerial ownership structure's company because the ownership structure of company will affect the company's performance. Thus, the bank can reduce the high probability of default risk when granted a loan to company.

Moreover, Board of Director of the company can also use this study to increase their efficiency of firm's performance. They can determine that either managerial ownership structure is better or the non-managerial ownership structure on the company is better in order to increase their firm's performance. They also can use to make the comparison with their competitors on how to improve their firm's profitability by adjusting the ownership structure of companies. If the company found out that their firm's profitability is lower than their competitors are, they can make decision on how to improve their company's profitability.

Finally yet importantly, the study that have done was useful and significant to the parties of above in making decision related to corporate finance. Thus, this research is an efficient tool to improve the company's performance.

5.4 Limitations of the study

Based on the research, there are some problems have been identified. From there, it had led some limitations to make result not ideal.

Firstly, target population and the years that chosen as sample size for this research are small. There are 70 firms and only five years have been chosen for the usage in this study as the sample size in this research. Ng, Yuce, & Chen (2009) they have use 4315 firms for their sample size which is larger than the researcher sample size of only 350. Thus, small sample sizes may bring out the result which is inconsistent and inaccurate. The larger the sample size will come out with the result which is more reliable and accurate than the small sample size model.

Besides, this research did not include a dummy variable of financial crisis. This is because the researcher were unable to identity which company that will get affected by the financial crisis during the year 2008. However, according to Fan (2011), the services sector is get affect due to financing falls in the categories of services.

Moreover, the limitation that encounter is there is less available of annual report for the selected companies as the companies disclose the most recent annual report only. This research only could get the 5 years of annual report in this study for trading and services sector in Malaysia.

Lastly, the target population in this study only focus on Malaysia only. However, other countries can be chosen as the target of population in the research. Different countries have different types of culture in the management of a firm. This might be affect to obtain the precise results with different data from different countries. However, there is a limitation on searching of annual report for the companies outside Malaysia. The annual report for those companies other than Malaysia might not be complete and there is limited year of annual report that is available.

5.5 Recommendations for Future Research

As the limitations were state at above, here are some recommendations for future researchers to improve the overall research experience.

First, there are only 70 selected firms as sample size for this study. It is unable to get result that is more accurate although it is a large population (350-sample size) in this research. The result will be more accurate and significant if the sample size is increase. Future researchers are recommend to take in larger sample size on the related company on their ownership structure, so that the result that obtained will be more accurate and better. The outcome of the result will be more reliable and consistent if the sample size is large enough.

Besides that, since this research was use 5 years annual reports as the period of sample size, future researchers are advise to lengthen the period of sample size by using more than 5 years. Future researchers can find out the data from DataStream if the research scope is provide in DataStream. This recommendation is given for the purpose of data will be more accurate by capturing a large sample size and the result of study will be better and ideal.

Besides, future researcher can include the dummy variable of financial crisis in order to get a better picture on how the ownership structure affect the firm performance. With this, the model will become more consistent and well explained in different aspects.

Last but not least, future researchers can expand the coverage of the sample in the research to different countries. It should not be only in a specific country since different countries have different result. Therefore, future researchers can conduct their research in all the developed and developing countries to determine the relationship between ownership structure and firm performance.

5.6 Conclusion

The objective of this research is determine the relationship between ownership structure and firm performance in trading and services sector that the companies are listed in Bursa Malaysia. This study also aims to determine which firm performance is better among managerial and non-managerial. A total of 70 trading and services sector that listed in Bursa Malaysia are chosen for this research. As a conclusion of this study, this research can conclude that the firm size, leverage and Tobin's Q have significant relationship with ownership structure of the company.

The data is collected from selected firm's annual report and analyzed the data collected using statistical software Eviews. Based on the results, managerial firms have higher firm performance compared with non-managerial firms. Firm size (total assets), leverage and Tobin's Q are significant variables to determine the firm performance between managerial and non-managerial firms.

This chapter summarizes the statistical analysis, major finding of the research, implications of the study, limitations as well as recommendations for future researchers. Lastly, this research has meet its objective by knowing relationship between ownership structure and firm performance of trading and services sector that listed in Bursa Malaysia.

REFERENCES

- Alex Ng, Ayse Yuce & Eason Chen . (2009). Determinants of state equity ownership and its effect on value / performance : China's privatized firms . *Pacific-Basin Finance Journal* , 413-443.
- Aliaga, M. & Gunderson, B. (2002). *Interactive statistics* (3rd ed.). New Jersey: Pearson Prentice Hall.
- Amran, N. A., & Ahmad, A. C. (2010). Family Succession and Firm Performance among Malaysian Companies. *International Journal of Business and Social Science*, 1(2).
- An, S., Jin, H. S., & Simon, T. (2006). Ownership Structure of Publicly Traded Newspaper Companies and Their Financial Performance. *Journal of Media Economics* , 19 (2), 119-136.
- Anderson, R.C. & Reeb, D.M. (2003). Founding-Family Ownership and Firm Performance: Evidence from the S&P 500. *The Journal of Finance* , Vol.58, no.3, pp.1301.
- Arosa, B., Iturralde, T., & Maseda, A. (2010). Ownership structure and firm performance in non-listed firms: Evidence from Spain. *Journal of Family Business Strategy*, 1, 88-96.
- Barzegar, B., & Babu, K. N. (2008). The Effects of Ownership Structure on Firm Performance: Evidence from Iran. *The Icfai Journal of Applied Finance* , 14 (3), 43-55.
- Bai, J., & Ng, S. (2005). Tests for Skewness, Kurtosis, and Normality for Time Series Data. *Journal of Business & Economic Statistics*, 23(1), 49-60.
- Ben-Amar, W., & Andre, P. (2006). Separation of Ownership from Control and Acquiring Firm Performance: The Case of Family Ownership in Canada. *Journal of Business Finance and Accounting* , 33 (3 & 4), 517–543.

- Benjamin, M. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance* , 16, 321–341.
- Bernardo, A. E., & Chowdhry, B. (2002). Resources, real options, and corporate strategy. *Journal of Financial Economics*, 63, 211-234.
- Biorn, E. (2013). On Models And Data Types In Econometrics. *Introductory Econometrics* , 1-6.
- Blackwell, M. (2008). Multiple Hypothesis Testing: The F-test*. 1-7.
- Bouzgarrou, H., & Navatte, P. (2013). Ownership structure and acquirers performance: Family vs. non-family firms. *International Review of Financial Analysis* , 27, 123-134.
- Brant, R. (2007). Multiple Linear Regression. 2-14.
- Brickley, J. A., Ronald, C. L., & Clifford, W. S. (1988). Ownership Structure and Voting on Antitakeover Amendments. *Journal of Financial Economics* , 20, 267-291.
- Brockmann, E. N., & Simmonds, O. G. (1997). Strategic decision making: The influence of CEO experience and use of tacit knowledge. *Journal of Managerial Issues*, 9(4), 454-468.
- Bryan, L.C.W. , Ooi, A.Y. & Christianna C.P.Y. (2007). Malaysia's Services Industry Towards The Global Environment. *International Economic Conference on Trade and Industry (IECTI) 2007*. Bayview Hotel Georgetown, Penang.
- Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *Journal of Finance* , 58, 2167-2210.
- Chang, S. J. (2003). Ownership Structure, Expropriation, and Performance of Group-Affiliated Companies in Korea. *Academy of Management Journal* , 46 (2), 238-253.

- Chen, C.-J., & Yu, C.-M. J. (2012). Managerial ownership, diversification, and firm performance: Evidence from an emerging market. *International Business Review*, 21, 518-534.
- Chen, M.-Y. (2003). Classical Linear Regression Models. *Econometrics (I)*, 14-32.
- Chen, X., Harford, J., & Li, K. (2007). Monitoring: which institutions matter? *Journal of Financial Economics*, 86 (2), 279-305.
- Cheung, A., & Wei, J. (2006). Insider ownership and corporate performance: Evidence from the adjustment cost approach. *Journal of Corporate Finance*, 12, 906-925.
- Chi, W., & Wang, Y. (2009). Ownership, performance and executive turnover in China. *Journal of Asian Economics*, 20, 465-478.
- Congdon, J. D., & Dunham, A. E. (1999). Defining the Beginning: The Importance of Research Design. *Research and Management Techniques for the Conservation of Sea Turtles*, 1-5.
- Demsetz, H. (1983). The Structure of Ownership and the Theory of the Firm. *Journal of Law and Economics*, 26 (2), 375-390.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93 (61), 1155-1177.
- Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7, 209-233.
- Drakos, A., & Bekiris, F. (2010). Corporate performance, managerial ownership and endogeneity: A simultaneous equations analysis for the Athens stock exchange. *Research in International Business and Finance*, 24, 24-38.
- Edmans, A., & Manso, G. (2010). Governance Through Trading and Intervention: A Theory of Multiple Blockholders. *Review of Financial Studies*, 24 (7), 2395-2428.

- Elyasiani, E., & Jia, J. (2010). Distribution of institutional ownership and corporate firm performance. *Journal of Banking & Finance* , 34, 606-620.
- Fahlenbrach, R., & M. Stulz, R. (2009). Managerial ownership dynamics and firm value. *Journal of Financial Economics* , 92, 342-361.
- Fan, Y. (2011). Services Policy Reform in the People's Republic of China: Before and After the Global Financial Crisis. *ADB Working Paper 304*. Tokyo: Asian Development Bank Institute.
- Fazilah, A. (2011). Corporate Governance Mechanisms and Performance of Public-Listed Family-Ownership in Malaysia. *International Journal of Economics and Finance* , Vol 3, No1.
- Florackis, C., Kostakis, A., & Ozkan, A. (2009). Managerial ownership and performance. *Journal of Business Research* , 62, 1350–1357.
- Furno, M. (2005). The Glejser Test and the Median Regression. *The Indian Journal of Statistics* , 335-358.
- Galende, J., & De la Fuente, J. M. (2008). Internal Factors Determining a Firm's Innovative Behaviour. *Research Policy*, 32, 715-736.
- Glejser, H. (1969). *A new test for heteroscedasticity*. J. Amer. Statist. Assoc., 64, 316-323.
- Gomez, P. Y. (2005). On the Discretionary Power of Top Executives. *International Studies of Management & Organization* , 37-62.
- Gorton, G., & Schmid, F. (1999). Corporate governance, ownership dispersion and efficiency: Empirical evidence from Austrian cooperative banking. *Journal of Corporate Finance* , 5, 119-140.
- Gujarati, D., & Porter, D. (2009). *Basic Econometrics* (5th edition ed.). USA:McGraw-Hill.

- Han, K.C. & Suk, D.Y. (1998). The Effect of Ownership Structure on Firm Performance: Additional Evidence. *Review of Financial Economics*, Vol 7, no.2, pp.143.
- Hayashi, F. (2000). Finite-Sample Properties of OLS. *Econometrics* , 3-84
- Holderness, C., Kroszner, R., & Sheehan, D. (1999). Were the good old days that good? Changes in managerial stock ownership since the great depression. *Journal of Finance* , 54, 435-469.
- Hu, Y., & Zhou, X. (2008). The Performance Effect of Managerial Ownership : Evidence from China. *Journal of Banking and Finance*, 32, 2099-2110.
- Iannotta, G., Nocera, G., & Sironi, A. (2007). Ownership structure, risk and performance in the European banking industry. *Journal of Banking & Finance* , 31, 2127-2149.
- Isakov, D. & Weisskopf, J.P. . (2009). Family Ownership , Multiple Blockholders and Firm Performance . *Finance International Meeting AFFI - EUROFIDAI* . Paris.
- Jabeen, M., & Shah, A. (2011). A review on family ownership and information asymmetry. *African Journal of Business Management* , 3 (35), 13550-13558.
- Jiang, B.-B., Laurenceson, J., & Tang, K. K. (2008). Share reform and the performance of China's listed companies. *China Economic Review* , 19, 489-501.
- Kapopoulos, P., & Lazaretou, S. (2007). Corporate Ownership Structure and Firm Performance: evidence from Greek firms. *Journal Compilation* , 15 (2), 144-158.
- Kim, E. (2006). The impact of family ownership and capital structures on productivity performance of Korean manufacturing firms: Corporate governance and the “chaebol problem”. *Journal of THE JAPANESE AND INTERNATIONAL ECONOMIES* , 20, 209-233.

- Kogid, M. , Kok, S.C. Jusoh, M. (2009). Asian Financial Crisis: An analysis of the Contagion and Volatility Effects in the Case of Malaysia. *International Journal of Business and Management*, 128-138.
- Kumar, J. (2003). Ownership Structure and Corporate Firm Performance. *Indira Gandhi Institute of Development Research*.
- Lcxiere, C., & Martinb, K. (1997). Executive stock ownership and performance Tracking faint traces . *Journal of Financial Economics* , 45, 223-255.
- Leech, D., & Leahy, J. (1991). Ownership Structure, Control Type Classifications and the Performance of Large British Companies. *The Economic Journal* , 101 (49), 1418-1437.
- Li, D., Moshirian, F., Nguyen, p., & Tan, L. (2007). Managerial ownership and firm performance: Evidence from China's privatizations. *Research in International Business and Finance* , 21, 396–413.
- Li, T., Sun, L., & Zou, L. (2009). State ownership and corporate performance: A quantile regression analysis of Chinese listed companies. *China Economic Review* , 20, 703-716.
- Lucey, T. (2012, september 1). *Quantitative Techniques*. Retrieved January 13, 2014, from amazon: http://www.amazon.com/Quantitative-Techniques-Terence-Lucey/dp/0826458548/ref=la_B001K89IQS_1_3?s=books&ie=UTF8&qid=1396361725&sr=1-3
- Lumsdaine, R. L., & Ng, S. (1999). Testing for ARCH in the presence of a possibly misspeci"ed conditional mean. *Journal of Econometrics*, 93, 257-279.
- Omran, M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics* , 28, 32-45.
- Maddala, G. S. (2001). *Introduction to Econometrics* (3rd ed.). New York: John.

- Majluf, N., & Silva, F. (2008). Does family ownership shape performance outcomes? *Journal of Business Research* (61), 609-614.
- Majumdar, S. K. (1997). The Impact of Size and Age on Firm-Level Performance: Some Evidence from India. *Review of Industrial Organization*, 12, 231-241.
- Martinez, J., Stohr, B., & Quiroga, B. (2007). Family ownership and firm performance: evidence from public companies in Chile. *Family Business Review*, 20, 83-94.
- Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance*, 12, 321-341.
- McConnell, J., & Servaes, H. (1990). Additional Evidence on Equity Ownership and Corporate Value. *Journal of Financial Economics*, 27, 595-612.
- Means, G. C., & Berle, A. A. (1932). The Dispersion of Stock Ownership. In *The Modern Corporation and Private Property* (pp. 47-68).
- Mikkelson, W. H., Partch, M. M., & Shah, K. (1997). Ownership and operating performance of companies that go public. *Journal of Financial Economics*, 44, 281-307.
- Morck, R., Shleifer, A., & Vishny, R. (1988). Management Ownership and Market Valuation. *Journal of Financial Economics*, 20, 293-315.
- Moshirian, F., Nguyen, P., & Tan, L. W. (2007). Managerial ownership and firm performance: Evidence from China's privatizations. *Research in International Business and Finance*, 21, 396-413.
- Mourier, M. (2010). Multiple blockholder ownership and performance of companies. *Unpublished Master Thesis of Copenhagen Business School*.
- NA, S.-K., & Ratti, R. (2002, December). Ownership Structure and Firm Performance in Korea. 1-107.

- Newey, W.K. and K.D. West(1987). *A simple, positive definite, Heteroscedasticity and autocorrelation consistent covariance matrix.* *Econometrica* 55, 703-708.
- Ng, A., Yuce, A., & Chen, E. (2009). Determinants of state equity ownership, and its effect on value/performance: China's privatized firms. *Pacific-Basin Finance Journal* , 17, 413-443.
- Oluwatayo, A. A., & Amole, D. (2013). Ownership, structure, and performance of architectural firms. *Frontiers of Architectural Research*, 2, 94-106..
- Ongore, V. O. (2011). The relationship between ownership structure and firm performance: An empirical analysis of listed companies in Kenya. *African Journal of Business Management* , Vol. 5(6), 2120-2128.
- Ortega-Argiles, R., & Moreno, R. (2009). Evidence on the Role of Ownership Structure on Firm's Innovative Performance. *Research Institute of Applied Economics*.
- Park, H. M. (2009). *Comparing Group Means: T-tests and One-way ANOVA Using STATA, SAS, R, and SPSS*. Working Paper. The University Information Technology Services (UITS) Center for Statistical and Mathematical Computing, Indiana University.
- Perrini, F., Rossi, G., & Rovetta, B. (2008). Does Ownership Structure Affect Performance? Evidence from the Italian Market. *Journal Compilation* , 16 (4), 312-325.
- Qi, D., Wu, W., & Zhang, H. (2000). Shareholding structure and corporate performance of partially privatized firms: evidence from listed. *Pacific-Basin Finance Journal* , 8, 587-610.
- Rois, R., Basak, T., Rahman, M. M., & Majumder, A. K. (2012). Modified Breusch-Godfrey Test for Restricted Higher Order Autocorrelation in Dynamic Linear Model – A Distance Based Approach. *International Journal of Business and Management*, 7(17), 88-97.

- Rose, C. (2005). Managerial Ownership and Firm Performance in Listed Danish Firms: In Search of the Missing Link. *European Management Journal* , 23 (5), 542–553.
- Ruan, W., Tian, G., & Ma, S. (2011). Managerial Ownership, Capital Structure and Firm Value: Evidence from China's Civilian-run Firms. *Australasian Accounting Business and Finance Journal* , 5 (3), 73-92.
- Salehi, M., & Baezgar, B. (2011). A survey of empirical studies on management ownership. *African Journal of Business Management* , 5 (17), 7188-7197.
- Shleifer, A., & Vishny, R. W. (1997). A survey of Corporate Governance. *The Journal of Finance* , 52 (2), 737-783.
- Shleifer, A., & Vishny, R. W. (1988). Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics* , 20, 293-315.
- Shleifer, A., & Wolfenzon, D. (2002). Investor protection and equity markets. *Journal of Financial Economics* , 66, 3-27.
- Silva, F., & Majluf, N. (2008). Does family ownership shape performance outcomes? *Journal of Business Research* , 61, 609-614.
- (2010). *Tenth Malaysia Plan 2011-2015*. Putrajaya: The Economic Planning Unit, Prime Minister Department .
- The Official Portal of Malaysia External Trade Development Corporation*. (2013). Retrieved from [matrade.gov.my](http://www.matrade.gov.my): <http://www.matrade.gov.my/en/malaysia-exporters-section/33-trade-statistics/1765-malaysias-trade-with-the-world-2000-2010>
- Tranmer, M., & Elliot, M. (n.d.). Multiple Linear Regression. *Cathie Marsh Centre for Census and Survey Research*, 7-9.
- Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics* , 80, 385–417.

- Wei, Z., & Varela, O. (2003). State equity ownership and firm market performance: evidence from China's newly privatized firms. *Global Finance Journal* , 14, 65-82.
- Wei, Z., Xie, F., & Zhang, S. (2004). Ownership Structure and Firm Value in China's Privatized Firms: 1991-2001. *Department of Economics and Finance* , 40 (1), 87.
- White, H. (1980). A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. *Econometrica*, 48(4), 817-838.
- Xu, X., & Wang, Y. (1999). Ownership Structure and Corporate Governance in Chinese Stock Companies. *China Economic Review* , 10, 75-98.
- Yen, T.-Y., & Andre, P. (2007). Ownership structure and operating performance of acquiring firms: The case of English-origin countries. *Journal of Economics and Business* , 59, 380-405.
- Yixiang, Z. (2011). Empirical Research on Ownership Structure and Corporate Performance Based on the Perspective of Dynamic Endogeneity. *Energy Procedia* , 5, 1878-1884.
- Young-Sam, K., & Byung-Yeon, K. (2012). Ownership structure and firm performance: Evidence from the Chinese corporate reform. *China Economic Review* , 23, 471-481.
- Yusoff, M. B. (2005). MALAYSIAN BILATERAL TRADE RELATIONS AND ECONOMIC GROWTH. *International Journal of Business and Society* (6), 55-68.
- Zahra, S. A. (2005). Entrepreneurial Risk Taking in Family Firms. *Family Business Review*, 23-40.
- Zahra, S., Hayton, J., & Salvato, C. (2004). Entrepreneurship in Family vs Non-Family Firms: A Resource- Based Analysis of the Effect of Organizational Culture. *Entrepreneurship Theory Practice* , 28 (4), 363-381.

Zhou, X. (2001). Understanding the determinants of managerial ownership and the link between ownership and performance: comment. *Journal of Financial Economics* , 62, 559-571.

APPENDICES

Appendix 1: Result of Managerial Ownership

Dependent Variable: MAN_1

Method: Least Squares

Date: 03/02/14 Time: 11:02

Sample: 1 350

Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_FA	-0.025237	0.072244	-0.349323	0.7271
LOG_AS	-0.078945	0.031015	-2.545411	0.0114
LEVERAGE	-0.235921	0.076689	-3.076339	0.0023
ROA	-0.027671	0.054445	-0.508237	0.6116
ROE	0.011674	0.021911	0.532814	0.5945
TQ	0.181159	0.137070	1.321658	0.1872
C	0.719369	0.321967	2.234290	0.0261
R-squared	0.077019	Mean dependent var	0.142857	
Adjusted R-squared	0.060874	S.D. dependent var	0.350428	
S.E. of regression	0.339595	Akaike info criterion	0.697670	
Sum squared resid	39.55633	Schwarz criterion	0.774828	
Log likelihood	-115.0922	Hannan-Quinn criter.	0.728381	
F-statistic	4.770330	Durbin-Watson stat	0.697866	
Prob(F-statistic)	0.000109			

Appendix 2: Result of Non-managerial ownership

Dependent Variable: NON_MAN_1

Method: Least Squares

Date: 03/02/14 Time: 11:04

Sample: 1 350

Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_FA	0.025237	0.072244	0.349323	0.7271
LOG_AS	0.078945	0.031015	2.545411	0.0114
LEVERAGE	0.235921	0.076689	3.076339	0.0023
ROA	0.027671	0.054445	0.508237	0.6116
ROE	-0.011674	0.021911	-0.532814	0.5945
TQ	-0.181159	0.137070	-1.321658	0.1872
C	0.280631	0.321967	0.871614	0.3840
R-squared	0.077019	Mean dependent var	0.857143	
Adjusted R-squared	0.060874	S.D. dependent var	0.350428	
S.E. of regression	0.339595	Akaike info criterion	0.697670	
Sum squared resid	39.55633	Schwarz criterion	0.774828	
Log likelihood	-115.0922	Hannan-Quinn criter.	0.728381	
F-statistic	4.770330	Durbin-Watson stat	0.697866	
Prob(F-statistic)	0.000109			

Appendix 3: Variable in the model

Y – Managerial Ownership / Non-Managerial Ownership

X₂ - Firm Age (Year)X₃ - Firm Size (Total Asset in Rm)X₄ - Leverage (Total Debt / Total Asset)X₅ - Return on Asset (Net Income / Total Asset)X₆ - Return on Equity (Net Income / Total Equity)X₇ - Tobin's Q (Equity + Long-term debt + Short-term debt) / Total Asset

Appendix 4: Result of Durbin-Watson Test (Eviews)

Dependent Variable: MAN_1

Method: Least Squares

Date: 02/27/14 Time: 02:39

Sample: 1 350

Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_FA	-0.025237	0.072244	-0.349323	0.7271
LOG_AS	-0.078945	0.031015	-2.545411	0.0114
LEVERAGE	-0.235921	0.076689	-3.076339	0.0023
ROA	-0.027671	0.054445	-0.508237	0.6116
ROE	0.011674	0.021911	0.532814	0.5945
TQ	0.181159	0.137070	1.321658	0.1872
C	0.719369	0.321967	2.234290	0.0261
R-squared	0.077019	Mean dependent var	0.142857	
Adjusted R-squared	0.060874	S.D. dependent var	0.350428	
S.E. of regression	0.339595	Akaike info criterion	0.697670	
Sum squared resid	39.55633	Schwarz criterion	0.774828	
Log likelihood	-115.0922	Hannan-Quinn criter.	0.728381	
F-statistic	4.770330	Durbin-Watson stat	0.697866	
Prob(F-statistic)	0.000109			

Appendix 5: Result of Breusch-Godfrey Serial Correlation LM Test (Eviews)

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	257.9701	Prob. F(1,342)	0.0000
Obs*R-squared	150.4901	Prob. Chi-Square(1)	0.0000

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 02/27/14 Time: 02:40

Sample: 1 350

Included observations: 350

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_FA	-0.000754	0.054624	-0.013811	0.9890
LOG_AS	-0.002288	0.023451	-0.097578	0.9223
LEVERAGE	0.042798	0.058046	0.737309	0.4614
ROA	-0.018165	0.041181	-0.441109	0.6594
ROE	-0.028048	0.016658	-1.683694	0.0932
TQ	-0.001316	0.103639	-0.012699	0.9899
C	0.015593	0.243443	0.064051	0.9490
RESID(-1)	0.660416	0.041118	16.06145	0.0000
R-squared	0.429972	Mean dependent var	-4.75E-16	
Adjusted R-squared	0.418304	S.D. dependent var	0.336663	
S.E. of regression	0.256769	Akaike info criterion	0.141315	
Sum squared resid	22.54823	Schwarz criterion	0.229496	
Log likelihood	-16.73008	Hannan-Quinn criter.	0.176414	
F-statistic	36.85287	Durbin-Watson stat	1.951094	
Prob(F-statistic)	0.000000			

Appendix 6: Tolerance of Autocorrelation - Newey-West Test (Eviews)

Dependent Variable: MAN_1
 Method: Least Squares
 Date: 02/27/14 Time: 02:41
 Sample: 1 350
 Included observations: 350
 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 6.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_FA	-0.025237	0.125957	-0.200358	0.8413
LOG_AS	-0.078945	0.032121	-2.457725	0.0145
LEVERAGE	-0.235921	0.094592	-2.494100	0.0131
ROA	-0.027671	0.041609	-0.665013	0.5065
ROE	0.011674	0.011132	1.048749	0.2950
TQ	0.181159	0.104944	1.726254	0.0852
C	0.719369	0.300223	2.396113	0.0171
R-squared	0.077019	Mean dependent var		0.142857
Adjusted R-squared	0.060874	S.D. dependent var		0.350428
S.E. of regression	0.339595	Akaike info criterion		0.697670
Sum squared resid	39.55633	Schwarz criterion		0.774828
Log likelihood	-115.0922	Hannan-Quinn criter.		0.728381
F-statistic	4.770330	Durbin-Watson stat		0.697866
Prob(F-statistic)	0.000109			

Appendix 7: Result of ARCH Test (Eviews)

Heteroskedasticity Test: ARCH

F-statistic	28.59350	Prob. F(9,331)	0.0000
Obs*R-squared	149.1539	Prob. Chi-Square(9)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 02/23/14 Time: 20:50

Sample (adjusted): 10 350

Included observations: 341 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.041532	0.012345	3.364247	0.0009
RESID^2(-1)	0.625558	0.054963	11.38139	0.0000
RESID^2(-2)	0.057759	0.064757	0.891935	0.3731
RESID^2(-3)	-0.024589	0.064789	-0.379529	0.7045
RESID^2(-4)	0.028033	0.064747	0.432956	0.6653
RESID^2(-5)	-0.209378	0.063729	-3.285470	0.0011
RESID^2(-6)	0.048076	0.064740	0.742596	0.4583
RESID^2(-7)	0.044662	0.064779	0.689440	0.4910
RESID^2(-8)	0.056845	0.064749	0.877926	0.3806
RESID^2(-9)	0.012395	0.054963	0.225515	0.8217
R-squared	0.437402	Mean dependent var	0.115307	
Adjusted R-squared	0.422104	S.D. dependent var	0.215242	
S.E. of regression	0.163626	Akaike info criterion	-0.753584	
Sum squared resid	8.861981	Schwarz criterion	-0.641212	
Log likelihood	138.4861	Hannan-Quinn criter.	-0.708813	
F-statistic	28.59350	Durbin-Watson stat	1.996697	
Prob(F-statistic)	0.000000			

Appendix 8: Result of Glejser Test (Eviews)

Heteroskedasticity Test: Glejser

F-statistic	15.49209	Prob. F(6,343)	0.0000
Obs*R-squared	74.62600	Prob. Chi-Square(6)	0.0000
Scaled explained SS	100.0850	Prob. Chi-Square(6)	0.0000

Test Equation:
 Dependent Variable: ARESID
 Method: Least Squares
 Date: 02/26/14 Time: 02:02
 Sample: 1 350
 Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.073445	0.201394	5.330074	0.0000
LOG_FA	-0.035764	0.045189	-0.791429	0.4292
LOG_AS	-0.106429	0.019400	-5.486048	0.0000
LEV	-0.215559	0.047970	-4.493657	0.0000
ROA	-0.035265	0.034056	-1.035501	0.3012
ROE	0.005728	0.013705	0.417962	0.6762
TQ	0.164770	0.085738	1.921777	0.0555
R-squared	0.213217	Mean dependent var	0.238358	
Adjusted R-squared	0.199454	S.D. dependent var	0.237412	
S.E. of regression	0.212420	Akaike info criterion	-0.240705	
Sum squared resid	15.47694	Schwarz criterion	-0.163546	
Log likelihood	49.12339	Hannan-Quinn criter.	-0.209993	
F-statistic	15.49209	Durbin-Watson stat	0.811044	
Prob(F-statistic)	0.000000			

Appendix 9: Result of Breusch-Pagan-Godfrey Test (Eviews)

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	6.242854	Prob. F(6,343)	0.0000
Obs*R-squared	34.45853	Prob. Chi-Square(6)	0.0000
Scaled explained SS	58.58870	Prob. Chi-Square(6)	0.0000

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 02/26/14 Time: 22:37

Sample: 1 350

Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.560900	0.193387	2.900398	0.0040
LOG_FIRIMAGE	-0.013959	0.043393	-0.321682	0.7479
LOG_ASSET	-0.060824	0.018629	-3.265081	0.0012
LEVERAGE	-0.144292	0.046063	-3.132532	0.0019
ROA	-0.019525	0.032702	-0.597063	0.5509
ROE	0.005007	0.013160	0.380490	0.7038
TOBIN_Q	0.120073	0.082330	1.458434	0.1456
R-squared	0.098453	Mean dependent var	0.113018	
Adjusted R-squared	0.082682	S.D. dependent var	0.212969	
S.E. of regression	0.203975	Akaike info criterion	-0.321843	
Sum squared resid	14.27076	Schwarz criterion	-0.244684	
Log likelihood	63.32254	Hannan-Quinn criter.	-0.291131	
F-statistic	6.242854	Durbin-Watson stat	0.792077	
Prob(F-statistic)	0.000003			

Appendix 10: Result of White-Heteroscedasticity Test (Eviews)

Heteroskedasticity Test: White

F-statistic	2.255173	Prob. F(27,322)	0.0005
Obs*R-squared	55.65933	Prob. Chi-Square(27)	0.0009
Scaled explained SS	94.63573	Prob. Chi-Square(27)	0.0000

Test Equation:
 Dependent Variable: RESID^2
 Method: Least Squares
 Date: 02/27/14 Time: 02:42
 Sample: 1 350
 Included observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.097268	3.191179	-0.030480	0.9757
LOG_FA	0.395439	0.948045	0.417110	0.6769
LOG_FA^2	-0.137444	0.140303	-0.979622	0.3280
LOG_FA*LOG_AS	0.051073	0.096018	0.531904	0.5952
LOG_FA*LEVERA				
GE	-0.079180	0.233214	-0.339516	0.7344
LOG_FA*ROA	0.416885	0.557479	0.747805	0.4551
LOG_FA*ROE	0.143152	0.261425	0.547582	0.5844
LOG_FA*TQ	-0.456416	0.575463	-0.793128	0.4283
LOG_AS	-0.243763	0.650943	-0.374476	0.7083
LOG_AS^2	0.015412	0.034984	0.440550	0.6598
LOG_AS*LEVERA				
GE	0.102005	0.102000	1.000050	0.3180
LOG_AS*ROA	-0.510188	0.348281	-1.464875	0.1439
LOG_AS*ROE	0.058371	0.087599	0.666347	0.5057
LOG_AS*TQ	-0.171285	0.172875	-0.990803	0.3225
LEVERAGE	-0.871592	1.496087	-0.582581	0.5606
LEVERAGE^2	0.133120	0.314987	0.422619	0.6729
LEVERAGE*ROA	-0.071138	0.551135	-0.129076	0.8974
LEVERAGE*ROE	-0.876300	2.845894	-0.307917	0.7583
LEVERAGE*TQ	-0.217033	1.183580	-0.183370	0.8546
ROA	-2.394242	8.387182	-0.285464	0.7755
ROA^2	0.064994	0.130925	0.496419	0.6199
ROA*ROE	-0.050093	0.132287	-0.378669	0.7052
ROA*TQ	5.260108	7.102913	0.740556	0.4595
ROE	0.965533	2.496762	0.386714	0.6992
ROE^2	0.004291	0.011765	0.364752	0.7155
ROE*TQ	-0.857231	3.649445	-0.234893	0.8144
TQ	2.644162	1.715900	1.540977	0.1243
TQ^2	-0.208837	0.578726	-0.360856	0.7184
R-squared	0.159027	Mean dependent var	0.113018	

Adjusted R-squared	0.088510	S.D. dependent var	0.212969
S.E. of regression	0.203326	Akaike info criterion	-0.271395
Sum squared resid	13.31193	Schwarz criterion	0.037239
Log likelihood	75.49419	Hannan-Quinn criter.	-0.148548
F-statistic	2.255173	Durbin-Watson stat	0.792707
Prob(F-statistic)	0.000496		
