

DIVIDEND POLICY AND AGENCY COST IN
MALAYSIA

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A research project submitted in partial fulfillment of the
requirement for the degree of

BACHELOR OF FINANCE (HONS)

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE
DEPARTMENT OF FINANCE

AUGUST 2013

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DECLARATION

We hereby declare that:

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

Our research project has been successfully completed with the assistance of various authorities. We would like to take this opportunity to thank everyone who have help and guide us in completing our research project.

First of all, we would like to thank to University Tunku Abdul Rahman (UTAR) for giving us the opportunity to conduct this research. It enables us to learn and gain more experience in conducting a research.

Furthermore, we express gratitude to our supervisor, Ms. Zuriawati Binti Zakaria; who is a lecturer of the Faculty of Business and Finance in UTAR. We are very grateful for her guidance, advice, suggestion, constructive comment and commitment to reply our queries promptly throughout this research project. Ms. Zuriawati Binti Zakaria always stood by us and scarified her valuable time for helping us when we were in need for assistance.

Finally, we would like to express our gratitude towards our beloved parents. Their continuous support and encouragement throughout our study in UTAR are essential. Additionally, we would like to extend our truthful thanks to all those have helped us for completing our Final Year Project.

DEDICATION

We would like to dedicate this paper to our beloved parents for their continuous support throughout our university life. Not forgetting lecturers and tutors that educate us during our degree life especially our supervisor, Ms Zuriawati Binti Zakaria. Lastly, we would also like to dedicate this paper to Universiti Tunku Abdul Rahman (UTAR) and our country, Malaysia.

TABLE OF CONTENTS

	Page
Copyright Page.....	ii
Declaration	iii
Acknowledgement.....	iv
Dedication	v
Table of Contents	vi
List of Tables	xi
List of Figures	xii
List of Abbreviations	xiii
Preface.....	xv
Abstract.....	xvi
CHAPTER 1 INTRODUCTION	1
1.1 Research Background.....	1
1.1.1 Agency Problem in Abroad and Malaysia.....	1
1.1.1.1 Cases of Agency Problem in Abroad.....	4
1.1.1.2 Cases of Agency Problem in Malaysia.....	7
1.1.2 Dividend Policy.....	9
1.2 Problem Statement.....	13
1.3 Research Objective.....	14
1.4 Research Question.....	15
1.5 Hypothesis of the Study.....	15
1.6 Significant of the Study.....	16

1.7	Chapter Layout.....	17
1.7.1	Chapter 1.....	17
1.7.2	Chapter 2.....	18
1.7.3	Chapter 3.....	18
1.7.4	Chapter 4.....	18
1.7.5	Chapter 5.....	18
1.8	Conclusion.....	19
CHAPTER 2	REVIEW OF LITERATURE	20
2.0	Introduction.....	20
2.1	Review of the Literature.....	20
2.1.1	Dividend Policy and Agency Problem	20
2.1.2	Firm Size and Agency Problem.....	25
2.1.3	Ownership Concentration and Agency Problem.....	26
2.1.4	Firm Debt and Agency Problem.....	29
2.1.5	Liquidity and Agency Problem.....	32
2.1.6	Crisis and Agency Problem.....	33
2.2	Review of Relevant Theoretical Models.....	35
2.2.1	M & M Dividend Irrelevant Theory.....	35
2.2.2	Agency Theory.....	36
2.3	Proposed Conceptual Framework.....	38
2.4	Hypothesis Development.....	40
2.5	Conclusion.....	41
CHAPTER 3	METHODOLOGY.....	42

3.0	Introduction.....	42
3.1	Research Design.....	42
3.2	Data Collection Method.....	43
3.3	Sampling Design.....	46
3.3.1	Target Population in Malaysia.....	46
3.4	Research Instrument.....	46
3.5	Construct Measurement.....	47
3.5.1	Measurement of Agency Cost.....	47
3.5.2	Measurement of Dividend Payout.....	48
3.5.3	Measurement of Firm Size.....	48
3.5.4	Measurement of Ownership Concentration Structure.....	49
3.5.5	Measurement of Firm Debt.....	50
3.5.6	Measurement of Liquidity.....	51
3.6	Data Processing.....	52
3.7	Data Analysis.....	53
3.7.1	Multiple Linear Regressions.....	53
3.7.2	T-test Statistic.....	55
3.7.3	F-test Statistic.....	55
3.7.4	Diagnostic Checking.....	56
3.7.4.1	Normality Test.....	56
3.7.4.2	Multicollinearity.....	57
3.7.4.3	Autocorrelation.....	58

3.7.4.4 Heterosecdasticity.....	59
3.8 Conclusion.....	61
CHAPTER 4 DATA ANALYSIS.....	62
4.0 Introduction.....	62
4.1 Descriptive Analysis.....	62
4.2 Scale Measurement.....	64
4.2.1 Hausman Test.....	64
4.2.2 Normality Test.....	65
4.2.3 Multicollinerity.....	66
4.2.4 Autocorrelation.....	68
4.3 Regression Result.....	70
4.4 Conclusion.....	75
CHAPTER 5 DISCUSSION, CONCLUSION AND IMPLICATION.....	76
5.0 Introduction.....	76
5.1 Summary of Statistical Analyses.....	76
5.2 Discussion on Major Finding.....	78
5.2.1 Dividend Payout and Agency Cost.....	79
5.2.2 Firm Size and Agency Cost.....	80
5.2.3 Ownership Structure and Agency Cost.....	80
5.2.4 Debt and Agency Cost.....	82
5.2.5 Liquidity and Agency Cost.....	82
5.2.6 Crisis and Agency Cost.....	84
5.3 Implication of Study	84

5.4	Limitation of Study	86
5.5	Recommendation for Future Research.....	86
5.6	Conclusion	88
	References	89

LIST OF TABLES

	Page
Table 1.1: DPS/FCFPS by Industry Sector, 2004-2008	12
Table 1.2: Top 5 dividend yield in Malaysia (until May, 2013)	13
Table 4.1: Result of Descriptive Analysis	62
Table 4.2: Result of Hausman Test	64
Table 4.3: Result of Normality Test	65
Table 4.4: Pair-wise correlations of all variables for overall result	66
Table 4.5: Pair-wise correlations of all variables for low debt companies	67
Table 4.6: Pair-wise correlations of all variables for high debt companies	67
Table 4.7: Result of Autocorrelation	68
Table 4.8: Result of Unit Root Test	70
Table 4.9: Regression Result of Overall Model	70
Table 4.10: Regression Result of Low Debt Companies' Model	72
Table 4.11: Regression Result of High Debt Companies' Model	73
Table 5.1: Decision for the Hypotheses of the Study	77
Table 5.2: Summaries for the Hypotheses of the Study	78

LIST OF FIGURES

	Page
Figure 1.1: Share price of Sime Darby	8
Figure 2.1: Summary of determinants influence the agency costs	38
Figure 3.1: Flow Charts of Data Processing	52

LIST OF ABBREVIATIONS

2SLS	Two Stage Least Squares
3SLS	Three Stage Least Squares
AC	Agency Cost
ADF	Augmented Dickey-Fuller
AIRASIA	Airasia Bhd
BHPS	British Household Panel Survey
CBN	Central Bank of Nigeria
CHEETAH	Cheetah Holding Bhd
CLRM	Classical Linear Regression Model
DEBT	Firm Debt
DMY	Crisis of 2007-2008
DPS	Dividend per Share
DV	Dividend Policy
Eviews	Electronic Views
FCFPS	Free Cash Flow per Share
FEM	Fixed Effect Model
GCB	Guan Chong Bhd
GDP	Gross Domestic Product
GLS	Generalized Least Squares
GSEP	German Socioeconomic Panel
HHI	Herfindahl-Hirschman Index

LIS	Luxemburg Income Study
LQ	Liquidity
LSDV	Least Square Dummy Variable Estimator
MNCs	Multinational Firms
NLS	National Longitudinal Surveys
NPV	Net Present Value
OLS	Ordinary Least Squares
OWS	Ownership Concentration
PDF	Probability Density Function
PP	Philip-Perron
PSID	Panel Study of Income Dynamics
REITs	Real Estate Investment Trusts
SCIENTX	Scientx Bhd
SIZE	Firm Size
UNIMECH	Unimech Group Bhd
UTAR	University Tunku Abdul Rahman
VAR	Vector Autoregressive
WLS	Weighted Least Squares

PREFACE

This research paper was a part of the fulfillment requirement for Bachelor of Finance (Hons) and to be accomplishing within two trimesters. Our supervisor on this project is Ms. Zuriawati Binti Zakaria. Additionally, the final year project is indeed exclusively for the authors of this project yet it is based and refers on other researcher's research paper and the resources are quoted as in reference.

There are a huge number of researches and studies warp up on this topic but there are only a hand full of research and studies about the variables within Malaysia. Therefore, we are excited to know how these variables will affect each other between Malaysia. Hence, we specially select the topic 'Dividend Policy and Agency Cost in Malaysia'.

The process of writing this thesis is challenging but the knowledge and experience was precious in dealing the agency cost and dividend policy in Malaysia as well as it helps us for our future prospect.

ABSTRACT

Targeted population in this research was the 48 trading and services companies which are listed in Bursa Malaysia. Besides that, we also focused on the high and low debt trading and services industry in Malaysia in order to carry out our study. Panel data has been used in this research to carry out the regression model, taking from 2005 to 2010. Firm size, firm debt, ownership concentration, dividend policy and liquidity are the main causes of the agency problem. During this period of time which is from 2007 to 2008, there was a financial crisis worldwide. Thus, we include dummy variable in this research to represent the financial crisis.

Empirical result shown that firm size and agency problem is significant positive in all situations which are either low or high debt company. It might due to more securities analysis happened when the more bigly the firm size, thus lead to agency problem increase. On the other hand, crisis from 2007 to 2008 is one of the independent variables in our research, this factor and agency problem is insignificant negative in all situations which are either low or high debt company. Survive of company is the only objective when there is presented of financial crisis; hence agency problems may be reduce when the company attack by crisis. Lastly, we found that the others factors such as dividend policy, firm debt, liquidity and ownership concentration have inconsistent or different relationship in different situation.

Keywords: Agency problem, Dividend policy, Debt

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This section is discussed about the background of study, problem statement, research objective, research question, hypotheses of the study and significance of study.

1.1 Research Background

1.1.1 Agency Problem in Abroad and Malaysia

Agency problem is defined as conflicts of interest between corporate insiders, such as managers and controlling shareholders and outside investors such as minority shareholders which are central to the analysis of the modern corporation according to the James (1933) and Jensen and Meckling (1976).

Agency cost includes principal monitor expenditures, residual loss, combined with a set of contract between the agent and conflict of interest by Fama and Jensen (1983) and has been created since the separation of ownership and management of the corporation which was stated by agency theory. Besides that, stockholders assign the administration of the corporate affairs to the management and if the management makes a decision contrary to the main objective of the corporation that is the maximization of shareholders' wealth. This will cause the shareholders to undergo agency costs.

Agency costs are known as intangible costs that are created from the conflict of shareholders and managers' benefits and those of shareholders and bondholders. Behavior of agent can make the agency cost decrease in the firm value, which are difference with the owners.

According to Fama and Jensen (1983) and Islam (2010) agency costs have involves different monitor, cost of the bond and residual claim. Activities to monitor have constraints on agent, restrict operation and impose budget and compensation with the outcome of monitoring and bonding like to accept limit agent's contract to authoring decision making and agree to have qualified auditor to audit accounts. But even suffered enough monitoring and bonding, still cannot ensure that the agent to maximize their utility. Ever though has effective monitoring it will also be residual loss, because unable to ensure that the agent's action in the interest of the principal, considering the existing monitoring and welding equipment.

For special effects, features of residual claims in the resource can be allocated by decision rules are based on Fama and Jensen (1983). Contract structure is to limit agent's risk-taking by specifying both a fixed return or incentive pay and measure performance. Residual claim or residual risk bearers defined as residual risk for different resources and commitment of random into payment for agent and undertaken the contractual rights of cash flow. Most arise residual claim are organizing, financial mutual, nonprofit organization and another. Due to organization is a public company, organization for residual claims will become unrestricted. For example, stakeholders had not needed of any characteristic in the organization, residual claims can freely convert to another person and residual claim rights of net cash flows for the organization of life. Due to unlimited rule of residual claims of a public company, generally will almost complete separation and specialization of decision functions and residual risk bearing and it will occur the agency problem.

In business, lack of information such as activities of agent, monitor's cost and analysis performance of management are depended by agency cost. The cost of the plan is for money reward acting principal welfare maximization and cost determination and execution of policy rules such as supply of replacement is depended by cost. In the market, competitive conflict will cause manage to limit their freedom of agency to conflict their own interests. At the same time, opportunities to sell the business will make cost to limit (Islam, 2010).

According to Hansmann and Kraakman (2004) and Islam (2010), there are three parties will arise agency problem which are manager and shareholder, creditor and shareholder, credit and manager. Conflict interest normally occurs between shareholder and manager is from asymmetric information because different position and want to explore their own maximum interest. Happened on conflict interest problem between shareholder and manager have several reasons which are manager focused on the shorter duration investment horizon, manager control and making decisions for the whole organization while shareholder focused on maximum interest. Earning for a manager is fixed while shareholder is residual claim.

Creditor and shareholder also arise agency problem by Islam (2010). This will happen in an internal organization and normally will conflicts in investment decision and taking or choosing of the project and to measure how much must pay out dividend and calculate how to finance these projects. Shareholder likes to take a risky project because creditors most like to invest in this kind of project. It will lead to increase organization debt and risk especially bankruptcy risk. When a company is in distress, bankruptcy will most arise because creditors will follow the process of scheduling the debt payment to require an organization to repay back. Four categories can arise creditors and shareholders' which are moral hazard, adverse selection and signaling. The

manager must find a way to reduce an agency costs associated with equity which is increasing financial leverage.

1.1.1.1 Cases of Agency Problem in Abroad Countries

According to Carlos and Stephen (1990) studies, the agency problem in early Chartered companies, where is the case of the Hudson's Bay company was the multinational firm in trouble when the director has problems in supervising the overseas managers. The Hudson's Bay Company encounters the private trade by their own company managers, as it has become more problematic.

According to Palenzuela (1999), Spanish Insurance Industry have agency problem which are common stock companies and Mutual Insurance Company. Agency problem can occur by ownership structures, marketing channels and company portfolio of product and services between manager, policyholder and agent. Agency problem arise is based on own insurance company their business line. In Spanish insurance companies arise conflict of interest between manager, shareholder and policyholder. Reason of this is manager more like to focus on greater levels of consumption and less focus intensive work. Manager like lower risk investment and lower financial leverage because it can reduce the danger of bankruptcy and avoid their management investment portfolio and capital. This will arise agency problem between manager and shareholder because shareholder focus on maximization of profit if the manager no increase their benefit of insurance companies. Besides that, manager can damage shareholder interest and use this to divert resource. This agency problem can be control without any cost. But, this will related to policyholder and shareholders become agency problem. Shareholder will requests insurance companies use policy to increase the value of the available to policyholder. Insurance companies will expected policyholder behavior into

a set of premium and take advantage of them such as increase the cost of premium so that insurance companies can get benefit of policyholder.

According to Davis (2002), the Enron implosion in the United State causes a huge damage on the accounting professions, shareholders, stakeholders and also the economy of the United State compare to the other cases happened in US. According to Davis (2002), it is estimated that the cost to the US economy will be US\$ 64 billion in 2002 between the Enron and WorldCom Collapses. It is estimated by using US Federal Reserve that 17% of the decline in share prices is attributable to investor concerns about fraud and mistreatments of earnings which was due to these collapses. Davis (2002) found that the gross domestic product (GDP) will be decreases by 0.67% for the next two years. The reduction will give a big impact to the economy such as US\$ 35 billion of lost in production, US\$ 62 billion declined in GDP and 4500 direct job losses over the period. These losses in the US economy lead the difficulty in quantify the problems which are serious in the economy of US. The problems are such as public perception on the country's economy, loss of confidence in the reliability of financial reporting and the perception that the scandals are now etched in the centre of the system rather than the periphery. The US has enacted legislation with far reaching frameworks encompassing corporate responsibility, audit independence and heightened financial disclosure due to the Enron collapses according to Sarbanes-Oxley Act (2002).

Based on Kim and Lee (2003), the Korean company's incur agency problems when there is a financial crisis. As a result, they found out the major problems that the Korean company facing is the ineffective corporate governance system that concern to the various agency problems, and more agency problems will occur when the financial crisis concurrently, as the outcome it lowers the firm value. Although the authors suggest the corporate governance structure is an important factor to determine the role of agency problems

during the crisis, but the stock markets are more important to figure the agency problems. Hence, the authors also found a consistent result and cited based on Rajan and Zingales (1998) studies, that during the crisis, the investors will take more consideration of the corporate governance system, typically countries with weak corporate governance and it might have several impacts of agency problems on stock returns while in contrast on the operating performance.

According to Sadiq et al., the banking industry in Nigeria was started in 1892 with the establishment of the African Banking Corporation. The first legislation on banking was started after 1952 when the first ordinance in the industry was made. There are only five banks that exist which are three foreign banks and two indigenous banks. During 1959, the Central Bank of Nigeria (CBN) which is the apex regulatory authority in financial industry was set up. During the mid 80's the sector was highly regulated but by the end of 80's financial liberalization was taken place in order to encourage the growth and development in financial sector. The competitive market was taken place after the liberalization following with a laxity in the regulatory functions, poor credits, policy somersaults and bank panic. According to Sadiq et al., one of the cases of agency problem was found in Nigerian banking sector following the recapitalization exercise that took place in the industry in 2006. It is caused by the poor corporate governance that has been identified to be responsible for the distress in the sector in previous years. According to the CBN governor were engaged in "unethical and potentially fraudulent business practices". This led to the enrichment of senior top management executives to the detriment of the shareholders and depositors. The recapitalization exercise of 2006 caused the banks to raise their minimum share capital from \$13.4 million. This caused the banks to face with many problems of agency cost.

1.1.1.2 Cases of Agency Problem in Malaysia

According to Wain (2009), Malaysia Perwaja Steel Project face loss of RM2.56 billion, but actually losses RM10 billion. In year 2002, Prime Minister Dato Seri Dr.Mahathir had confessed that Perwaja had losses about RM10 billion. Stared with year 1982, Perwaja Steel as a government owned heavy industry Company Corporation with the Japanese Company Nippon Steel Corporation and invested a project with costs RM 1 billion in Terengganu in order to provide domestic demand for steel products. At that time, Perwaja Steel was faced by the production and bears a lot of debt in yen while interests of payment were more and more high. In 1987, Japanese Company Nippon Steel Corporation moved out the project invested in Terengganu. At the same time, Mahathir gave all the authority to Perwaja's Principal Eric Chia. Eric Chia was services in Perwaja for seven years and successful to solve a problem of production and debt and took a leave in year 1995. According to Wain (2009), after he leaved from Perwaja, all the deficit will be occurred, he draw from Bank Bumiputra which is RM 860 million and EPF which is RM130 million without discussions shareholder of Perwaja. Furthermore, he lead to Perwaja Steel losses from RM 1 billion increase to RM 2.49 billion and RM 5.7 billion on the additional debt crippled. The new principal of Perwaja had listed a report about Perwaja losses when services of Eric Chi are unauthorized contracts, unwise investment, misappropriation of funds, and poor management with broad of directors and manager, not accurate accounting record. When happened this case, Perwaja's broad of director were take action to absence the meeting, bidding process, blatantly ignored, and not satisfied with the Eric Chia. This will be causes to the agency problem happen because conflict of broad of director and shareholders of Perwaja. In year 2004, Eric Chia was be charged with dishonestly authorization and paid of RM76 million but total loses was more that RM 10 billion (Wain.B, 2009).

According to Malaysian Insider, the recent case in 2010 Sime Darby faced on huge losses compared to last 13 years which is RM1.6 billion until RM2.5 million. Information disclosed by Government enterprise group, share price of Sime Darby will drop which is from RM51, 981.90 million (May, 2010) to RM46, 272.90million. This will happened because of Sime Darby's broad of director which is Datuk Seri Ahmad Zubir Murshid unwise investment in the sectors of energy and utilities and project delay of the Bakun Dam in Sarawak. This will causes to agency problem happen because conflict interest of broad of director and shareholder of Sime Darby. In this project will causes company loss which is RM 2 million and company not get any return with this project. When this news disclose, Shareholder of Sime Darby will let Datuk Seri Ahmad Zubir Murshid took a leave and use legal to settle. Sime Darby faced RM 10 billion for law suited by project of Bakun Dam and will mke damaged reputation of Sime Darby. Besides that, it will make investor became not interested to invest Sime Darby's share price and profit of sime Darby will drop. When stock market opens the price, Sime Darby's share will decrease every one sen which is RM 8.65 to RM 7.70.

Figure 1.1: Share price of Sime Darby



Source: www.themmalaysianinsider.com

According to the star (2011), report that Chin Keem Feung, 46 years old and Shukri Abdul Tawad, 47 years old was the ex-directors of Transmile Group Bhd were caught under Section 122B (b) (BB) of the Securities Industry Act 1983. They had been locked up for issuing fallacious information of the income statement to the Bursa Malaysia Securities Bhd which were totaling RM989,191,000 in the fourth quarter and cumulative period of 2006, in a Transmile's quarterly report which was not examined consolidated results for the financial year ending Dec 31, 2006. The Sessions Court judge Datuk Jagjit Singh, had penalized RM300,000 for both criminal, in absence six month lock up and they were charged on November 14, 2007.

1.1.2 Dividend Policy

Dividend policy is a policy that board of director of a company will decide how much will be pay out to shareholders as dividend. Once a company makes a profit, management must decide on what to do with those profits. They could continue to retain the profits within the company, or they could pay out the profits to the owners of the firm in the form of dividends. Once the company decides on whether to pay dividends they may establish a somewhat permanent dividend policy, which may in turn impact on investors and perceptions of the company in the financial markets. What they decide depends on the situation of the company now and in the future. It also depends on the preferences of investors and potential investors.

Dividend policy is a puzzle toward coporate due to deciding on the amount of earnings to pay out as dividends is one of the tricky financial decisions that a firm's managers face. Another is that a proper understanding of dividend policy is crucial for many other areas of financial economics. In particular, theories of asset pricing, capital structure, mergers and acquisitions, and capital budgeting all rely on a view of how and why dividends are paid.

Clearly, dividend payment is one of the most important unsolved problems in finance due to dividend puzzle (Subramanian & Devi.S, 2011). Dividend puzzle is the empirically observed phenomena that companies pay dividends tend to be rewarded by investors with higher valuations. At present, there is no explanation widely accepted by economists. The Modigliani-Miller theorem suggests that the puzzle can be explained by some combination of taxes, bankruptcy costs, market inefficiency and asymmetric information only. Therefore, several explanations are advance such as tax-clientele theory, signaling theory, free-cash flow hypothesis to solve the dividend puzzle (Subramanian & Devi.S, 2011).

According to dividend survey report, 2009, there are twelve determinants can influence the dividend policy which are target dividend payout rate, stability of earnings, results of business operations, potential earning growth, level of retained earnings, capital structure, consistency of dividend payment, sufficiency of funding, return on equity, investment opportunities, liquidity of funds and others. Profitability, liquidity, leverage, investment opportunities and companies past dividend trends, these determinants of dividend policy can be categorized into this few main groups.

As well in the dividend survey report 2009, there is stated that each determinant alone may not be capable to influence the dividend policy but when interaction of these determinants, it will influence the dividend policy of a company. For example, when a company profitable but not liquid in cash, thus will not pay dividends to their investors due to insufficient of cash in hand. On the other hand, when a company profitable and also liquid in cash, they are not necessary pay dividend to their investors also maybe due to other factors affect their decisions such as choose to invest in positive NPV project or have to pay interest of borrowings to the borrower. In short, there is not necessary a profitable firm pay dividends to their shareholders.

Table 1.1 is the performance indicator of DPS/FCFPS based on industry sector in Malaysia from year 2004 to 2008. From the table, we can see that trading and services sector not shown any negative DPS/FCFPS in 2004 to 2008. Although there are no any negative value in DPS/FCFPS, but the value of DPS/FCFPS is lower than consumer, properties and REITS sectors. It can be supported by the 5-year average in above table which is consumer sector shown 0.29%, properties sector shown 0.18% and REITs sector shown 0.64%, all is more than trading and services sector which is only 0.17%. However, trading and services is not the lowest average dividend payout in these 5 years due to infrastructure sector shown only 0.07% DPS/FCFPS on average of 5 years.

In the year 2004, trading/services sector perform a RM 0.11 DPS/FCFPS. However, the figure of DPS/FCFPS drops to RM0.10 in 2005. In the year 2006, the figure increasingly back to RM0.15 DPS/FCFPS but in year 2007, the figure drops back to RM0.11. In the year 2008, the DPS/FCFPS of trading/services sector shown a quite big figure which is RM0.30 if compare with previous years.

Table 1.1: DPS/FCFPS by Industry Sector, 2004-2008

No	Industry Sector	DPS/ FCFPS (RM)	DPS/ FCFPS (RM)	DPS/ FCFPS (RM)	DPS/ FCFPS (RM)	DPS/ FCFPS (RM)	5-Year Average
		2004	2005	2006	2007	2008	(%)
1	Construction	-0.01	0.12	-0.02	0.31	-0.13	0.04
2	Consumer	0.33	0.35	0.34	0.21	0.25	0.29
3	Finance	-0.14	-0.21	-2.88	0.05	-2.01	-0.99
4	Hotel	0.14	0.18	0.14	0.15	-0.78	-0.03
5	Industrial	-0.01	0.18	0.15	-0.53	0.30	0.08
6	Infrastructure	0.09	0.09	0.08	0.04	0.08	0.07
7	Plantation	0.30	0.27	-0.15	0.27	-0.26	0.09
8	Properties	0.11	0.08	0.17	0.53	0.02	0.18
9	REITs	1.88	0.25	0.64	0.76	0.70	0.64
10	Technology	0.20	0.10	0.20	-0.08	0.06	0.06
11	Trading/Services	0.11	0.10	0.15	0.11	0.30	0.17

Note: REITs= Real Estate Investment Trusts, DPS= Dividend per share, FCFPS = Free Cash flow per share

Source: Dividend Survey Report 2009

International company Haveloche Corporation pursued a dividend policy of paying out 20% of earnings in cash dividends, from the IPO of stocks until 2000. However, when the new CEO took place in January 2000, there are some changes of their dividend policy since the firm need of equity funding. As a result, company reduce cash dividend (Stretcher & Michael, 2005).

Figure 1.2 below is the KLSE dividend policy stocks, which shows the dividend policy of the listed company in Bursa Malaysia in term of percentage updated by May, 2013. One of the companies, Airasia Bhd (AIRASIA) will adopt dividend policy of a payout 20% of earnings as dividend to their shareholders. Follow by Guan Chong Bhd (GCB) will adopt dividend policy of a payout 25% of earnings as dividend to their shareholders. Last but not least, Scientx Bhd (SCIENTX), Unimech Group Bhd. (UNIMECH) and

Cheetah Holding Bhd. (CHEETAH) will agree to payout 30% of earnings as dividend to their shareholders.

Table 1.2: Top 5 dividend yield in Malaysia (until May, 2013)

Stock Name	Dividend Policy (%)	Total EPS (Last 4Q) (cents)	Expected Dividend (cents)	Last Price (RM)	Dividend Yield (%)
AIRASIA	20	67.50	14.00	3.310	4.08
GCB	25	31.95	8.00	1.890	4.23
SCIENTX	30	43.53	13.00	4.190	3.12
UNIMECH	30	18.24	5.50	1.700	3.22
CHEETAH	30	8.34	2.50	0.520	4.81

Source: <http://www.malysiastock.biz/Dividend-Policy/>

1.2 Problem Statement

There are several reasons that encourage us to study the agency problem in Malaysian service and trading industry. We found that many service and trading industry in abroad for example United State, United Kingdom, Bangladesh companies encounter agency problem because of some reasons such as misappropriation of the company fund, mismanagement, fraud in accounting plan, conflict between manager and shareholders and so one. According to Sadiq et al. they found that there is an agency problem in Nigerian banking industry because of poor corporate governance due to recapitalization exercise. Other than that, we also found that according to Arnold and Lange (2003), Enron which is a services industry facing an agency problem because of misleading financial accounts.

We found that much news was provided related to the agency problem in Malaysian service and trading industry such as Transmail, Sime Darby, Perwaja and so one but

we found that there is fewer researchers have investigated the agency problem in services and trading industry in Malaysia. Therefore, this research mainly focuses to study the agency problem so we also study the agency problem in services and trading industry in Malaysia.

According to Kim and Lee (2003), economic crisis for instance the financial crisis 2007 to 2008, there may lead to the changes in the agency problem. Agency problem will become more distressing when the financial crisis happens. Therefore, we want to study whether the Malaysia companies will face the same situation as the Korean companies, as there is the occurrence of financial crisis.

In additional, the recent study by Savadjany and Haeri (2011) found that dividend policy and agency cost is not related in Tehran in 2011. However, there are many researchers proven that dividend policy and agency cost are related in a negative way in many countries. Due to ambiguous result between dividend policy and agency cost, therefore this study examine what is the relationship between dividend policy and agency cost in Malaysia.

1.3 Research Objective

1. To examine the relationship between dividend policy and agency cost in Malaysia.
2. To examine the relationship between firm size and agency cost in Malaysia.
3. To examine the relationship between ownership concentration and agency cost in Malaysia.
4. To examine the relationship between firm debt and agency cost in Malaysia.
5. To examine the relationship between the liquidity and agency cost in Malaysia.
6. To examine the relationship between the crisis and agency cost in Malaysia.

1.4 Research Question

1. What is the relationship of dividend policy toward the agency cost in Malaysia?
2. What is the relationship of firm size towards the agency cost in Malaysia?
3. What is the relationship of ownership concentration toward the agency cost in Malaysia?
4. What is the relationship of firm debt toward the agency cost in Malaysia?
5. What is the relationship of liquidity toward the agency cost in Malaysia?
6. What is the relationship of crisis toward the agency cost in Malaysia?

1.5 Hypothesis of the Study

Hypotheses One:

H₀: There is no relationship between dividend policy and agency costs in Malaysia.

H₁: There is relationship between dividend policy and agency costs in Malaysia.

Hypotheses Two:

H₀: There is no relationship between firm size and agency costs in Malaysia.

H₂: There is relationship between firm size and agency costs in Malaysia.

Hypotheses Three:

H₀: There is no relationship between ownership concentration and agency cost in Malaysia.

H₃: There is relationship between ownership concentration and agency cost in Malaysia.

Hypotheses Four:

H₀: There is no relationship between firm debt and agency cost in Malaysia.

H₄: There is relationship between firm debt and agency cost in Malaysia.

Hypotheses Five:

H₀: There is no relationship between liquidity and agency cost in Malaysia.

H₅: There is relationship between the liquidity and agency cost in Malaysia.

Hypotheses Six:

H₀: There is no relationship between crisis and agency cost in Malaysia.

H₆: There is relationship between crisis and agency cost in Malaysia.

1.6 Significance of the Study

This study provides a better understanding of the factors that affect the agency problems in Malaysia. The result of this research is beneficial to those relevant parties, for instance the policy makers, regulators, investors, companies, and academician who would like to investigate the study of agency problems.

This thesis might be able to contribute to policy maker in doing policy that suitable for service and trading company. Moreover, this thesis also benefits the policy maker to identify the factors that affect the level of agency problem which specifically in Malaysian services and trading companies. Thus, it could be used by the policy maker to see the basic idea about this issue. Another party that is relevant to the benefit of the studies is the company, where the companies able to determine what are the factors that major cause the agency problem, and find solution to manage the agency problem by monitoring the manager and shareholder relationship or the usage of company fund.

One of the parties who get the benefit of this study is the investors, where the investors are able to access the company financial performance by overview the annual report of the company such as the company income statement, balance sheet, and cash flow statement. Other than that, the investors could use this research as a

guidance to see either involve in the agency cost or not, for instance the misuse of the company funds, provide a fallacious financial statement and conflict between the shareholder and manager. Furthermore, before the investors invest in the company shares, the investor can view the company possibilities of insolvency or liquidation.

Nevertheless, the academician is also one of the relevant parties that benefit from this study. This is because the academician can further extend this research paper to compare their result of studies if the scope of studies is related to this research. Besides that, academician can gain more knowledge about this topic, for example the main causes of the agency problem in the company. The academician can compare the agency cost in the developing and developed countries, as this research is focus on developing country. Therefore, this study will benefit to the academician to know more about the agency problem in developing countries.

1.7 Chapter Layout

1.7.1 Chapter 1

Chapter 1 provides an introductory of the study which gives an overview of the research background. Besides, the problem statement, research objectives, research questions, hypotheses of the study and significant of the study are discuss in this chapter.

1.7.2 Chapter 2

Chapter 2 provides the literature review of the study. Theoretical model is adopted to develop the proposed conceptual framework and hypotheses development is used to explain the proposed conceptual framework.

1.7.3 Chapter 3

Chapter 3 explains about the methodology that used in this research project which includes the research design, data collection methods, sampling design, research instrument and econometric techniques analysis.

1.7.4 Chapter 4

Chapter 4 presents the patterns and analysis of the result according to the research questions and hypotheses. This research is performing through the estimated models by using Eview 6.0 software. We have also conducted the test for diagnostic checking which are normality test, multicollinerity test and Durbin-Watson test. Hausman test also being conducted to choice random or fixed effects model is more appropriate in this study.

1.7.5 Chapter 5

Chapter 5 covers the overall conclusion for this research project. It provides the discussions of the major findings and implications of the study. In addition,

the limitations of the study and recommendations for future research for further enhancement is provide in this chapter.

1.8 Conclusion

Chapter 1 provides an overall about the agency problems in Malaysia and as well as abroad country. It provides an overall understanding on the topic and purposes of conducting the research. This study mainly focuses on the agency problem in Malaysia which is occurring in service and trading industry. In order to more understanding about the topic, a review on relevant literature has to be done to seek for supporting evidence for the study. This will be conducted in the Chapter 2.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, a review of the literature will be discussed on the topic that study in Chapter 1, the relationship between agency cost and dividend policy. For further research, a relevant theoretical model is adopted to develop the proposed conceptual framework and the proposed conceptual framework is developed based on the research objectives and research questions that mentioned in Chapter 1. Besides, hypotheses are developed to further explain the proposed conceptual framework.

2.1 Review of the Literature

From the previous researches stated that dividend policy, firm size, ownership concentration, firm debt, liquidity and crisis have relationship with the agency problem. Following will discuss each of these variables and agency problem either is positively or negatively related.

2.1.1 Dividend Policy and Agency Problem

The finding of Rozeff (1982) states that when the larger number of stockholder own the outside equity and the insiders holders hold lesser share of the equity, the firms will be set up higher dividend payouts. The dividend payouts are part of the firms optimum controlling and serve to reduce agency costs. The researcher develop a model of optimal dividend payments

minimizes the total of the two costs. His use two independent variables as proxies for the agency cost which are the natural logarithm of the number of stockholders and the percent of stock held by insiders. He used 1,000 over 64 different industries as his sample sizes from 1974 until 1980. He found that stockholders demand a higher dividend payment if their possession is more scatter and if they can get a higher portion of the common equity. In addition, he also found that the dividend payment is negative relation to the percentage of stock held by insiders.

Dividends can also reduce agency conflicts by subjecting companies to the inspection of capital market monitoring (Easterbrook, 1984). The researcher used the agency-costs explanations of dividends. He lists some of the instrument by which increasing exercises of the capital and dividends can control the agency costs. If the firm is continuously in the market for new capital, so the less serious of the agency costs happened due to it constantly put the management under inspection by security exchange, investment banks and capital suppliers. Thus, the dividends payout will causes the firm to undergo a third-party audit, which serves to encourage managers to make public new information and reduce agency costs in order to protect needed of the funds.

Llyod et al. (1985) try to expand the research did by Rozeff (1982) of the agency costs as an explanatory cause in dividend payment ratio and proved that a strong support for their hypothesis of dividends as fractional solution to agency costs. It is consistent with the research made by Jensen (1986), where the high dividends payout could limit the cash available for managers. Thus, it can minimized the managers invest in the wastage perquisites and unprofitable projects. The larger companies have deviation towards more external management and moral hazard is possibly more important in such companies. Increasing size of the organization enhances difficulty of companies' contracts increasingly and this affects the complexity of management and also increases

the management costs. He also found that managers in the companies with high risk wish to substitute a small part of capital in the company. In addition, risk aversion will influence dividend policies of the company and also expected that more debt reduces agency conflicts.

As extension, Jensen et al. (1992) have linked between internal ownership and financial policy to information asymmetry among the external and internal investors. He believes that financial decisions of the internal ownership and corporations depend on each other. If the company increase the dividends payout in order to reduce the agency costs, the company's need to external money for investment is increased which enhances operation costs. They used cross-sectional data to differences the insider ownership and dividend policies in the U.S. Moreover, they analyzed firm data at two points in time, 1982 on 565 of the firms and 1987 on 632 of the firms. These two policies are set up related indirectly and directly through their correlation with operating characteristics of the firms. The results support the hypothesis that levels of insider ownership not the same of systematically across firms. The results of the analysis support the view that insider ownership and financial decisions are interdependent. Purposely, insider ownership has a negative influence on firm's dividend levels. Consequently, this observation supports Rozeff's view that the payout dividends on reducing the agency costs are slighter for firms with them have larger of the insider ownership.

The finding of Moh'd et al. (1995) state that they are more support and further contribution to the agency problems of dividend debate. They introduce a number of modifications to the cost minimization model including institutional holdings, industry dummies and a lagged dependent variable to the RHS of the equation to address possible dynamics. They used the Weighted Least Squares regression, employing panel data on 341 U.S. firms from 1972 to 1989 over 18 years support the view that the dividend process is of a dynamic nature. The result shows that when the managers hold a low

percentage of firm shares, the higher dividend payouts are observed and the external ownership becomes more dispersed. This supported the earlier researched of Rozeff's (1982) and Easterbrook's (1984) hypotheses that shareholders seek larger dividend payout as they observe their level of control to diminish.

Strong shareholder rights can minimize the agency cost of equity by enabling minority shareholders to safe high dividend payouts (La Porta et al., 2000). The researchers are tests on a cross section and they collect a sample of firms across 33 countries during 1989 until 1994 around the world to reveal the dividend policies of large corporations by using two alternative agency models of dividends which are "the substitute model" and "the outcome model". The outcome hypothesis posits negative relation between the dividend payouts and the agency costs. When agency costs are low, minority stockholders are more likely to be in a position to pressure corporate insiders to disgorge cash. Besides that, for the substitute hypothesis posits a positive relation between the dividend payouts and the agency costs. When agency costs are low, corporate insiders are less likely to use dividend payouts to establish a reputation for decent treatment of minority stockholders. According to the "the substitute model," insiders interested in issuing equity in the future pay dividend to build a reputation for presentable treatment of minority shareholders. According to the "the outcome model," dividends are paid because minority shareholders force corporate insiders to disgorge cash. The stronger minority shareholder rights should be associated with higher dividend payouts predict by the "the substitute model". However, the "the outcome model" predicts the opposite.

In India Manos (2002) discovered that the agency problems of dividend policy in the perspective of a rising economy. By adapted the Rozeff's cost minimization model the author introduce a business group relationship namely insider ownership, foreign ownership, institutional ownership and ownership

dispersion as an alternative for the agency costs. Based on 661 non-financial companies listed on the Bombay Stock Exchange. The results reveal a positive impact of all business group relationship to the decision of dividend payouts. The result also reveals a positive relationship between foreign and dividend payout indicates that the larger the percentage held by foreign institutions, the larger the need to induce capital market controlling. In addition, capital market controlling is also important when the distribution of ownership increases since the more generally the ownership spread, the more sensitive the free rider problem will be happened, hence, and the larger need for outside controlling. Further, the facts of a positive relationship between institutional and the dividend payout ratio is consistent with the favorite for dividends related forecast.

The recent study by Savadjany and Haeri (2011) stated that the dividend policy not creates agency costs in Tehran stock exchanges. Due to the company may create debt in proportion to its undistributed earnings and invests the whole funds. Thus, the conducted investment lacks appropriate effectiveness and as a result shareholders undergo agency costs. In order the researchers selected the companies listed in Tehran stock exchange from 2001 until 2006 as population. Beside than that, they selected the gainful firms that had not distributed some or all of their earnings as sample. The pair test has been used to examine the two groups of variable.

In a conclusion, we can expect negative relationship between dividend policy and agency costs. When the company payout more dividend, there is less agency problems in that company.

2.1.2 Firm size and Agency Problem

In the journal of Lasfer (1999), it is shows that the small size of firm is not subject to the agency cost however the large size of firm is significantly to the agency cost. It is because the small companies being high risk in borrowing the short term so reduce the agency cost and due to want reduce the agency cost, the small companies use leasing to finance their growth opportunities. Therefore, it can be said that firm's size positively toward the agency cost. When the firm's size is big the agency cost problem tends to occur. Lasfer used 2,256 United Kingdom's companies as sample size and observed from 1984 to 1996 by used pooled time-series and cross-sectional observations.

According to Doukas et al. (2005), when there are more securities analysis it will reduce the agency costs. Therefore, there is negative relationship between the securities analysis and agency costs. In their study, they also examine whether the ability of security analysis have impact on firm size and the result shown that securities analysis are less effect to the larger firm. On the other world, it can be said that the company size and securities analysis are negatively related. When the UK firm size is big, it will lead to security analysis is considerably less effective and last, agency problem will be increase. Thus it can be concluding that, when the size of company is large the agency problem is highly proportion occurring. The OLS regression model had been used to examine the monitoring effects of security analysis on agency costs.

In additional, Cohen and Yagil (2006) found that firm's size and agency cost of dividend was positive relationship. They conduct their survey by used questionnaire, question 1 deal with the agency cost of dividend factor while question 2, 3 and 4 regarding the sensitivity factor, the flow of information factor, and the size factor respectively. There are only consists of four questions about the agency costs. The study is based on an international

survey conducted by fax and addressed directly to CFOs of major companies in five different countries: the U.S, the U.K, Germany, Canada and Japan (Cohen & Yagil, 2006).

In short, we can expect that firm's size and agency costs is positively related which means when the firm's size is big, the agency costs tend to happened in that particular corporate.

2.1.3 Ownership Concentration and Agency Problem

According to Ang et al. (2000), they studied that the agency cost will rises when there is a reduction in managerial ownership. This can be explained by the impacts of economies of scale and differences in capital structure in a firm. Other than that, the author also provides evidence that delegated monitoring of small firms by the banks will lower the agency problem. They found that the agency cost levels for non-listed United State businesses are negatively related to the manager's ownership interest and the degree of external bank monitoring and it is positively related to the number of shareholders and the existence of outside managers. It means that when the manager's ownership increases, the agency cost will decreases. The author collects the information from 5 million small farm and nonfinancial business operating in United State. The study is carried out at the end of 1992. The method use by the authors to run this result is multivariate regression. This regression help the authors to explain the factors that affects the agency cost rather than ownership structure which are the annual sales and the firm age.

Marck and Yeung (2003), find China firms during 2005 to 2007 that the firms that fully controlled by families will have less agency problem in the firm. This shows that both ownership structure and agency problem have a negative relationship.

Apart from that, Anderson et al. (2003), study the relationship between founding family ownership and agency cost in a firm during the period of 1993 to 1998. The researchers found that founding family ownership have potential to alleviate the agency cost of debt inside the firm. This is because families, who are act beyond their ownership stake, can exert additional power and have possibility to reduce the agency problem inside the firm by placing one of their family members in the CEO position. Therefore, their study concluded that there is a negative relationship between the founding family ownership and the agency cost of debt.

Other than that, Mollah et al. (2007) study 10 years listed Bangladesh company and the result revealed that the agency problem is worst when the degree of insider ownership such as family controlled firms in Bangladesh is less when the dispersion of ownership is high. This is because according to agency cost theory, the firm with higher dividend payout ratio will have less equity fraction held by the insider and therefore the degree of ownership dispersion will be high.

Consistently, Florackis and Ozkan (2008) also find that the larger ownership concentration of UK companies, it will mitigate the agency problem in a firm. This is because the effect of managerial ownership depends on the trade-off between the entrenchment and alignment effects.

In addition Ahmed (2009) took the Bursa Malaysia companies for period of 5 years which is from 1997 to 2001. Logistic regression model is used by the author in order to study the effects of concentration of managerial ownership on agency cost. The managerial ownership concentration is help to reduce the agency cost between outside equity holders and managers inside the firm. The researcher concludes that the higher managerial ownership will reduce the agency cost inside the firm. This is because of the higher risk undertaking by the managers inside the firm.

Besides that, McKnight and Weir (2009) also found that the rising in board ownership of large UK companies will reduce the agency cost. These findings were supported by Singh and Davidson (2003). The researchers found that a firm with huge ownership structure in a firm will contribute to a lower agency cost. This is because the higher asset turnover and low discretionary expense to sales ratio will reflect a lower agency cost. This study was carrying out for a period between 1992 and 1994 based on pooled regression-random effects model and pooled regression-fixed effects model.

Based on the Malaysia study conducted by Ramli (2010), a high level of managerial ownership between 2002 until 2006 may reduce the agency problem and it is found that the ownership structure in Malaysia is concentrated. This is because the managers have to bear the portion of losses arising from their different behavior.

Moreover, Khan et al. (2013), also carry out a study to determine how the family ownership affects the agency cost of debt in Pakistani firms. The research was carried out for the period of 2006 to 2010. The researchers found that the family ownership have potential to reduce the agency cost of debt in a firm, where undiversified portfolio shareholders mainly focus on family reputation and they may want the firm management pass to the descendants. Therefore, Khan et al. (2013), conclude that there is a negative relationship between family ownership and agency cost.

In a conclusion, we predict that ownership structure and agency costs have a negative relationship as majority of the authors provides the same result. It means that when the managerial ownership is higher, the agency costs can be lowered.

2.1.4 Firm Debt and Agency Problem

Doukas and Pantzalis (2003) study the effect of agency costs on the leverage of multinational and non multinational firms using 2502 and 4449 year-firm observation for United State multinational corporations (MNCs) and non-multinational corporations (non-MNCs) over the period of 1988-1994. A fixed regression model used by the authors to run out the result of the tests. The outcome shows multinational firms have a greater inverse relationship between the agency costs of debt on the long term debt, than the domestic firm. It is more difficult and costly to operate monitoring of managerial decisions for multinational firms because it involves larger geographic diversification. On the other hand, they fail to prove that multinational firm using more short term debt than long term debt because the multinational firm has privilege to access more sources of capital market.

Harvey et al. (2004) investigate the relationship between the debt and the agency and information problem during 1980 to 1997 in 12 countries. The countries namely, Mexico, Venezuela, Argentina, Brazil, the Czech Republic, Indonesia, Malaysia, Peru, Portugal, Singapore, Thailand and South Korea. Based on three stage least squares (3SLS) and ordinary least squares (OLS), the author find that the agency and information problems effect can be mitigated through the debt, where it shows the separation of the management control and ownership cause the firm value to loss, can be alleviated by the benefit of debt. Meanwhile, the benefit of the debt focuses on the firm that have either a relatively high percentage of assets in place or low growth opportunities, when the cumulative abnormal returns are positively related to the agency costs and a positive cumulative abnormal return earned when the internationally syndicated bank issue term loans. The reconstructing theory support these outcomes that shareholder value adherence to monitored agreements, when the firms face the agency costs. In a conclusion, there is a negative relationship between the debt and the agency costs.

The major problem that causes the corporate governance in both financial and non financial industries is the agency cost (Berger & Patti 2006). They try to examine the agency costs hypothesis by proposing a new approach which is the profit efficiency (indicate as firm performance). To implement their tests, they collect data from U.S. commercial banks and it measured over the period of 1990 to 1995. They used two methods which are ordinary least square (OLS) and two stage least squares (2SLS) models to carry out their studies. The result shows that high leverage or lower equity capital ratio is related to high profit efficiency. The result is consistent with the agency costs theory and supported by Jensen and Meckling (1976), Myers (1977), Grossman and Hart (1982), Jensen (1986), Williams (1987), Harris and Raviv (1990), and Stulz (1990). This is because high leverage may affect the manager to deplete their salaries, position, privilege and so on, thus it causes the manager stress on generating the cash flow to pay the interest expenses. When the manager increases the revenue, it will result the firm to gain profits, and reduce the shareholder losses from agency costs, regarding to the choice of investment, quantity of risk taken, the firm is state liquidated and dividend policy. Therefore, high leverage will reduce the agency costs of external equity and raise the firm value by inspiring the managers to fulfill the interest of shareholders. In a conclusion, there is a negative relationship between debt and agency costs of outsider equity.

According to Brockman and Unlu (2009) corporate decision can be affected by creditor rights because between debt and equity claimants, they provide the ground rules for competing interests. They examine the impact of agency costs of debt on the creditor rights. Based on 120,507 firm-year observations from 16,525 unique firms across 52 countries during the period 1990-2006. Their result confirms the impact on the agency costs of debt, where the creditor rights affect the dividend policy. Creditors keep the control rights over corporate payout policies and both parties have an incentive to reduce the agency cost of debt, where the managers permit the restriction on payout

policy as a substitute for weak creditors' rights and creditors demand. In a conclusion, the higher the credit rights, the higher the dividend payouts, in turns mitigate the agency costs of debt. Therefore, there is a negative relationship between creditors' rights and agency cost of debt.

By examining the impact of governance and ownership variables on agency costs in the United Kingdom for the period of 1996 to 2000, McKnight and Weir (2009) find that the manager has less opportunities to attack non value maximizing activities, when the firm is being monitored by debt holders which the firm with higher levels of debt. By employed a fixed effect model (FEM), the author also reveals that an increase in investment of high risk projects in a plan to cover the interest payment, occurs when the debt increases. Hence, the agency cost reduces, as debt increases, increase the investment will outstanding the incentive for managers to improve their monitoring. In a conclusion, there is a negative relationship between debt and agency cost. The result is consistent with the earlier finding by Jensen and Meckling (1976) and McConnell and Servaes (1990).

D'Mello and Miranda (2010) study the firm's disadvantage from the over investments before the offering period and the function of long term debt financing in influencing the overinvestment agency problem. The authors use the sample of 366 debt offering which conducted between 1968 to 2001 by unlevered firms. Based on the multivariate regression analysis method the results shows that highly support the over investments control theory, where the presenting debt in a capital structure causes the overinvestment by the manager to reduce. This is because the new debt offering related to the interest payment, and functions to discipline the manager by forcing the manager to services the obligations such as make interest payments, hence reduce the payout extra cash and thereby reduce the discretionary fund on the excess investments. This argument indicates a negative relation between the interest payments related to the debt issued and the overinvestment agency costs.

Based on Taled (2012), the Amman Stock Exchange companies from 2007 to 2011 discovered that there is a positive relation between the free cash flow and leverage and negative relationship between the debt and agency costs. Based on his result, he shows that most leverage will be used by the firm, when there is a higher free cash flow, and in turn mitigate the agency costs. Overall, it can be summarized that there is a negative relationship between the debt and agency costs. Jensen (1986), studies the benefit of the debt in reducing the agency costs of free cash flows. Debt creation also called as “control hypothesis” which allow the manager to effectively contractual their promise to pay out the future cash flows in a method that the manager cannot achieve by the simple dividend increase, when the debt being issued in the exchange for stock. Whenever the manager does not keep their promise to make the interest and principal payment, the shareholder has the right to take over the firm into the bankruptcy court given that the shareholder has the recipients of the debt, which had taken from the manager. The carefulness of the managers will reduce the cash flow available spending. In a conclusion, the agency cost of the cash flow can be reduced by debt. Taled (2012) drawn a similar conclusion with the previous researcher.

In a conclusion, we expect that the leverage or debt and agency costs have a negative relationship as the majority of the authors provide the same result. It means that when the leverage increase, the agency costs will decrease.

2.1.5 Liquidity and Agency Problem

Garvey and Swan (2002) find that the market with liquid stock can improve the conflict of interest between managers and shareholder. This shows that the liquidity of a firm and agency cost in publicly traded US company have a negative relationship.

Other than that, according to Chen et al. (2003), an optimal level of liquid funds in the absence of tax effects can be used to eliminate the agency costs of the firm in China market by implementing the first-best investment policy for a given capital structure. The study cover from 2005 to 2007, in the view point of some entrepreneur, the concluded that a low levered firm will choose a high investment threshold which will result in agency cost of underinvestment. On the other hand, the investment firm with high liquidity levered will choose a lowered investment threshold which will result in overinvestment agency costs. Therefore, liquidity of firm's fund is one of the important factors in determining the agency cost of debt.

In short, we predict that liquidity and agency costs have a negative relationship as most of the authors provide the same result. It means that when the liquidity of a company is high, the occurring of agency problem will be lower.

2.1.6 Crisis and Agency Problem

Agency problems are very likely to become more important factors during a crisis since the crisis would cause more companies to fall into a situation of financial suffering and firms in financial suffering would be exposed to more agency problems, especially agency problems between shareholders and bondholders (Jensen & Meckling, 1976). In their result, they prove that there is positive relationship between agency problems and crisis.

Jensen (1986) shows that a company with a large amount of free cash flows is subject to higher agency costs of equity, implying negative relation between free cash flows and performance during a crisis. In an economy-wide financial suffering, free cash flow problems would become less important since managers would greatly need cash to survive, without leaving much money to

squander. Thus, in Jensen's result he proves that there is negative relation between free cash flow and performance during a crisis.

Agency problem proxy variables are less closely related to operating performance during a crisis (Rajan & Zingales, 1998). They stated that investors get more interested in agency problems during a crisis, implying a closer relation between agency problems and stock returns than the relation between agency problems and operating performance during a crisis. Therefore, in their result they proved that there is positive relationship between agency problems and crisis.

The finding of Kim and Lee (2003) stated that the agency problems have some power in explaining stock returns of Korean companies during the financial crisis period. Due to the most companies were known to have weak corporate governance structures, agency problems might become more important during a crisis. The researchers test the role of different agency problems in explaining the cross-sectional differences in performance under an economy-wide financially suffering situation during the financial crisis. The researchers used 590 non-financial companies that listed in the Korean Stock Exchange. The crisis year of 1998 is omitted. Further, the facts of a positive relationship between agency problems and crisis are consistent with the favorite for crisis related forecast during the financial crisis period.

In Bangladesh Mollah et al. (2007) investigates the influence of dividend policy on agency cost during the pre and post of the 1998 financial crisis. The researchers used 153 companies for 10 years from 1988 through 1997 for pre-crisis sample while 153 companies for 5 years from 1999 through 2003 for post-crisis. The crisis year of 1998 is omitted. Besides that, the researchers found that the effected of agency problem during the pre-crisis period and none in the post-crisis period on the Dhaka Stock Exchange. In addition, the

facts of a negative relationship between agency problems and financial crisis are consistent with the favorite for crisis related forecast.

In a conclusion, we can expect positive relationship between crisis and agency problems. When the crisis occurs, there is less agency problems in the companies.

2.2 Review of Relevant Theoretical Framework

Theoretical Framework on agency problems centered around two classic works; first is the M&M Dividend Irrelevant Theory by Modigliani and Miller (1958) and second is the Agency Theory by Jensen and Meckling (1976); Rozeff (1982); Easterbrook (1984); Jensen (1986); Moh'd et al. (1995).

2.2.1 M & M Dividend Irrelevant Theory

The determining work on dividend payouts policy was initiated in 1958 by Modigliani and Miller (M&M), proposed that dividend policy was irrelevant. Consequently, any changes of the dividend policy make no different to firm value due to shareholder can replicate any required free cash flows by buying and selling the equity. Modigliani & Miller (1958) found that with a fixed investment strategy in an economy without any confrontation which is agency costs, transaction costs and taxes, in a situation where all investors have the same right of entry to market prices and the information without any cost, the firm's financial strategy will be irrelevant. If the markets are in perfect, the firm's value will be independent of hedging. Thus, an investor will be able to get clear of the exchange rate risk from its selection through diversification, eliminating the gains of a dynamic hedging policy by the firm. Other than that,

hedging only adds a value to the firm if some hypotheses of the model existing by Modigliani & Miller (1958) are hassle-free. The main conclusion of this paper is that firm's capital budgeting policy is independent of its dividend policy.

2.2.2 Agency Theory

According to Jensen and Meckling (1976) and Rozeff (1982) were argued that the agency problem is less serious when the managers hold a large portion of the outstanding shares in the organization. If the managers hold a small portion, they work less energetically and consume excessive perquisites because they hold a small portion of the resulting costs. Consequently, agency theory argues that managerial ownership is a bonding mechanism and self controlling mechanism. Managerial stock ownership can reduce agency problems by targeting the benefits and interests of a firm's management with its shareholders. Managerial ownership bonded management personal wealth to firm value which is shareholders wealth (Easterbrook 1984).

Moreover, Easterbrook (1984) expanded an argument that external shareholders are active in searching the funds from the firm to force managers to be subject themselves to examine the capital markets. The author lists some of the institutions by which dividends and capital raising exercises can monitor the agency cost happen. Besides that, agency problems are less serious if the firm is constantly in the market for new capital due to it continuously put the management under examine by investment banks, capital suppliers and security exchange. Thus, the dividends payout will causes the firm to undergo a third-party audit, which serves to encourage managers to make public new information and reduce agency costs in order to protect needed of the funds. Shareholders are willing to allow the costs of new

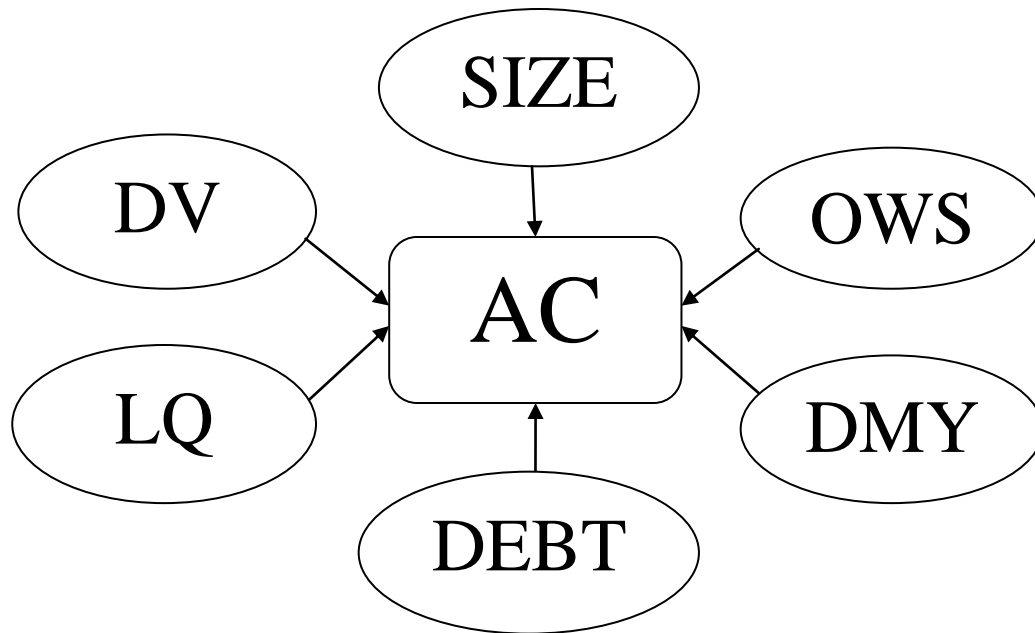
funding to recognize the larger benefits related with the reduction in both information asymmetries and agency problems.

Jensen (1986) found that the free cash flow hypothesis claims that funds outstanding after finance all the positive net present value projects tend to have a high agency problems. Hence, promises to pay out to shareholders as dividends might reduce the agency problems due to it reduces the amount of free cash flows that managers could otherwise be wasted through projects that provide personal benefits to managers or over investment.

According to Moh'd et al. (1995), agency theory relates to dividend policy stems from the works of Rozeff (1982) and Easterbrook (1984). Rozeff adjust the agency theory argument of Jensen and Meckling (1976) by building a model in which dividends serve as an instrument for reducing agency problems. Thus, they can offer and distribution the dividend to their shareholders. According the Rozeff (1982), if a firm is planned to increase outsider's capital to refill funds paid out in dividends, then the managers must reduce agency problems and expose new information to secure the new funding. Furthermore, dividend payout may act like one form of bonding mechanism to reduce agency problems due to it also can reduce the opportunity for managers to use firm's free cash flow to do the perquisites activities or over investment.

2.3 Proposed Conceptual Framework

Figure 2.1: Summary of determinants influence the agency costs.



Source: Developed for the research

$$\text{Model: } AC_t = \beta_0 + \beta_1 DV_t + \beta_2 SIZE_t + \beta_3 OWS_t + \beta_4 LQ_t + \beta_5 DEBT_t + \beta_6 DMY_t$$

Where, AC = Agency Cost, DV = Dividend Policy, SIZE = Firm Size, OWS = Ownership Concentration, LQ = Liquidity, DEBT = Firm Debt, DMY = Crisis of 2007 – 2008 (DMY = 1, if crisis exist; 0, otherwise)

DV represented the dividend policy, majority researchers such as Jensen (1986) and Moh'd et al. (1995) found that dividend policy is one of the determinants will influence the agency cost by negative way. However, in a recent study of Savadjany and Haeri (2011) found that dividend policy and agency cost is no related. Thus, we predict that in Malaysia' services and trading sector, the dividend policy and agency problem is negative relationship.

Firm size is represented by SIZE in the model. Lasfer (1999), Doukas et al. (2005) and Cohen and Yagil (2006) found that firm size will influence the agency problem, where if the firm is big, there is high probability agency problem exist in that particular company. Therefore, we also expect that in Malaysia' service and trading sector, the firm size and agency problem have positive relationship.

The independent variable OWS is refer to the ownership concentration of the firm. According to Singh and Davidson (2003), they found that when a firm has higher ownership structure, it will reduce the agency problem in that firm. This is because higher asset turnover and low discretionary expense to sales ratio will reflect a lower agency cost. Therefore, it predict that the ownership structure and agency problem in Malaysia' services and trading sector have a negative relationship.

The independent variable DEBT is the indicator for firm debt. According to McKnight and Weir (2009), high level of debt will reduce the agency cost, this is because the manager has less opportunity to attack the non value maximizing activities and they being monitored by debt, where the manager need to cover the interest payment and pay it to the debt holder. Thus, the agency cost reduces, as debt increases. In a conclusion, we expect that firm debt is negative related with the agency cost in Malaysia' services and trading sector.

Besides that, the independent variable LQ indicates the liquidity of a firm. According to Chen et al. (2003) and Garvey and Swan (2002), they studied that the liquidity of a firm is also one of the factor that causes the agency problem to occur in a firm. They found that the higher liquidity of a firm will reduce the agency cost. Therefore, we forecast that the liquidity and agency problem have a negative relationship in Malaysia' services and trading sector.

Last but not least, crisis is represented by DMY in this research. We predict that the crisis and agency problem is positive related as supported by Jensen and Meckling (1976), Rajan and Zingales (1998) and Kim and Lee (2003) which means that crisis

will affected the agency problem. Probability of agency problem will incur when there is exist of crisis compare with none exist.

2.4 Hypothesis Development

According to the previous researchers, the relationship of each independent variable and dependent variable is as follow:

H₁: There is negative relationship between dividend policy and agency cost in Malaysia.

As previous researcher majority proven that dividend policy and agency cost is negative related, so we predict that in Malaysia's trading and service sector dividend and agency cost also negatively related.

H₂: There is positive relationship between firm size and agency cost in Malaysia.

As majority researcher stated that firm size is positively related with agency cost, so we also expect that same situation happen in trading and service sector in Malaysia which is firm size and agency cost have positive relationship.

H₃: There is negative relationship between ownership concentration and agency cost in Malaysia.

We forecast there is negative relationship between ownership concentration and agency cost in Malaysia's trading and service industry as supported by majority previous researchers.

H₄: There is negative relationship between firm debt and agency cost in Malaysia.

Majority researcher indicated that firm debt and agency cost is negative related, so in Malaysia we assume same situation happen in trading and service industry which

means that when there is more debt, so the probability of occur agency problem will be highly.

H₅: There is negative relationship between liquidity and agency cost in Malaysia.

As majority previous researcher shown that when the company is highly liquid, so the agency problem will be reduce. Therefore, this situation is assumed in Malaysia's trading and service sector which the liquidity and agency cost is negatively related.

H₆: There is positive relationship between crisis and agency cost in Malaysia.

When there is exist of crisis, the chances of agency problem occur will be higher compare with none exist of crisis is proven by pass research. In Malaysia, we also can forecast that there is positive relationship between crisis and agency cost in trading and service industry.

2.5 Conclusion

Beginning of this chapter, there is discussed about the literature review from past study. This research has used fixe independent variables constituting of dividend policy, firm size, ownership structure, debt and liquidity. As supported by previous studies, researchers assume that those variables are significant in determining the agency problem in Malaysia. Therefore, researchers will be collecting those indicators observations from reliable database and plan carefully for the research methodology so as to obtain a proper analysis to prove what they assumed is correct and accurate. After that M &M Dividend Irrelevant Theory and Agency Theory is discuss under the part of review of relevant theoretical models. Follow by proposed conceptual framework and hypothesis development is explained to let the readers more understanding about this research topic. Next chapter will discuss about methodology.

CHAPTER 3: METHODOLOGY

3.0 Introduction

In this chapter will comprise the research design, data collection method, target population, construct measurement, data processing and also data analysis. Thus, research methodology helps the researchers and the readers how the research was carried out scientifically. Therefore, in this chapter we will list out the variables that cause agency cost to occur in trading and services industry in Malaysia.

3.1 Research Design

We use research design as a primary direction in order to carry out this study. In this study we use a quantitative research as we use secondary data to study regression model. According to Hesketh and Laidlaw, quantitative research is based on measurements and evidence found by the researchers. This quantitative research mainly focuses on the statistical analysis and the numerical data. There are some approaches to quantitative research which are includes experimental, descriptive, correlation and causal comparison. Other than that, quantitative research uses the scientific method and focuses on independent variables, collecting measurable evidence and at last compute the conclusion. In this study, the research is to determine the relationship between independent variables which are ownership structure, liquidity, firm size, debt and the dividend policy with the dependent variable which is the agency cost.

According to Hesketh and Laidlaw, there are three types of research design which are explanatory research, descriptive research and causal research. Normally,

explanatory research is focus on ‘why’ questions. However, descriptive research is more concern on the relationship between two variables. The causal research is to determine the causal-and-effect relationship through an experiment. The explanatory research can use to formulate the problems more accurately and create hypotheses. There are some types of explanatory research such as literature search, interviews and experience survey. The descriptive research is more to describe on characteristics of variables and make specific prediction. There are some types of descriptive research which are longitudinal study, panel study and sample survey. Apart from that, causal research is a study to provide evidence regarding causal relationship. One of the examples of causal research is laboratory experiment.

3.2 Data Collection Method

In order to study the factors that cause the agency problem in Malaysia, we study that the firm size, debt, ownership structure, dividend policy and liquidity are the main causes of these agency problem. We collect the data for all the variables from Thomson data stream in University Tunku Abdul Rahman (UTAR). In this research, we used the panel data in order to carry out regression model. The period of data were covered from the year 2005 until 2010 with 288 observations. During this period of time which is from 2007 to 2008, there was a financial crisis worldwide. Thus, we add another variable which are the dummy variable in order to represent the financial crisis.

In this research we used the quantitative research as a result we used all the quantitative data in order to carry out this project. According to Aliaga and Gunderson (2000), research quantitative is defined as the “explaining phenomena by collecting numerical data that are analyzed using mathematically based methods”. As the data are collected from the Thomson data stream from UTAR which are all in

numerical value, therefore we can say that this research used quantitative research as it is indicated by the statement provided by Aliaga and Gunderson.

According to Parlow (2010), panel data refers to a cross to a cross section repeatedly sampled over time in which similar individual has been followed throughout the period of the sample. Individuals in panel data can be classified as household, person, plant, firm, municipality, state or country. The period normally used in panel data are annually, quarterly, weekly, days, five years interval or any observation time. General feature of panel data is that the group of individuals (N) used is normally large whereas number of time periods (T) is generally short. There are some examples of panel datasets which is Panel Study of Income Dynamics (PSID), National Longitudinal Surveys of Labor Market Experience (NLS), German Socioeconomic Panel (GSEP), The British Household Panel Survey (BHPS), Swedish Agriculture Farm Level Survey (JEU), Finnish Company Database (Yritystietokanta), Luxemburg Income Study (LIS) and so one.

According to Gujarati and Porter (2009), there two patterns of panel data which are balanced panel and unbalanced panel. Balanced panel data is the data consist of equal number periods for each observation in the data. Balanced panel data also consists of two categories which are short balanced panel data and long balanced panel data. However, the unbalanced panel data is the panel data that consists of not equal number of observation for each subject in the data. This is because of the missing data at the certain period of time. In order to avoid this kind of problem we use STATA instead of Eviews in order to run the model.

According to Bruderl (2005), there are some advantages by using panel data to estimate a model. One of the advantages is that panel data give more information on the time-ordering of events. It also provides a huge number of observations and at the same time increased the degrees of freedom to carry out the study. Panel data also will reduce the collinearity among the independent variables and at the same time will increase the precision of the regression model. It is better to use panel data to examine

the dynamics of adjustment in unemployment, income mobility and so one. Other than that, it also provides a better estimation of individual's behavior. The result provide by using panel data will more variable and less aggregate over firm and individuals. At the same time, panel data allows to control for individual unobserved heterogeneity.

According to Parlow (2010), there are two types of panel models inside the panel data which are fixed effects model and random effects model. According to Gujarati and Porter (2009), fixed effect model is used in order to study the individual's characteristics for each observation in the sample based on the intercept term regardless of time effect. This fixed effect model is a panel regression model that takes into the account of different characteristics from different observations with dummy variable. Therefore because of this reason the fixed effects model is also known as Least Square Dummy Variable Estimator (LSDV). These authors also found that the random effects model is a model used to test the individual's characteristics for each observation in the sample based on random error terms. This model does not include the dummy variables as the fixed effects model.

Based on Beck (2004), Gujarati and Porter (2009) and Parlow (2010), the Hausman test can be used in order to differentiate between fixed effects model and random effects model under the hypothesis testing. The null hypothesis for this test is that the random effects model is consistent and efficient whereas the alternative hypothesis for the test is that the random effects model is inconsistent and inefficient or the fixed effect model is efficient and consistent. If the probability value of the test is less than the significant value which is 10%, then reject the null hypothesis. When the null hypothesis is rejected, it implies that the fixed effect model is more appropriate than the random effects model.

H_0 : Random effects model are consistent and efficient

H_1 : Random effects model are inconsistent and inefficient (Fixed effect is more appropriation)

Decision Rule: Reject H_0 if the probability value is less than the significant value which is 10% otherwise does not reject H_0 .

3.3 Sampling Design

3.3.1 Target Population in Malaysia

According to Burn and Grove (1997), the target population is defined as ‘the entire aggregation of respondents that meet the designated set of criteria’. In this research, the target population was the trading and services industry in Malaysia. Besides that, we also focused on the high and low debt trading and services industry in Malaysia in order to carry out this study. Our original sample size to carry out this study is 140 trading and services companies in Malaysia because of incomplete data we exclude 92 companies from our sample size. This is because we are unable to find data for certain variables from the data stream. Therefore, in this project we study 48 trading and services companies which are listed in Bursa Malaysia.

3.4 Research Instrument

Electronic Views (Eviews) is used to examine and test the regression analysis in this research. Eviews is the most popular and well-liked econometric package around the world. Eviews can be used for general econometric analyses and statistical analysis. The analyses were included time series estimation and forecasting, cross-section and panel data analysis (Van den Bossche, 2011). Moreover, Eviews also combines both worksheet and relational database technology with the traditional tasks found in

statistical software and also can use Windows GUI to combine with a programming language which displays limited object orientation (Renfro, 2004).

Eviews relies heavily on a proprietary and undocumented file format for data storage (Van den Bossche, 2011). However, for input and output, it supports numerous formats, including databank format, Eel formats, PSPP or SPSS, DAP or SAS, Stata, Rats, and TSP. Furthermore, it can access OECD databases. According to Startz (2007), Eviews can estimate a regression and show the information on each estimated coefficient from the Eviews output. In addition to regression coefficients, Eviews also can provide a great deal of summary information about each estimated equation.

In short, Eviews is used to run the estimated multiple regression model in this research. Moreover, we using Eviews to do diagnostic checking for determining whether multicollinearity, autocorrelation and heteroscedasticity problems exist or not and also to run the model specification test and normality test.

3.5 Construct Measurement

3.5.1 Measurement of Agency cost

One of the ways to measure the agency cost is by using assets-to-sales ratio. This measurement has been used in two United State studies as a direct measurement for agency costs by Ang et al. (2000) and Singh and Davidson (2003). These studies argue that the assets-to-sales ratio measures the efficiency with which management uses the firm's assets to generate sales. High ratio shows that the assets generating significant sales and at the same time indicates low agency cost. On the other hand, low ratio indicates high agency costs and inefficient asset utilization.

$$\text{Asset-to-Sales Ratio} = \frac{\text{Total Asset}}{\text{Sales Revenue}}$$

3.5.2 Measurement for Dividend Payouts

Since we are dealing with the services and trading sector in this research in Malaysia, we measured the dividend payout ratio by using total dividend divide by net income. According to La Porta et al. (2000) stated that the numerator in these ratios is the total cash dividend payout to the common shareholders and the preferred shareholders and also the denominators are earnings. The dividend to earnings ratio is the most commonly used measure of dividend payouts. According to Lintner (1956) suggests that firms have target payout ratios and adjust dividends to earnings with a lag; the target payout is the result of an unspecified decision process within the firm.

$$\text{Dividend Payout Ratios} = \frac{\text{Total Dividend}}{\text{Net Income}}$$

3.5.3 Measurement for Firm Size

Previous research use several ways to measure firm's size, such as total assets, sales, number of shareholders and capital stock, and net income (Omar & Simon, 2011) and market value (Wang et al., 2008). The level of sales turnover can be used to measure the size of the business. The 1985 Companies Act says: "a firm with turnover less than £1.4 million is small. If turnover lies between £1.4 million and £5.75 million then the firm is medium size. If turnover is over £5.75 million it is large".

Firm size also can be measure by using a percentage. Obviously, according to Wang et al. (2008) the larger the percentages share of the market the larger the business. Unfortunately, this measure is only useful for comparing businesses in the same industry.

Other than that, the value of the business measures the value of the business if it were to be sold. This value can vary enormously depending upon if there is another business wanting to buy it. Last but not least, the value of capital employed calculates the value of everything the business owns, in other words, how much it would cost to replace all of the businesses assets.

Hence, in this research we are used Logarithm of total assets to proxy the firm's size. The size of firm measured by log total assets will be compared as the effect of the firm's size with that of the dependent variable of study which is agency cost. Utama (2012), also supporting literature that have established the measure of an organizations size to be the logarithm of the total asset base. Total asset values as per the balance sheet, gives a good measure of the scale of operations.

$$\text{Firm Size} = \text{Log (Total Asset)}$$

3.5.4 Measurement for Ownership Concentration Structure

According to Jensen and Meckling (1976), ownership structure means that there is a distribution of equity according to the number of votes and capital and at the same time with the identity of the equity owners. There are some measurements used in order to measure the level of ownership structure.

In this research, we just focus on Herfindahl-Hirschman Index (HHI) which is one of the measures used for market concentration. According to Overland et

al. (2012), the concentration of ownership structure can be calculated using the sum of the squared values of all shareholders' voting shares. The sum of the squared values of shares can be range from nearest to zero to 10,000. If the market is being monopoly, then the market concentration will be higher and there will be less competition in the market. In this research, we used the first five largest shareholders' voting shares. The calculation of the Herfindahl-Hirschman Index (HHI) is as follows:

$$HHI5=s1^2+s2^2+s3^2+\dots\dots\dots + sn^2 \text{ (where sn is the market share of the ith firm)}$$

3.5.5 Measurement for Debt

According to Solomon (2004) leverage ratio estimate the degree to which an individual on the debt financing. There are some measurements used to measure debt of a firm which is known as debt ratio. The two ratios that use frequently to analyze the amount of financial risk borne by the particular individual which is the debt to asset ratio and debt to equity ratio that derives all its elements from the balance sheet, income statement and the number of interest earned ratio. The formula for debt to total asset is the total liabilities divide the total assets on the other hand, the debt to equity is formulated by the total liabilities divide the total owner's equities. In this study, we used debt to equity ratio in order to compute for the debt measurement of the firm. High ratio of debt indicates the firm's operation is associated with greater risk, in contrast low ratio of debt indicates the firm's operation is associated with lower risk.

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debts}}{\text{Total Equity}}$$

3.5.6 Measurement for Liquidity

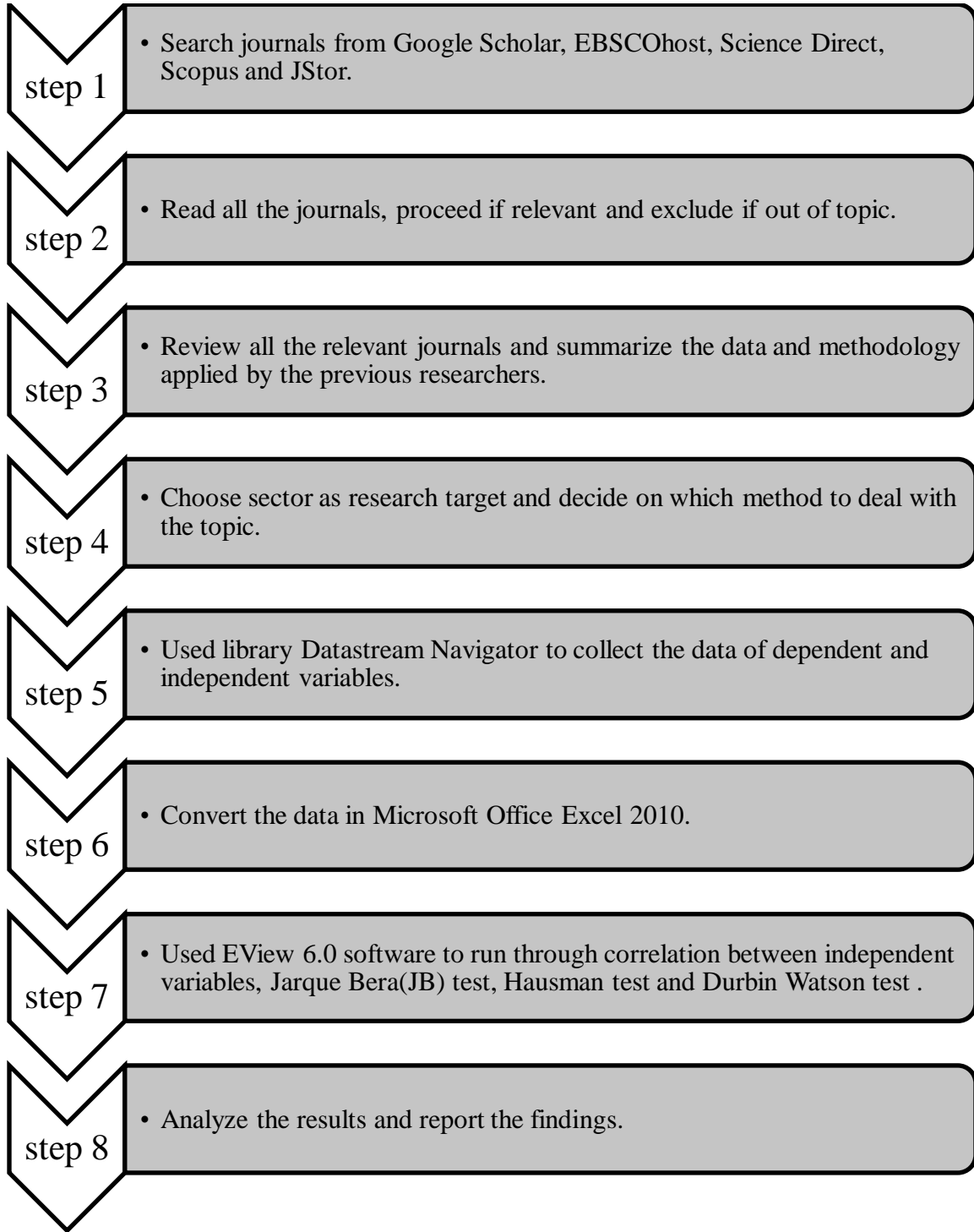
According to Graham (2010), liquidity is defined as how cash, cash equivalents and other assets can be easily converted into cash. There are some measurements used to measure liquidity of a firm and it is known as liquidity ratio. Liquidity ratio is able to calculate the firm's ability to pay off its short term debt obligations. There are three types of ratio under liquidity ratio which is current ratio, quick ratio and cash ratio.

In this study, we used current ratio in order to compute for the liquidity of the firm. Current ratio is known as current or working capital position. Current ratio is the proportion of current assets to current liabilities. This formula derives that whether a firms short term assets are readily available to pay off its short term liabilities. Higher current ratio is shows the firm's performance is good.

$$\text{Current ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

3.6 Data Processing

Figure 3.1: Flow Charts of Data Processing



Source: Develop for the research

Figure 3.1 shows the flow charts of data processing. There are all have 8 steps of data processing. First, search for journals from Google Scholar, EBSCOhost, Science Direct, Scopus and JStor. Second, read through all the journals. If find out the journal is relevant then proceed with it while if the journal is not relevant then excludes it. Third, review all the relevant journals and summarize out all the data and methodology that applied by the previous researchers. The fourth step is choosing country as research target and makes a decision on which method to deal with the topic. Next, use the library Datastream Navigator to collect the data of dependent and independent variables. Then, convert the data in Microsoft Office Excel 2010 .The following step is use Eview 6.0 software to run through correlation between independent variables, Jarque Bera (JB) test, Hausman test and Durbin Watson test. Lastly, analyze out the results and report the findings as well.

3.7 Data Analysis

3.7.1 Multiple Linear Regressions

Multiple linear regression is not same like simple linear regression. Simple linear regression is one explanatory variable (X_i) to estimate dependent variable (Y). According to Gujarati and Porter (2009), multiple linear regression have one dependent variable (Y) and two or more independent variable (X_i) included in the model. Independent variables act as explanatory variable to estimate the result of dependent variable. Equation of multiple linear regression model:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \dots + \beta_k X_{ki} + \mu_i$$

Gujarati and Porter (2009) use multiple linear regression instead of simple linear regression because is to understand the functional relationship between

dependent variable and independent variable and try to see the probably of independent variable lead to changes in the dependent variable. We used six independent variables to estimate dependent variable to get an accurate result. Equation of multiple linear regression model as below:

$$AC_t = \beta_0 + \beta_1 DV_t + \beta_2 SIZE_t + \beta_3 OWS_t + \beta_4 LQ_t + \beta_5 DEBT_t + DMY$$

AC refer to agency cost in Malaysia, β is the parameter used to explain the degree it will affect agency cost. DV is dividend policy, SIZE is firm size, OWS is ownership concentration, LQ is a liquidity and DEBT is friem debt and DMY is crisis 2007 - 2008.

Assumption of multiple linear regression, parameters must be linear and not relationship among independent variable, no autocorrelation, no multicollinearity, homoscedasticity, no specification bias. We must make sure that multiple linear regression follow classical linear regression model (CLRM). This is because; if any two independent variables have correlation each other it will affect the information from the model not accurate result and bias.

In multiple linear regression, β_1 and β_2 are partial regression coefficients. Partial regression coefficient is to measure the change in value of dependent variable, per unit change in X_2 , holding the value of X_3 constant. In multiple linear regression, we used adjusted R^2 better than R^2 . This is because R^2 will increase and never decrease when the number of independent variable increase. So that, used adjusted R^2 is better ever thought number of independent variable increase and adjusted R^2 no necessarily increase and adjusted R^2 is more meaningful than R^2 for multiple linear regression model (Gujarati & Porter, 2009).

3.7.2 T-Test Statistic

Statistical Data Analysis procedure had been used by T-test for testing the sample result of the null hypothesis is true or false (Gujarati, 1995). The t-test assumption requires normality distribution sample of the population and equal variances. Test statistic (estimator) and the sampling distribution are essential to test the significance. The decision to reject or do not reject the H_0 depends on the test statistic and the probability that obtained from the data. The formula for a t-test statistic is $\hat{\beta}_1 - \beta_1 / se(\hat{\beta}_1)$, follow the degree of freedom in the t distribution with $(n-2)$. Nevertheless, there are two the decision rules can be made, which are based on the test statistic and p value. If the test statistic is greater or lower than the critical value, it will reject H_0 ; in contrast, if the probability is less than the significance level, 10%, we reject the null hypothesis.

3.7.3 F- Test Statistic

According to Gujarati (2006), F distribution also known as the variance ratio distribution as it is used to compare the variances of two populations. As we know, F-statistic is a measure of the whole significance of the estimated regression. F-statistics is used when there are multiple parameters in a model. Apart from that, F-statistic is any statistical value in which the test statistic has an F distribution under the null hypothesis.

There are several properties of F-statistic value. One of the properties is that the F distribution is always skewed to the right and which ranges from 0 to the infinity value. Other than that, F distribution almost nearer to the normal distribution as its degree of freedom becomes larger. According to Gujarati (2006), he tells that the “F-statistic under the null hypothesis and find out the

p value obtaining a specified value of the test statistic from the appropriate probability distribution.” If the probability value is less than the significant level of 10%, then reject the null hypothesis. Therefore, it can be concluded that it is significant for the overall model to explain the dependent variable.

H_0 : The model is significant

H_1 : The model is insignificant

Decision Rule: Reject the null hypothesis if the probability value is less than the significance value which is 10%.

3.7.4 Diagnostic Checking

The existence of econometrics problem in our regression model leads us to run the diagnostic checking. Therefore, we conduct various hypotheses testing to determine whether our regression model is free from multicollinearity, heteroscedasticity and autocorrelation problem. Besides that, we also use normality test for these diagnostic checking.

3.7.4.1 Normality Test

According to Gujarati and Porter (2009), normality distribution is used to test whether the error term is normally distributed or not. There are some assumptions that are found by Gujarati (1995), under the Central Limit Theorem. One of the assumptions is that if there are a huge number of explanatory variables and identically distributed random variables, then the distribution of their sum tends to a normal distribution. Second is that although the number of variables is not very big or the variables are not strictly independent, thus their sum may still be normally distributed. Finally,

the normality distribution is a plain distribution which are including only two parameters which are mean and variance.

According to Park (2008), there are two methods to test the normality distribution in a model which is graphical and numerical methods. Graphical methods will look at the distribution of random variables, for example standard normal distribution whereas numerical methods view the summary of statistics such as skewness and kurtosis. Graphical methods will present in the form of histogram of residuals which shows the shape of the probability density function (PDF) of a random variable. However for numerical method, the author used Jarque Bera (JB) test in order to examine whether the error terms are normally distributed or not. The null hypothesis for the test is error terms are normally distributed whereas the alternative hypothesis is error terms are not normally distributed. If the probability value is less than critical value, then we reject the null hypothesis. For example, if the probability value is less than 10%, then the error term are not normally distributed or otherwise error term is normally distributed.

H_0 : The error term are normally distributed

H_1 : The error term are not normally distributed

Decision Rule: Reject H_0 if the probability value is less than the significant level which is 10% or otherwise do not reject the H_0 .

3.7.4.2 Multicollinearity

According to Gujarati and Porter (2009), multiple linear regression model often will be destroyed by multicollinearity problem due to it includes many independent variables. Besides that, multicollinearity will happened on when some or all of the independent variables are highly correlated with each other and response unnecessary information. Multicollinearity problem normally

will be categories as perfect, serious, no serious and no multicollinearity problem in a model. BLUE estimator normally will be ignored due to estimator still unbiased, efficient and consistent. On the other hand, if a model occurs serious multicollinearity we want to solve the model and it will affect BLUE estimator become unbiased, inefficient and inconsistent.

Multicollinearity occur due to several reason such as improper including many explanatory variables than the number of observation, using dummy variable, adding polynomial term and include same or proxy variable twice in a model. These reasons will affect dependent variable and consequence in multicollinearity problem. Result of model could be insignificant value; due to serious multicollinearity will affects standard error value become greater. Besides, increased in standard error will lead to smaller value of t-statistics and result inefficient. This has violated Classical Linear Regression Model (CLRM) assumption.

According to Gujarati and Porter (2009), one of the detecting multicollinearity is correlation coefficient(r). We use r to test our result supported by Pen (2011) and Wang et al. (2013). When high pair-wise correlation coefficients occurred. Decision rule is when r more than 0.8 is mean that have multicollinearity. If r less than 0.8 is mean that no serious multicollinearity.

3.7.4.3 Autocorrelation

According to Gujarati and Porter (2009), autocorrelation is defined as the correlation or relationship between the number of observations ordered in time and it can be means that error term in the two periods is correlated. Normally, autocorrelation problem will occur in time series data. Due to the nature of time series date could easily cause the error term in the past are correlated with error term in the current (Mizon, 1995). Autocorrelation often will cause

the variance of error term is not reached at optimal level. It will cause the p-value of t and F statistic for independent variable to be wrong or biased, and then these will lead to provide misleading results. Such as, wrong functional form will lead the variance of estimators to be overestimated or underestimated, it will cause the important variables to become insignificant or the irrelevant variables become significant.

According to Gujarati and Porter (2009) has mentioned that Durbin-Watson Test (Durbin & Watson, 1950) can use for autocorrelation. We use this test to estimate our result because this test is most useful for autocorrelation (Jeong & Chung, 2001). Durbin –Watson test is used for detecting the series correlation or determined whether the continuous related to the regression residuals independent each other. As a rule of thumb, Durbin Watson between 1.5 and 2.5 shows that no autocorrelation problem based on Age and Aga (2007) and Vogt and Johnson (2011). In our decision rule, we used rule of thumb to make decision to test whether got autocorrelation problem and assume that when d value is between 1.5 and 2.5 is no autocorrelation problem. Hypothesis of Durbin-Watson test is as below:

H_0 : There is no autocorrelation.

H_1 : There is a problem of autocorrelation

Decision Rule: Do not reject H_0 , when the d value is between 1.5 and 2.5.

Otherwise, reject H_0 .

3.7.4.4 Heteroscedasticity

According to Gujarati and Porter (2009), heteroscedasticity normally occurs in cross sectional data. If the variances of error terms are not achieved at optimal level or error terms that do not have constant, heteroscedasticity problem will happen. It will lead the F-test and T-test statistics values become biased and p-

value or confidence interval for the independent variable to be not precise. As the result, the estimated parameter still can be estimated but the estimation results become not accurate. This model is considered to be inefficient (Antonakis & Dietz, 2011).

There are two major causes of heteroscedasticity problem which are the nature of data and the model specification errors. Example for the causes of heteroscedasticity are outlier observation in the sample, exclusion of important variables, small sample size, skewness in distribution of one or more regressors which had included in the model (Gujarati & Porter , 2009).

According to Gujarati and Porter (2009), we can use several ways to check whether got heteroscedasticity such as park test, glejser test, white test or ARCH test. In these test, we must make that these tests show that no sufficient evidence to reject H_0 at certain significant level. Because for the coefficients are still unbiased and consistent. Besides, this problem wills distribution of coefficients increasing the variances of the distributions.

As stated in the theory, if heteroscedasticity occurs, we would found several ways to solve heteroscedasticity problem such as generalized least squares (GLS) and weighted least squares (WLS) is a way to transform variance of distributed term which apply OLS, Different of GLS and WLS is variance of error term. Variance of error term for GLS will become constant with value to one while WLS's variance of error term will become constant. Increase sample size can reduce the impacts of missing value and outlier on the estimated results. If the sample size large, the dependent and independent variable will become normal and will to error term become normal distribution and will minimum heteroscedasticity problem (Gujarati & Porter, 2009). Furthermore, White's Heteroscedasticity-consistent Variances and Standard Error can be used to correct standard error of OLS estimators and

conduct statistical inference based on this standard error (Gujarati & Porter, 2009).

As a conclusion, we use white test to control the heteroscedasticity problem in this research.

3.8 Conclusion

In conclusion, this chapter explains how the whole research was carried out. Other than that, this research methodology also briefly explains the steps used by the researchers in order to carry out their study. Next, the analysis of data will be done in Chapter 4 using the Eviews.

Chapter 4: Data Analysis

4.0 Introduction

This chapter starts with descriptive statistic and diagnostic checking for our model and follow by presenting the results obtained from various techniques. The model we employ is Multiple Linear Regressions Model. We run three models by using Eview, which are model for overall result follow by model for low debt companies and last is model for high debt companies.

4.1 Descriptive Analysis

Table 4.1: Result of Descriptive Analysis

	AC	DEBT	DV	LQ	OWS	SIZE	DMY
Mean	2.1313	89.2351	0.4327	2.4498	13.9612	5.7457	0.3344
Median	1.4120	34.2700	0.1189	1.9400	8.8490	5.7814	0
Maximum	13.2190	6821.4600	43.9123	21.1700	76.5735	7.8693	1
Minimum	0.4322	0	-23.9051	0.3400	0.0864	4.0071	0
Standard Deviation	1.8818	419.2738	3.5661	2.0701	12.1166	0.7107	0.4726

Note: AC= agency cost, DEBT= firm debt, DV= dividend policy, LQ= liquidity, OWS= ownership concentration, SIZE= firm size, DMY= crisis₀₇₋₀₈

Source: Developed for the research

The descriptive statistic for the main variable are the agency cost, debt, dividend, liquidity, ownership structure, size and dummy variable, that used in this study is from the period 2005 to 2010. The mean for the agency cost, AC in service and trading sector is 2.1313, where the minimum value and the maximum value is

between 0.4322 to 13.2195, with 1.4120 percent median for the agency cost. The standard deviation for the agency cost is 1.8818. The value of 0 and 6821.460 is the minimum and the maximum value of firm debt, DEBT. The mean for firm debt, DEBT service and trading sector is 89.2351, which is higher than the 39.88 mean that reported by D'Mello and Miranda (2009) using the sample firm listed on the Compustat database of 366 debt offerings between 1968 to 2001. As compared to the value reported in McKnight and Weir (2009) using the United Kingdom non-financial firms incorporated in FTSE 350 Share Index Companies over the period 1996 to 2000, this value is also higher. Nevertheless, the median for the debt, DEBT is 34.27 percent, which also shows higher percent than the report by D'Mello and Miranda (2009) and McKnight and Weir (2009), while the standard deviation for the debt service and trading sector is 419.2738. However the average for dividend, DV in the service and trading sector is 0.4327 percent which is lower than the 2.808 percent dividend that reported by Sulong and Nor (2010) that using the non-financial firms listed on the main board of Bursa Malaysia from 2002 to 2005. In addition the median, minimum, maximum and standard deviation for the dividend, DV are 0.1189 percent, -23.9051 percent, 43.9123 percent and 3.5661 percent, respectively. Furthermore, liquidity is LQ; show the average (median) percentage of 2.4498 percent (1.94 percent). The minimum and maximum percentages for the liquidity, LQ are 0.34 and 21.17. In this study standard deviation for the liquidity is 2.0701. More interesting results show in the concentrated ownership variable. The average percentage of concentrated ownership, OWS is 13.9612 percent, which is lower than the Sulong and Nor (2010) reported on the average concentrated ownership, 31.8 percent, which indicate that firm in Malaysia are closely occupied by a few individuals or families, that using the non-financial firms listed on the main board of Bursa Malaysia from 2002 to 2005. The average concentrated ownership is 43.44 percent over 150 top listed firms in Malaysia for the year 2000, had been reported by Tam and Tan (2007). Moreover, the median, minimum, maximum and standard deviation for the concentrated ownership, OWS is 8.849, 0.0864, 76.5735 and 12.1166 percent, respectively. On average, about 5.7457 percent of the firm size is lower than the value reported by Bryan et al. (2006) which is 7.409 percent, that using the sample consists

of firms reporting compensation data on the ExecuComp, Compustat and SEC's Edgar databases 1992 to 1999. Obviously, the median of data implies that most of the companies are large in size, where the median and standard deviation for the firm size in service and trading sector is 5.7814 and 4.0071 percent. The maximum value for the firm size is 7.8693 and the minimum value for the firm size is 4.0071.

4.2 Scale Measurement

4.2.1 Hausman Test

Table 4.2: Result of Hausman Test

	Chi-Square Statistic	Decision
Overall Result	3.58	Random
Low Debt Companies	2.07	Random
High Debt Companies	7.80	Random

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Developed for the research

Hausman test was performed whether the model is fixed effects model or random effects model. We verify that the probability value of the hausman test of overall result is 0.7328 which was more than the significant level of 10%, indicating that the random effects model is consistent and efficient.

Afterwards, we easily verify that the probability value of the Hausman test of low debt companies, 0.8382 was greater than the significant level of 10%, indicating that the random effects model is consistent and efficient.

Hereafter, probability value of the Hausman test of high debt companies is 0.1672 which was greater than the significant level of 10%, indicating that the random effects model is consistent and efficient.

Therefore, we do not reject null hypothesis (H_0) in these three models. In short, we can conclude that the three models which is overall model, model of low debt companies and model of high debt companies is use random effect in this research.

4.2.2 Normality Test

Table 4.3: Result of Normality Test

	Jarque-Bera Statistic	Decision
Overall Result	1219.51***	Non-normality
Low Debt Companies	87.18***	Non-normality
High Debt Companies	552.46***	Non-normality

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Developed for the research

Jarque-Bera (JB) test is use to detect the normality of error terms. After conducting JB test on three models which is overall result model, low debt companies' model and high debt companies' model, we found that the p-value of JB statistic in these three models are lower than 10% significant level. Therefore, we have sufficient evidence to conclude that the error term is not normally distributed in these three models which means that we reject null hypothesis (H_0).

However we do not reject H_0 , due to in the Central Limit Theorem there is stated that when the sample size is huge enough so we can assume that the model in normally distributed (Gujarati, 2003). Number of observation which is more than 100, it can be assumed that the model is normally distributed. In this research the number of observation is 288, so we can assume that the overall model in normality distributed. As well as the low debt and high debt

companies' model, no of observation is 144, so these two models also can be assumed are normally distributed. Therefore, three models conducted in this research are normally distributed supported by theory of Center Limit Theorem.

4.2.3 Multicollinearity

Table 4.4: Pair-wise correlations of all variables for overall result

	AC	DEBT	DV	LQ	OWS	SIZE	DMY
AC	1.0000						
DEBT	0.0661	1.0000					
DV	-0.0812	-0.0262	1.0000				
LQ	0.0097	-0.1108	-0.0177	1.0000			
OWS	-0.0121	-0.0614	-0.0062	-0.0067	1.0000		
SIZE	0.4751	0.1476	-0.0602	-0.1407	0.2555	1.0000	
DMY	0.0055	-0.0591	0.0201	0.0932	-0.0234	0.0104	1.0000

Note: AC= agency cost, DEBT= firm debt, DV= dividend policy, LQ= liquidity, OWS= ownership concentration, SIZE= firm size, DMY= crisis₀₇₋₀₈

Source: Developed for the research

We use pair-wise correlation coefficient to detecting whether there is multicollinearity problem occur in the model. From the table 4.3 above, the highest correlation coefficient is 47.51% and the lowest correlation coefficient is 0.55%. Both figures shown that there is not occur multicollinearity problem in the overall model due to the highest correlation coefficient is not exceeding 80%.

Table 4.5: Pair-wise correlations of all variables for low debt companies

	AC	DV	LQ	OWS	SIZE	DMY
AC	1.0000					
DV	0.1150	1.0000				
LQ	0.2586	-0.0823	1.0000			
OWS	0.1556	-0.0566	-0.0834	1.0000		
SIZE	0.3333	0.0250	0.0056	0.4991	1.0000	
DMY	-0.0404	0.0762	0.0517	-0.0118	-0.0081	1.0000

Note: AC= agency cost in low debt companies, DV= dividend policy, LQ= liquidity, OWS= ownership concentration, SIZE= firm size, DMY= crisis₀₇₋₀₈

Source: Developed for the research

For the model of low debt companies, there is also not exists the multicollinearity problem due to the highest correlation coefficient shown in table 4.4 is 49.91% and the lowest correlation coefficient is 0.56%. Figure of highest correlation coefficient is not exceeding 80%.

Table 4.6: Pair-wise correlations of all variables for high debt companies

	AC	DV	LQ	OWS	SIZE	DMY
AC	1.0000					
DV	-0.2916	1.0000				
LQ	0.0092	-0.0020	1.0000			
OWS	-0.0765	0.0783	0.0176	1.0000		
SIZE	0.4713	-0.0962	-0.0003	0.1695	1.0000	
DMY	0.0397	-0.1082	0.2487	-0.0439	0.0389	1.0000

Note: AC= agency cost in high debt companies, DV= dividend policy, LQ= liquidity, OWS= ownership concentration, SIZE= firm size, DMY= crisis₀₇₋₀₈

Source: Developed for the research

Last but not least, model of high debt companies not existing multicollinearity problem as well. Highest figure of correlation coefficient is only 47.13% which is not more than 80% and the lowest figure of correlation coefficient is 0.03%.

In short, we can conclude that there is not existing multicollinearity problem in these three models which are overall model, model of low debt companies and model of high debt companies.

4.2.4 Autocorrelation

Table 4.7: Result of Autocorrelation

	Durbin-Watson Statistic	First Order Durbin-Watson Statistic	Decision
Overall Result	1.09	2.40	No Autocorrelation
Low Debt Companies	1.16	1.93	No Autocorrelation
High Debt Companies	1.18	2.32	No Autocorrelation

Source: Developed for research

Follow on; we proceed to autocorrelation testing for overall model. Durbin-Watson was performed whether the continuous related to the regression residuals independent each other. Durbin-Watson indicates that the model is inconclusive as the statistic of the test 1.09 is close to 1. From these, conclude that the model does not determine the autocorrelation problems exist or not. Therefore, we carried out First Order test by deeply determine whether the autocorrelation problems exist or not. In this test, the First Order Durbin-Watson indicates that the model is no autocorrelation due to the statistic of the test 2.40 is between the ranges of 1.50 to 2.50.

Next, proceed with autocorrelation testing in model of low debt companies and the result also inconclusive as the Durbin-Watson statistic of the test 1.16 is close to 1. So, we carried out First order test, the result indicates that the low debt companies' model is no autocorrelation due to the First Order Durbin-Watson statistic of the test 1.93 is between the ranges of 1.50 to 2.50.

Afterwards, proceed with autocorrelation testing in model of high debt companies. Durbin-Watson indicates that the high debt companies' model is inconclusive as the statistic of the test 1.18 is close to 1. Therefore, we carried First order test to deeply determine whether the autocorrelation problems exist or not. In this test, the First Order Durbin-Watson indicates that the high debt companies' model is no autocorrelation due to the statistic of the test 2.32 is between the ranges of 1.50 to 2.50.

Due to all models'd value is between 1.50 to 2.50 which means that there is no autocorrelation problems according to Age and Aka (2007) and Vogt and Johnson (2011). Therefore, the decision we made is do not reject null hypothesis (H_0).

4.3 Regression Result

Table 4.9: Regression Result of Overall Model

Variables	Coefficient	Standard Error	T-Statistic
Constant	-5.67	1.69	-3.35***
Dividend Policy (DV)	-0.02	0.03	-0.68
Firm Size (SIZE)	1.39	0.31	4.53***
Ownership Concentration (OWS)	-0.01	0.01	-1.35
Firm Debt (DEBT)	-2.78	0.0002	-0.18
Liquidity (LQ)	-0.005	0.06	-0.08
Crisis ₀₇₋₀₈ (DMY)	-0.002	0.09	-0.02
R²	0.1002		
Adjusted R²	0.0809		
F-Statistic	5.19***		
Hausman Chi-Square Statistic	3.58		
First Order Durbin–Watson Statistic	2.41		

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Developed for the research

$$\widehat{AC} = -5.67 - 0.02DV + 1.39SIZE - 0.01OWS - 2.78DEBT - 0.0057LQ - 0.002DMY$$

$$p = (0.00) \quad (0.49) \quad (0.00) \quad (0.17) \quad (0.86) \quad (0.93) \quad (0.98)$$

$$R^2 = 0.1002, \bar{R}^2 = 0.0809$$

$$F = 5.19, \quad p = 0.00$$

In the model of overall result, we control heteroscedasticity problem by cross-section SUR by using Eview 6. From the result above it is indicated that the overall model is significant because the p-value of F-statistic is zero which is lower than 1% significant level. However, by testing the individual perspective it is only one independent variable which is firm size is significant and positive related with the agency cost at 1% significant level. It might be the bigger the firm size, the more securities analysis will occur and also lead to the agency problem increase. Other independent variables show that there are insignificant and negatively related towards

the agency cost. Dividend payout and agency cost is insignificant negative related, might due to there is optimum control by management on payout of dividend, so reduce the agency problem. Debt is insignificant with agency problem where the conflict between the shareholders and bondholders are absence and unrelated (Agrawal & Dijk, 2007). Managers has few authority in monitoring company fund due to most shareholders manage the company, so it could be lead to ownership concentration and agency problem is insignificant negative related. Liquidity and agency problem is insignificant and have negative relationship may because company need fund to invest in potential projects so might decrease the liquidity and agency problem. If a company not growth will lead to company value drop and negative impact will treated by investors. During the crisis, reduce the dividend to increase the liquidity is might one of the way to survive the company, so crisis and agency problem is negatively insignificant in this research.

Therefore, the model of overall result is fulfilling the assumption of CLRM due to this model is normally distributed with no multicollinerilty, autocorrelation and heteroscedasticity problem.

Table 4.10: Regression Result of Low Debt Companies' model

Variables	Coefficient	Standard Error	T-Statistic
Constant	-2.89	0.60	-5.00***
Dividend Policy (DV)	0.04	0.02	2.37**
Firm Size (SIZE)	0.80	0.11	7.19***
Ownership Concentration (OWS)	4.58	0.008	0.006
Liquidity (LQ)	0.09	0.05	1.80*
Crisis ₀₇₋₀₈ (DMY)	-0.14	0.15	-0.99
R²	0.1648		
Adjusted R²	0.1343		
F-Statistic	5.41***		
Hausman Chi-Square Statistic	2.08		
First Order Durbin-Watson Statistic	1.94		

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Develop for the research

$$\widehat{AC} = -2.98 + 0.04DV + 0.80SIZE + 4.58OWS + 0.09LQ - 0.14DMY$$

$$p = (0.00) \quad (0.01) \quad (0.00) \quad (0.99) \quad (0.07) \quad (0.32)$$

$$R^2 = 0.1648, \bar{R}^2 = 0.1343$$

$$F = 5.41, p = 0.00$$

Heteroscedasticity problem in the model of low debt companies is control by cross-section SUR by using Eview 6. The result from table 4.0 indicated that the overall model is significant because the p-value of F-statistic is significant at 1% level. From the individual perspective, majority independent variables are significant and positively related towards the agency cost in low debt companies which are dividend policy at 5% level, firm size at 1% level and liquidity at 10% level. In low debt companies, dividend payout and agency problem is significant positive is because huge fund will be payout as dividend, so irregular proportion might be created to insiders may will lead to increase on agency problem. On the other hand, liquidity and agency cost also significant positive in low debt company is might due to management could have more fund as cash flow so misusing the liquidity will occur

easily. Only two independent variables are insignificant towards the agency cost in low debt companies which are ownership concentration and dummy variable. Ownership concentration is positively related with agency cost but crisis₀₇₋₀₈ is shown a negatively relationship with agency cost. When the firms face low debt, largest shareholders ownership could have more authority in management so agency problem between majority shareholders and minority shareholders could increase. Thus, ownership concentration and agency problem is insignificant and positive related in this situation.

Therefore, the model of low debt companies is fulfilling the assumption of CLRM due to this model is normally distributed with no multicollinerilty, autocorrelation and heteroscedasticity problem.

Table 4.11: Regression Result of High Debt Companies' model

Variables	Coefficient	Standard Error	T-Statistic
Constant	-6.18	1.23	-5.04***
Dividend Policy (DV)	-0.20	0.14	-1.40
Firm Size (SIZE)	1.54	0.21	7.50***
Ownership Concentration (OWS)	-0.04	0.01	-2.56**
Liquidity (LQ)	0.002	0.13	0.02
Crisis₀₇₋₀₈ (DMY)	-0.07	0.26	-0.29
R²	0.2506		
Adjusted R²	0.2235		
F-Statistic	9.23***		
Hausman Chi-Square Statistic	7.81		
Durbin–Watson Statistic	2.32		

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Developed for the research

$$\widehat{AC} = -6.18 - 0.20DV + 1.54SIZE - 0.04OWS + 0.002LQ - 0.07DMY$$

$$p = (0.00) \quad (0.16) \quad (0.00) \quad (0.01) \quad (0.98) \quad (0.77)$$

$$R^2 = 0.2506, \quad \bar{R}^2 = 0.2235$$

$$F = 9.23, \quad p = 0.00$$

Last but not least, as well heteroscedasticity problem in the model of high debt companies is control by cross-section SUR by using Eview 6. From the table above it is indicated that the overall model is significant because the p-value of F-statistic is significant at 1% level. When we are testing for high debt companies, there are only two independent variable is significant toward the agency cost which are firm size at 1% level with positive relationship and ownership concentration at 5% level with negative relationship. When the firms face high debt, large shareholders could loss power to control the company since debt holders might involve in company management to safeguard the interest. Thus, ownership concentration and agency cost is negatively significant. Remaining variables is insignificant towards the agency cost; liquidity is shown a positive relationship towards agency cost in high debt companies' meanwhile dividend payout and crisis₀₇₋₀₈ is stated negative related with agency cost in high debt companies. Agency problem reduce might due to liquidity decrease when company face high debt. Therefore, liquidity and agency problem is positive significant. When the firms face high debt, there is larger of the insider ownership and may lead to decrease in agency problem. Thus, dividend policy and agency cost is insignificant negatively related.

Therefore, the model of high debt companies is fulfilling the assumption of CLRM due to this model is normally distributed with no multicollinerilty, autocorrelation and heteroscedasticity problem.

4.4 Conclusion

For a concluding remark of this chapter, this research discovered that the relationship between the agency cost and all independent variables in services and trading sector in Malaysia. It also interprets other results from the data of the research. At the last chapter, it would further discuss the major findings, study implications, limitations and also some recommendations for future research.

Chapter 5: Discussion, Conclusion and Implication

5.0 Introduction

Chapter 5 will provide the discussions of major findings which were summarized from Chapter 4. Next, the limitation of the study during the progress of the research and some recommendations for further improve in the future research will be emphasizing in this chapter. Finally, there is a conclusion for the entire research project.

5.1 Summary of Statistical Analyses

Chapter 4 started with Hausman test which is used to test whether random or fixed effects model is more consistent and efficient. Hereafter, diagnostic checking was perform which are including Jarque-Bera normality test to see whether the error terms of the model are normally distributed; Multicollinearity test to find out whether there is multicollinearity problem between the variables; Durbin-Watson and First Order test to test whether there is autocorrelation exists in the models. Lastly, overall result being reported which including F-test to see whether the multiple linear regressions model is significant and T-test to known the relationship among independent variable and dependent variable, as well to see whether each independent variable is significant. There is using cross-section SUR to control the heteroscedasticity by using Eview 6. After conducting all test, there is proven that three models which are model of overall result, model of low debt companies and model of high debt companies are not consist of any econometric problems; means that there is no multicollinearity, autocorrelation, and models is normally distributed.

Table 5.1 is the summaries of the result in chapter 4 based on the all firms, low debt companies and high debt companies.

Table 5.1: Decision for the Hypotheses of the Study

Hypotheses of the Study	All Firms	Low Debt Companies	High Debt Companies
H ₁ : There is negative relationship between dividend policy and agency cost in Malaysia.	Reject H ₁	Do not Reject H ₁	Reject H ₁
H ₂ : There is positive relationship between firm size and agency cost in Malaysia.	Do not Reject H ₂	Do not Reject H ₂	Do not Reject H ₂
H ₃ : There is negative relationship between ownership concentration and agency cost in Malaysia.	Reject H ₃	Reject H ₃	Do not Reject H ₃
H ₄ : There is negative relationship between firm debt and agency cost in Malaysia.	Reject H ₄	-	-
H ₅ : There is negative relationship between liquidity and agency cost in Malaysia.	Reject H ₅	Do not Reject H ₅	Reject H ₅
H ₆ : There is positive relationship between crisis and agency cost in Malaysia.	Reject H ₆	Reject H ₆	Reject H ₆

Source: Developed for the research

5.2 Discussion on Major Finding

Table 5.2 is the summaries for the hypotheses of the study; expected sign of all variables in this study is stated in this table.

Table 5.2: Summaries for the Hypotheses of the Study

Hypotheses of the Study	Expected Sign	All Firms	Low Debt Companies	High Debt Companies
H ₁ : There is negative relationship between dividend policy and agency cost in Malaysia.	-	-	+**	-
H ₂ : There is positive relationship between firm size and agency cost in Malaysia.	+	+***	+***	+***
H ₃ : There is negative relationship between ownership concentration and agency cost in Malaysia.	-	-	+	-**
H ₄ : There is negative relationship between firm debt and agency cost in Malaysia.	-	-	None	None
H ₅ : There is negative relationship between liquidity and agency cost in Malaysia.	-	-	+*	+
H ₆ : There is positive relationship between crisis and agency cost in Malaysia.	+	-	-	-

Notes: * Significant at 10%; **significant at 5%; ***significant at 1%.

Source: Developed for the research

5.2.1 Dividend Policy and Agency Cost

Based on the results in Chapter 4, dividend payout is found to have an insignificant negative relationship with the agency problem in Malaysia. The result inconsistent with the finding of Rozeff (1982), Llyod et, al (1985), Jensen (1986), Jensen et al. (1992), La Porta et al. (2000) and Manos (2002) whom verified dividend payout is significant and have negative effect on the agency problem. Easterbrook (1984) and Moh'd et al. (1995) further support the results with the statement that the dividends payout will causes the firm to undergo a third-party audit, which serves to encourage managers to make public new information and reduce agency costs in order to protect needed of the funds. This shows that the dividend payouts are part of the firms optimum controlling and serve to reduce agency costs.

On the other hand, the result obtained from this paper research consistent with the finding of Savadjany and Haeri (2011). In their studies, dividend payout is insignificant and not creates the agency problems. It due to the company may create debt in proportion to its undistributed earnings and invests the whole funds. Thus, the conducted investment lacks appropriate effectiveness and as a result shareholders undergo agency costs.

Dividend payout is also found to have an insignificant negative relationship with the agency problem in high debt companies. Larger of the insider ownership might be involve in company to controlling dividend payout when the company face high debt; therefore the agency problem might be reduce.

Besides that, the dividend payout is found to have a significant and positive relationship with the agency problems in low debt companies. It due to the huge funds for payout dividend will create irregularity proportion to the insider or managers in low debt companies. For that reason, this shows that

companies lacks optimum monitoring and serve to increase the agency problems.

5.2.2 Firm Size and Agency Cost

Overall result of our regression model shows that the firm size and agency cost are significant and positively related. Our result is consistent with Lasfer (1999), Doukas et al. (2005) and Cohen and Yagil (2006). Lasfer (1999), argue that there is high risk in small companies to borrow in short term, so the small companies use leasing to finance their growth opportunities to reduce agency cost, therefore the firm size and agency cost is positively related. This result also supported by Doukas et al. (2005), in their research stated that securities analysis will reduce agency cost. When the firm size is large, there will be more securities analysis, hence probability of agency cost occur will be higher. Moreover, Cohen and Yagil (2006) also supported our result and they argue that firm size is considered as a measure of agency conflicts, it is also presupposed that the determinants of firms' borrowing decisions are likely to be size dependent because of the differences in the financing opportunities available to small and large companies and in their potential agency costs.

5.2.3 Ownership Structure and Agency Cost

Besides that, ownership concentration also one of the important variable used to reduce the agency cost in companies (Marck & Yeung, 2003). However, we found that ownership concentration has negative insignificant effect on agency problem. Most of the shareholders will manage the company, thus manager has less authority to misuse the company fund. Yet, this result is not

significant in trading and service sector, where this sector focus more on human resources instead of capital. Our result is inconsistent with the past researchers such as Mollah et al. (2007), Florackis and Ozkan (2009) and Marck and Yeung (2003). They found that agency cost and ownership concentration have a negative relationship because the firms that fully controlled by families will have less agency problem in the firm.

Moreover, the result also shows that agency cost positively insignificant related to ownership concentration in low debt companies. During company incur in low debt, largest shareholders ownership have more authority in management without control from debt holder. Thus, the agency problem between majority shareholders and minority shareholders could increase. Concentrated shareholders may use fund for investment at minority shareholder expenses. According to Shleifer and Vishny (1997), "Since firms regularly re-enter debt markets for financing, this concentrated equity holders, who are typically long term investors with substantial wealth at risk, potentially have a strong impetus to mitigate the agency conflicts with bondholders". This might happen because less bondholders to keep monitor manager performance, hence it insignificantly affects agency cost.

Other than that, we also found that the agency cost and ownership concentration in high debt companies is negatively significant. Agency cost lower in high debt company might be due to high control from bondholder. Bondholder mainly concern about their payment or fund, thus they do involve in management especially if the firm manage by large shareholders. Large shareholder do not have full power to make decision, hence agency problem will reduce.

5.2.4 Debt and Agency Cost

Apart from that, the overall result of our regression model shows that the agency cost and debt are insignificant and negatively related. Yet, our result is inconsistent with McKnight and Weir (2009) and D'Mello and Miranda (2010). In their studies, they argue that debt mitigates the agency problem, whereby the manager being monitored by the debt holders as the debt increase with the payment of interest payment. Thus, the manager has less opportunity to use the fund and attack the non-value activities. According to Agrawal and Dijk (2007), debt is insignificant with agency problem, where the conflict between the shareholder and bondholder are absence and unrelated. This is because the management being persuades by the shareholder to take over the bondholder wealth, but the high changes of the management and low managerial shareholdings do not have the incentive and the pressure to take over the wealth from bondholders.

5.2.5 Liquidity and Agency Cost

Liquidity is one of the independent variable to measure agency cost. The overall result shows that agency cost and liquidity is negatively insignificant. The result is inconsistent with the finding of Yermack (1995). Manager who invests in poor investment will make company have low liquidity and higher agency problem due to company have less cash free flow to pay incentive of shareholder. This shows that there have negative relationships between liquidity and agency problem but insignificantly effect services and trading companies.

Other than that, this research finds that company with low debt experience high agency problem if the level of liquidity is higher. According to Whited

(1992), low liquidity it will make agency cost decrease because low debt companies have less borrowing short term money and lower probability of cost for default contract. According to Sibilkov (2007), the low liquidity insides the company will reduce the probability of bankruptcy, thus, it reduce the agency cost. This is because, more cost for the manager to take over the value from bondholder when the liquidity of the firm is low.

Agency cost and liquidity in high debt companies are positively insignificant. According to Ahmadzadeh and Malekinejad (2011), when high debt companies borrow more short term money from bank it will have higher liquidity and lead agency cost to raise. Liquidity can lead agency cost to occur if the information asymmetries are inefficient in financial market. Normally, companies will give information asymmetries to bank about company's performance and get high money from them to invest in investment activities. According to Wahab et al. (2012), information asymmetries can lead to moral hazard problem. Furthermore, higher liquidity to invest in higher risk investment can get higher return to the shareholder and manager but it will make agency cost to increase which is shareholder and manager have different opinion about high risk investment. According to Morellec (2001), high debt companies have high liquid asset and it may result to low cost of selling. It is also able to increase the sale and liquidity value. In turn, company sell assets will reduce the size and value of a company's assets. Thus, it will harmful to creditor. Moreover, company set the policy to control their company's assets to prevent the asset sales and increase the expected value of the asset in the liquidation of creditor. It is insignificant between liquidity and agency cost when assets are not binding collateral.

5.2.6 Crisis and Agency Cost

Agency problem is negatively and insignificant related to economic condition specifically crisis. The effect of crisis does not play a role to influence agency problem inside service sector. The result is inconsistent with previous literature such as Jensen and Meckling (1976), Rajan and Zingales (1998) and Kim and Lee (2003) whom proved to show that crisis is significant and positive effect on the agency problem. They indicated that agency problem are very likely to become more important factors during a crisis since the crisis would cause more companies to fall into a situation of financial suffering. Due to the most companies were known to have weak corporate governance structures, agency problem might become more important during a crisis.

On the other hand, Jensen (1986) and Mollah et al., (2007), do found that, crisis is significant and negatively affects agency problem. Due to in an economy-wide financial suffering, free cash flow problems would become less important since the managers and insiders would greatly need cash to survive, without leaving much money to squander, thus, agency problem reduce. This also can support our finding in high debt and low debt company, where high debt and low debt company insignificantly related to agency cost during crisis.

5.3 Implication of Study

This research paper contributes to policy makers, investors, company, and board of directors on the judgment of the decision making. Thus, it is important for the relevant parties to determine the strategy to mitigate the agency problem in Malaysia.

From this research, we found that the firm size turns out to be positively significant to the agency cost in Malaysia. When the firm size decreases, the agency problem inside the firm also will decrease. For example when the company size is smaller, the board of director can easily manage the firm and control all the managers in their company. Hence, the policy maker or regulator should give more attention to come out with guideline or policy to overcome the high agency cost in large company. This also can give impact to investor in investment decision. They also can analyze the company performance and management either increases or decrease the firm size tightly involves in agency cost. This can affect their return on investment.

Besides that, the liquidity also plays an essential role in determining the agency problem in Malaysia. The liquidity is the assets that can be easily convert into cash in a short term period. The liquidity in the low debt company has positively significant to the agency cost in Malaysia; when firm liquidity increase it tend to raise agency problem. The policy maker and regulator should address this issue since high liquidity in trading and services company result to the agency cost. Debt holder should play a significant role to control the manager on the tendency misuse the company funds.

In addition, the ownership concentration has negatively significant to the agency problem in high debt companies, as the firm not fully control by family, it will have high agency problem. Majority of the shareholders have the authorities to influence the minority shareholder in the decision making, company management and fund of the company. The board of director should focus on this issue by imposing certain rules and regulation in the company, in order to overcome the high agency problem in the firm. Besides that, it also helps the investors to make the decision by making the judgments whether this company is worth to invest in the long term period.

5.4 Limitation of Study

Throughout the whole period of this research, we are facing limitation during completing this research. Based on our knowledge, there is less researchers study the interrelation between the stock price and risk with the agency problem in Malaysia. The stock price and risk are one of the important independent variables to determine the agency problem (Utami & Inanga, 2011). Besides that, Liao et al. (2009) also found that there is a relationship between credit risk and agency problem inside the bank. Yermack (1995) found that stock options' incentives have significant association in reduction of agency cost. Hence, it will be more interesting if these two variables are included to study agency problem.

5.5 Recommendation for Future Research

We recommend the future researches who are interested in further studying this area should increase, the period of the study and at the same time widen their study into different sectors in Malaysia. In addition, if the future researchers study in multi sectors about the agency cost in Malaysia, this will benefit to investors, policy makers, companies, regulators and other relevant parties. Besides that, it also may provide more information about the agency problem in different sectors to the future researchers who are interested to study this relevant topic. Meanwhile, the future researchers can focus the agency problem in the developed and developing countries in order to investigate the differences between the agency cost in developed and developing countries.

Apart from that, we proposed the future researchers should include stock price and risk as additional variable to see the of agency problem in Malaysia. Others than study the five independent variables for instance dividend policy, debt, firm size, liquidity and ownership concentration, the future researcher can include these two

variables which are the stock price and risk to determine the agency problem in Malaysia. Thus, this study will contribute more knowledge to the coming researchers who are interested to study this relevant issue.

In addition, we recommend the future researcher to collect the data consistently. For example, the future researcher should collect the data from the annual report that provides the data at the same ending year of reporting. This is because if the future researcher collect data from the annual report that have different financial period, will cause inaccuracy in data collecting method. Therefore, the future researcher should go through the annual reports of each company before he or she proceed to collect the data.

Besides that, we recommend future researcher to use an alternative method to test the normality distribution by applying two defined distribution which are Gaussian and log normal distribution in order to get a better fit of the data.

Last but not least, we suggest that the future researchers can use alternative method to test autocorrelation problem applied by Breusch-Godfrey LM test. This is because, LM test can use not only testing for autocorrelation of any order but also can test with or without lagged dependent variable.

5.6 Conclusion

This research have going through the Chapter 1 for the overview of introduction, Chapter 2 for the literature review, Chapter 3 for the explanation about the methodology, Chapter 4 which conducted the data analysis and lastly is Chapter 5 which is the overall conclusion of the entire research project.

This research project is mainly focus on agency cost in trading and services industry in Malaysia. The main purpose of this study is to investigate whether the dividend policy, firm size, ownership concentration, firm debt, liquidity and crisis will influence the agency cost in Malaysia's trading and services sector.

We have summarized the results and emphasize some limitations of the study as well as suggest the recommendations for the future researcher to enhance in the future related research. In general, this research will give a more detail information about the determinants of agency cost in trading and services sector in Malaysia.

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