HERDING BEHAVIOR IN DIVIDEND POLICY: CASE STUDY OF MALAYSIA

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MASTER OF SCIENCE (FINANCE)
UNIVERSITI UTARA MALAYSIA
JUNE 2013

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Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia
In Fulfillment of the Requirement for the Degree of Master of Science

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ABSTRAK

Tujuan kajian ini adalah untuk membuktikan kewujudan tingkah laku berkelompok dalam polisi dividen dan kecenderungan satu-satu syarikat untuk mengikuti syarikat lain yang berada di dalam industri yang sama di Malaysia. Selaras dengan penyelidikan terdahulu, kertas ini meneroka pengaruh meniru dasar dividen di Malaysia. Ia akan membuktikan sama ada terdapat tingkah laku berkelompok di dalam polisi dividen di negara ini atau tidak. Hasil kajian menunjukkan, pengaruh meniru, tingkah laku berkelompok atau pematuhan antara industri dalam dasar dividen wujud di Malaysia. Lebih daripada 80 peratus daripada syarikat-syarikat yang memberi tindak balas dalam industri perdagangan dan perkhidmatan membayar dividen kepada pemegang saham mereka. Keputusan ini juga menunjukkan bahawa terdapat persamaan dalam pembayaran dividen di kalangan firma-firma dalam industri ini. Secara keseluruhannya, keputusan adalah konsisten dengan tiruan dalam polisi dividen. Kajian ini juga mendokumenkan kesesuaian mekanisme tiruan sosial di sebalik tingkah laku pembayaran dividen dan, oleh itu, ia akan menambah pengetahuan semasa kewujudan tingkah laku berkelompok di Malaysia.

Katakunci: tingkah laku berkelompok; pematuhan antara industri; polisi dividen; polisi dividen di Malaysia

ABSTRACT

The purpose of this study is to prove the existence of the herding behavior in dividend policy and the tendencies of one company to follow others in the same industry in Malaysia. Consistent with previous research, this paper explores imitative influence on dividend policy in Malaysia. It will prove whether there is herding behavior in the dividend policy or not. The result shows that the imitative influence, herding behavior or intra-industry conformity in dividend policy exist in Malaysia. More than 80 percent of the responded companies in trade and services industry are paying dividend to their shareholder. This result also indicates that there is similarity in dividend payout among firms in the same industry. Overall, the results are consistent with imitation in dividend policy. This study documents the relevance of social imitation mechanism behind dividend payout behavior and therefore it will adds to the current knowledge of the existence of herding behavior in Malaysia.

Keywords: herding behavior; intra-industry conformity; dividend policy; dividend policy in Malaysia

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATION

DPS	**Dividend per share**
BOD	**Board of Directors**
Div Dummy	**Dummy variables for dividend**
DPO	**Dividend Payout Ratio**
ROA	**Return on Assets**
A.ROA	**Average Return on Assets**
A.Growth	**Average rate of revenue growth**
A.DPO	**Average Dividend Payout Ratio**
Std. Deviation	**Standard Deviation**
TD/TD	**Total Debt deflated by Total Assets**
df	**Degree of freedom**
Sig.	**Significant**
OLS	**Ordinary Least Square**
GLS	**Generalized Least Square**
KLSE	**Kuala Lumpur Stock Exchange**

CHAPTER 1

INTRODUCTION

1.1   Introduction

Prior research such as the work by Michel (1979) purported that the relationship between dividend policy and firm valuation is still a major unresolved issue in corporate finance. Either theoretically or empirically, the research evidence proves to be contradictory. While financial theory is unequivocal on the inconsequence of dividend policy in perfect capital market, there is widespread recognition that payout policy in practice is controversial and not well understood. Moreover, with the presence of taxes and transaction costs, the dividend payment by the company is regarded as something of a dilemma. Nonetheless, a worthwhile field to venture into.

Dividend is actually a reward that encourages or attracts all investors to retain their shares at the company. Dividend are usually been paid by the companies to the shareholder with cash (cash dividend). Besides, dividend also provides an incentive to own stock in case of stable companies, even if they are not experiencing much growth in the share prices.

Feldstein and Green (1979) stated, in order to maximize the value of their shares, companies will pay dividends even though the funds could instead be retained and subsequently distributed to shareholders in a way that would allow them to be taxed more favorably as capital gains.

Dividend is one of the most classical fields in finance and still a much-debated problem to be solved. Baker, Mukherjee and Pakelian (2005) supported by the work of Black (1976) suggest that there was no a convincing explanation on the cause of the companies have to pay cash dividends to their shareholders. Moreover, financial economists also have intensely studied the possible role of dividends in maintaining or keeping the growth of corporate values. The word by Fischer Black (1976) comes into mind,

"The harder we look at dividend picture, the more it seems

like a puzzle, with pieces that just don't fit together."

In the content of dividend payout behavior, Caneghem and Aerts (2011) found a significant effect of industry type on the pattern of how dividend is paid. Although an industry effect may replicate common correlations among dividend payout determinants of firms in the same industry, it may also indicate that firms imitate the dividend policy decisions of other firms in the same industry.

Furthermore, the work of Choi and Sias (2009) revealed a strong evidence of institutional industry herding. This work is also align with the work by Rubin and Smith (2009) which also found that there was a positive relationship between institutional preference for low volatility and the tendency of higher levels of institutional ownership to increase volatility through their trading behavior.

1.2   Background of the Study

1.2.1 Herding behavior

Herding is defined as a group of investors following each other and out of the same industry for over some period (Choi & Sias, 2009). Sias (2004) examined the herding behavior in the institutional investors and tested it by employing a cross-sectional relation of investors' demand quarterly. The results show that investors are following each other, whether to buy or sell any of their securities.

However, this study focuses on the firm's decision on dividend payout derived. The study by Scharfstein and Stein (1990) provided relevancy in this study. They stated that, under certain circumstances; managers simply follow the investment decisions made by other managers and ignoring substantive private information. Although a growing empirical literature focuses on testing institutional herding in individuals securities, the proposed reasons for institutional herding hold at least equally well at the industry level.

Therefore, based on previous research, Caneghem and Aerts (2011) explored the influences on intra-industry conformity focus in dividend payout policy. With a data over 13 years period among a sample of U.S. firms, this research measures mimetic pressures as the institutional prevalence or the pervasiveness of a feature of dividend policy within the firm. By using the regression model, they found the evidence of significant institutional conformity tendencies in dividend policy.

That is also happening in Malaysian economy. Duasa and H. Kassim (2009) had examined the existence of herd behavior in Malaysia among foreign investors in the Malaysian capital market. They found that Malaysian short-term capital market can be volatile due to the herd behavior of the major portfolio investors. Therefore, imperative for Malaysia to take the necessary pre-cautionary measures

to ensure that an aggregate reversal in portfolio investment flows would not result in a de-stabilizing impact on the economy.

Lai and Lau (2004) indicated in their study, herd behavior under an extreme market stress environment in Malaysian stock market had been done. This study used to capture the presence of herd behavior in Malaysia. The results show that there is an evidence of herding behavior of Malaysian market participants was prevalent in extreme lower market stress context and financial crisis period.

1.2.2 Dividend policy in Malaysia

Dividend policy has been one of the significant topics in financial literature, which give it a considerable attention to solve the dividends vagueness. Alzomaia and Al-Khadhiri (2013) in their study, pointed out that, the decision of the firm regarding how much earnings could be paid out as dividend and how much could be retained is the concerned of dividend policy decisions.

Al-Malkawi, Rafferty and Pillai (2010) stated that dividend payment is clearly one of the most important unsolved problems in finance. It was bound up with the development of the corporate from itself. It was seen that the emergence of dividend policy as important to investors was, to some extent, driven by the evolving state of financial markets.

Same goes to Malaysia. Annuar and Shamsher (1993), in their study had investigated the dividends and earnings behavior of firms listed on the KLSE. Their study found that the dividend decisions of the firms partially depended on their current earnings and past dividend, and firms have long term target dividend which is conditioned upon their earnings ability. So, they conclude that, profitability is an important determinant of a firm's dividend policy.

Results shows in Pandey (2003) study, that Malaysian firm rely both on past dividends and current earnings in deciding the current period's payment of dividends. Furthermore, his results uncover that the Malaysian firm have lower target ratios and higher adjustment factors. This points to the low smoothing and relatively low stability of dividend policy in Malaysia.

In addition, Aivazian, Booth and Clearly (2003) found in their study that emerging market firms exhibit dividend behavior similar to U.S. firms, in the sense that dividends are explained by profitability, debt and market-to-book ratio. Though, the empirical dividend policy equations are structurally different, indicating different sensitivities to these variables. Furthermore, emerging markets firms seem to be more affected by asset mix, which seems to be due to their greater reliance on bank debt.

1.3 Problem Statement

The most challenging questions that always have been asked are: 1) why do we need to pay dividends to the investors? Other than to attract them to retain at the company, 2) is there any other reason for a company to pay dividends?, 3) why the company did not retained it and subsequently distributed to the shareholders so that they will be taxed more favorably as capital gains?

Feldstein and Green (1979) stated in their working paper, there are two principal ingredients that explained all the above questions which are; 1) the conflicting preferences of shareholders in different tax brackets, and, 2) the shareholders' desire for portfolio diversifications showed that the company will pay a positive fraction of earnings in dividends.

Dividend are referred as reward for providing finances to the company in literature as without any dividend payout ratio, shares would not have any value. Kumar (2003) pointed out that, dividend payout policy has been the primary puzzle in the economics of corporate finance as it is regarded to be complex with implications for economy (macro level) and firm (micro level) as well.

At economic level, dividend helps in formulating appropriate policies for achieving the national aggregate savings and sectoral

distribution of those savings keeping in view the priorities of national credit plans. While at the firm or micro level are crucial in taking investment and financial decisions.

Anil and Kapoor (2008) had stated that dividend payout has been an issue of interest in financial literarure. Academicians and researchers have developed many theoretical models describing the factors that managers should consider when making decisions. Though, they also quoted that Miller and Modigliani (M&M) (1961) argued that given perfect capital markets, the dividend decision did not affect the firm value and therefore, irrelevant.

However, most financial practitioners and academics surprised with this conclusion because the conventional wisdom suggests that a properly managed dividend policy will have an impact on share prices and shareholder wealth.

In previous study, Caneghem and Aerts (2011) referred to Michel (1979), Baker (1988) and Dempsey, Laber and Razeff (1993), documented significant industry influences on dividend payout behavior. While industry effect may reflect common correlations among dividend payout determinants of companies in the same industry, it may also indicate that the company imitates dividend policy decisions of other companies within the industry when setting their dividend payout level.

Align with institutional theory; Caneghem and Aerts (2011) argued that companies may tend to embed their dividend policy in a larger social reference framework. The institutional perspective offers a lens with which to study dividend policy patterns at industry level. Such patterns may result from institutional pressures for conformity to constitutive rules that function as rule like industry "formulas", defining what is credible, appropriate or legitimate. In that case, this study given to knowledge gathered from prior literature is geared to disclose the existence of herding behavior in dividend policy in Malaysia and the tendency of one company to imitate another in the same industry.

1.4   Research Question

The research question for this study:

i.   Does the herding behavior in dividend policy exist in this country?

1.5   Research Objectives

Generally, this study is to observe the herding behavior in dividend policy in this country. The specific objectives of this study are:

i.   To prove the existence of herding behavior in dividend policy in Malaysia; and

ii. To observe how at a certain degree are the tendency of one company to copy another company's dividend policy in the same industry

1.6   Scope of the Study

This study focuses on the companies which are listed on Main Market of Bursa Malaysia for the year of 2009 and grouped in trade and services industry. This study would cover the dividend payout ratio, average rate of revenue growth, average return on assets, firm size and debt, number of common shares and dividend dummy.

1.7   Limitation of the Study

It's quite hard to find references for this study because the choice of industry and variables employed is small and limited. This study uses the same regression method in previous research (Caneghem & Aerts, 2011) which used more than ten variables. Although a broad range of variables have been used in prior research, for this study, only seven variables had been chose based the availability of the data that can be collected. This study is based only on the secondary data which collected from Thompson DataStream and Bursa Malaysia website.

The difficulty of finding the data and other information arises when this study only used sample focused in 2009. The results and findings would be different if the period of sample used is longer.

This study used Ordinary Least Square (OLS). If this study used other methods such as Generalized Least Square (GLS), the results and findings would be different.

The sample used in this study only focused in one industry which is trade and services industry. Therefore, the results and findings are only representing this industry and not reflecting the whole country.

1.8   Significance of the Study

This study is very significant because it will provide beneficial information towards academician, practitioner and policy maker as well. It will help to boost the knowledge in corporate finance especially in this research field which is dividend policy.

This research could provide guidelines to the researcher to hold into other researches in future. Moreover, this research significantly provides the knowledge and information to other researchers and students.

In addition, the significant of this study is to see the herding behavior in dividend policy in Malaysia. It may focus on the how the managers make decisions towards their companies. Besides it may serve as conductor to other researchers on how the herding behavior happens in Malaysia and in other country.

1.9   Organization of the Study

The content of this study is organized into five chapters. This chapter focuses on the background of the herding behavior in dividend policy. The next chapter which is in Chapter 2 provides reviews of existing literatures.

Chapter 3 discusses on the methodologies applied in this study. The determinant model, research hypotheses and the estimation approaches are elaborated. Data sources and descriptions of variables are also explained in this chapter.

Chapter 4 analyzes the results and delivers the discussion on the descriptive findings on the herding behavior in dividend policy and observes the determinant factors.

Last but not least, Chapter 5 contains of the conclusions, recommendations and implications of this study together with limitations and suggestions for futures researches.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter provides the base knowledge of intra-industry conformity and herding behavior in the same industry to foothold the study which consist of literatures from previous studies.

2.2   Brief Introduction of Dividend

2.2.1   What is dividend?

Dividend is a distribution of a portion of a company's earning which decided by the board of directors to a class of its shareholders. Dividend is most often quoted in terms of the dollar amount each share receives which also known as dividends per share (DPS). DPS is a

mandatory distribution of income and realized capital gains made to mutual fund investors. Dividend can also be quoted in terms of a percent of the current market price that referred to as dividend yield.

Dividend can be pay in the form of cash, stock or property. Usually it refers to a cash distribution of earning. The most secure and stable companies will offer dividends to their stockholders. Their share prices might not move much but the dividend attempts to make up for this. On the other hand, the high-growth companies rarely offer dividends because all of their profits are reinvested to sustain higher-than-average growth.

2.2.2 Types of dividends

Decision to pay a dividend rests in the hand of the BOD of the corporations. A dividend is distributable to shareholders of record on a specific date. When the dividend has been declared, it becomes a liability of the company and cannot be easily withdrawn by the corporation.

The most common type of dividend is in form of cash. When public companies pay dividends, they pay regular cash dividends four times a year. Sometimes the companies will pay a regular cash dividend plus with an extra cash dividend. But paying a cash dividend will reduces corporate cash and retained earnings except in the case of a liquidating dividend where paid-in capital may be reduced.

An alternative form of cash payout is a stock repurchase. Just as a firm may use cash to pay dividends, it can use cash to buy back shares of its stock. The shares are held by the corporation and accounted for as treasury stock.

Dividend paid out in shares of stock is the other type of dividend. This dividend is referred as a stock dividend. It is not a true dividend because it is not paid in cash. The effect of this dividend is to increase the number of shares outstanding. Due to more shares that each owner holds, each is simply worth less.

This type of dividend is commonly expressed as a ratio or percentage; for example, with a 20 percent stock dividend, a shareholder will receives one new share for every five currently owned (20 percent increase).

2.2.3 Dividend policy

Dividend policy is the policy where a company or a firm uses to decide how much it will pay out to shareholder in dividends. It's concerned with taking a decision regarding paying cash dividend in the present or paying an increased dividend later. They could also pay the dividend in the form of stock dividend. The expectations of dividends by shareholders help the company determine the share value, therefore, dividend policy is a significant decision taken by the financial managers of any company.

Dividend policy also refers to the explicit or implicit decision of the BOD regarding the amount of residual earnings whether it is past or present that should be distributed to the shareholders of the corporation. This decision is considered as a financing decision because the profits of the company are an important source of financing available to the firm.

2.3   Conformity Trends

2.3.1   Institutional templates of appropriate behavior

In contrast to the dividend irrelevant argument by Miller and Modigliani (1958, 1961), Clark-Murphy and Soutar (2004) pointed out that, prior studies has indicate, investors have a distinct preference for stocks that pay a regular dividend and most of them were looking for a combination of income and capital gain from their investment.

Moreover, Dong, Robinson and Veld (2005) also found that investors have a strong preference to receive dividends. In their study, it found that investor prefer to receive stock dividends than to not receiving dividends at all in case the company cannot pay cash dividend, and managers must meet this preference although the rationale behind dividend payout behavior still vague.

Herding behavior is not a common behavior, but it is possible that such behavior has been undertaken by a company manager. Herding is a behavior that occurs when someone or a group of people act on the actions performed by others. This behavior has a relationship with economic activity such as investment recommendations (Scharfstein & Stein, 1990) and earning forecasting (Trueman, 1994),

Maug and Naik (1996) found that herding behavior also occurs in delegated portfolio management. From their research, they showed that the biases fund managers deviated from return-maximizing portfolio allocations and follow those of their benchmark. In some situations, the fund managers ignore their own superior information and "go with the flow" in order to reduce deviations from the benchmark.

Scharfstein and Stein (1990) has explained in their study that, imitations is a behavior that occurs when a person or a company acting on the actions taken by others. It emerges from the cognitive processes of observation and interpretation at the level of an institutional reference group. Usually it happens in the same industry such as consumer industry, manufacturing, financial institution and etc.

DiMaggio and Powell (1983) identified, if the reference group is primarily industry based, the industry can be expected to institutionalize

a range of normal decision patterns through an iterative isomorphic process.

Gleason, Mathur and Peterson (2004) stated that the tendency to herd may be strongest during periods of abnormal information flows and volatility, for example, during periods of high market stress, where investors seek the comfort of the consensus opinion. They may perceive that during these periods they will achieve the average market return if they follow the herd. Much of this occurrence is due to obtaining the additional reliable information during periods of market stress may be perceived as prohibitively costly.

Moreover, Choi and Sias (2009) noted, the industry herding is a group of investors following each other into and out of the same industry over the same period. Sometime, the herding loosely defined as investors buying or selling the same industry or security at the same time because trades occur consecutively (Sias, 2004). For example, agents may wait to act on information because they learn from watching the decisions of previous or other traders.

Caneghem and Aerts (2011) also quoted that neo-institutional theory draws attention to the causal impact of social factors on organizational behavior and offers a perspective that takes into account socio-economic influences with cognitive and normative ramifications on management decisions. Neo-institutional theorists suggest that

uncertainty about the consequences of highly visible policy decisions will lead the company to imitate the content of particular policy decisions of others.

Herding emerges when managers or companies are changing the principles and actions to conform to the principles and actions performed by others (Scharfstein & Stein, 1990). It occurs when managers who need to make decisions with various types of constraints, such as limited of information, time constraint and lack of ability.

Moreover, Trueman (1994) in his study had investigate about herding behavior on earning forecast and found that earnings predictors tend to herding in earnings forecast even though their private information justifies more extreme earnings forecasts. However, the level of herding is depends on personal and environmental factors. Aerts, Cromier and Magnan (2006) also stated in their study that, the mimetic process is enhanced in highly concentrated industries and is weakened when a firm is subject to public media exposure.

Trueman (1994) also agreed with Scharfstein and Stein (1990) statement. Scharfstein and Stein (1990) have conducted a study that examines the factors that encourage managers to do herding or imitation when making decisions. Their study explained that in certain circumstances, managers tend to mimic or imitate the decisions made

by other managers and to ignore the private information that they already have. This behavior still can be rational from the perspective of the managers who anxious about their reputations although in a social standpoint it is not efficient.

2.3.2 Industry effect on dividend payout (in other country)

In previous research, researchers stated that, even though dividend policy has been extensively studied, the existing theoretical models are still weak in empirical support. Frankfurter and Wood (2002), in their research indicated , a number of conflicting theoretical models lacking strong empirical support define current attempts to explain the puzzling reality of corporate dividend behavior.

Furthermore, there is no general consensus has yet emerged after several decades of investigation and scholars can often disagree even about the same empirical evidence (Al-Malkawi *et al*., 2010). Therefore, due to this, dividend policy has labeled as one of the most judgmental decisions that a manager has to make.

Lintner (1953), in Dempsey *et al.* (1993) hypothesized that dividend policy influenced by an industry effect which could be interpreted as common correlations with determinants of dividend payout by firms in the same industry.

Caneghem and Aerts (2011) indicate that companies tend to adopt practices that are used by large number of other companies. The widespread adoption essentially legitimate and pressuring such imitation. In this matter, earlier institutional research focused on prevalence as an indicator of institutional isomorphism and demonstrated that conformity through imitation is reflected in the observation that the number and density of firms adopting a certain behavior increases the likelihood that other companies will also do (Tolbert and Zucker, 1983).

Furthermore, Tolbert and Zucker (1983) also specified that decision to adopt will depend on the degree to which there is a common understanding that the change is necessary for efficient organizational performance.

Caneghem and Aerts (2011) also contend that dividend policy decisions may be exposed to industry-based conformity tendencies driven by institutional pressures. One of the main mechanisms by which institutional pressure are exerted is voluntary diffusion. It refers to the extent to which organizational practices have already diffused or spread voluntarily throughout an organizational field as a predictor of the possibility of conformity tendencies.

Moh'd, Perry and Rimbey (1995) stated that managers do appear to adjust the dividend payout in response to the agency cost or

transaction cost structure, through time as well as across companies. They posited that the dividend mechanism provides an incentive for managers to reduce the costs associated with the principal or agent relationship. Allocate resources in the form of cash dividends forces manager to seek external capital, thus causing them to reduce agency costs as they subject themselves to the scrutiny of the capital market.

Sawicki (2003) quoted from Lintner (1956) saying that, there is positive correlation between dividend policies of firms in the same industry and certain factors within the industry. Apart from the latter reluctance to cut rates, the nearest thing to a pattern that had been observed in the study was evidence of follow-the-leader behavior or imitation in payment of extras as well as in stock dividend and splits.

In addition, industry effect was found to complement, not substitute, the firm-specific variables. Nonetheless, the industry effect is significantly different from zero are small and in most cases do not show the determination from time to time. Similarly, Baker and Powell (2000) had done a survey on NYSE found that industry type appeared to influence the importance that respondents placed on some determinants of dividend policy.

In Dempsey *et al.* (1993) presents evidence concerning industry influences on the dividend decision after controlling for other firm-specific determinants known from prior research to affects payouts.

Industry affiliation is found to hold significant explanatory power when modeling payout behavior at the individual firm level.

Specific industries found to be significant are relatively few in number but they do not exhibit persistence in their effect over time, for the most part. Only modest support is found for the industry-related dividend leadership effect which proposed by Lintner (1956).

Australia and Japan dividend policies are affected by different financial factors. An industry effect is found to be significant in both countries. Fixed effects regression models show that, in Australia dividend policies is affected positively by size and liquidity in Japan, but negatively by risk in Japan only. Australia with an imputation tax system which favors dividends over capital gains has a significantly higher dividend payout than Japan lends support to the influence of environment on dividend policy (Ho, 2003).

Kamat (2008) in his studies found that in India, they pay relatively a larger proportion of their respective earnings to their equity and preference holders in the entire period. Most studies exclude regulated companies intentionally with a notion that their regulatory status may affect their dividend policies and include financial companies as a proxy to study regulated industry effect. The dividend payment across/within industry exhibits significant variations over the sub-period.

In addition, for India specifically, analysis of inter-corporate and inter-industry variations in dividend policy found that dividends interplay differently with exogenous factors. It the differences in ownership concentration, external fund requirement based on technology, the type of the product they manufactured, the presence of growth opportunities through internal financing and the future earnings flows that they expect to generate, difference the inter-corporate, inter-industry variations in dividend policies (Kamat, 2008).

However, a study has been made on Nigerian Stock Exchange (NSE) during the period 1993 to 2002 by Musa (2009). In his research paper, the empirical results revealed that the five metric variables that had been used in his research, have significant aggregate impact on dividend policy of quoted firms. This paper also stated that level of growth; firm size and industry classification do not have significant individual effect on the dividend policy of quoted firms in Nigeria.

Last but not least, in the local market, Pandey (2001) undergo a study examines the corporate dividend behavior of Kuala Lumpur Stock Exchange (KLSE) companies. The results show the influence if industry on payout ratios which also vary significantly across time. The analysis reveals that the dividend behavior of the Malaysian companies is sensitive to the changes in earning. By using Lintner's framework and panel regression methodology they found the evidence of less stable dividend policies being pursued by the Malaysian companies.

2.4 Summary

This chapter reviews the literature about the herding behavior in dividend policy around the world. The argument in the literature reviews above shown that there are an existence of industry effect on dividend policy in other country such as Japan, Australia, India and Nigeria.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this study is to prove the existence of herding behavior in dividend policy in Malaysia. This chapter discusses on data collection method, theoretical framework, data analysis and interpretation, and hypotheses testing that are used in conducting this study.

3.2 Data Collection

3.2.1 Sources of data

All data are obtained from the secondary sources. Secondary data refer to information gathered from sources which already exist.

Secondary data also refer to information gathered by someone other than the researcher who is conducting the current study. This data can be internal or external to the company and accessed through internet, record or published information. Examples of secondary data are; 1) company records or archive, 2) government publications, 3) websites of the company, 4) industry analyses and so on.

3.2.2 Sample of the study

There are various formulas for calculating the required sample size. It based on whether the data collected is to be of a categorical or quantitative.

This study utilized secondary data from one sources. All of the data were collected from the Thompson DataStream which is available at Sultanah Bahiyah Library, Universiti Utara Malaysia. There are 210 companies in trade and services industry listed in Bursa Malaysia Main Market. Krejcie and Morgan (1970) greatly simplified size decision by providing a table that ensures a good decision model. Based on Krejcie and Morgan (1970), out of 210 companies, 136 companies had been randomly chosen. The formula to determine sample size for research is as follow:

$$s = \frac{X^2 NP\ (1-P)}{[d2\ (N-1)] + [X2P\ (1-P)]}$$

where:

s	required sample size
X^2	the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)
N	population size
P	population proportion
d	degree of accuracy expressed as a proportion

However, there is no calculation needed to use Table 1 (as in appendices). Table 1 is applicable to any defined population.

The period of this study is only focus on 2009's data to prove the existence of herding behavior on dividend policy and to see the tendencies of one company to imitate another in the same industry. This data collected is on yearly basis.

Data that had been collected to carry on this research consist of:

1) Average rate of revenue growth over the past five years (2005 – 2009)

2) Average return on assets over a four-year period (2006 – 2009)

3) Dividend Payout Ratio (2009)

4) Average dividend payout ratio within the industry (2009)

5) Natural logarithm of sales (2009)

6) Total debt deflated by total assets (2009)

7) Natural logarithm of the number of common shares (2009)

8) Dummy variable that is coded one if the firm pays a dividend and zero otherwise (2009)

This study only focuses on year 2009 as to comprehend the relationship of herding behavior in dividend policy in a short period. All references are in a long-term period.

3.3   Data Analysis

As to prove the existence of herding behavior in dividend policy, in the first stage, descriptive analysis of the variables listed above was performed. To investigate further, the data was analyzed by using regression with fixed effect.

3.3.1 Regression analysis

There are several method have been used in order to measure the dividend payout ratio and the most common methods is a linear regression model.

Regression analysis is an analysis that establishes a functional relationship between dependent variable and a series of many independent. There are two types of regression analysis which are simple regression and multiple regressions. Simple regression is only has one independent variable, while multiple regressions it have more than one independent variables.

Regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. It is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables.

This study used multiple regressions because there few independent variables to be tested and the appropriate model that being used is the Tobit model which was introduced by Tobin in 1958.

The Tobit Model is generally expressed in the following way:

$$Y^*_I \quad = \quad \beta X_i + \varepsilon_t$$

With: $\quad Y_i \quad = \quad Y_i^* \text{ if } Y_i > 0$

$\qquad\qquad 0 \quad = \quad Y_i^* \text{ if } Y^*_i \leq 0$

This study adapts variables that are available in main regression model in Caneghem and Aerts (2011). The regression model for this study is as follow:

Pr$_{2009}$ = β + DIVDUM + Growth + AvgRoA + DPO + AvgDPO + ln Size + Debt + ln Share

where:

Pr	The probability of the focal firm is paying a dividend.
DIVDUM	Dummy variable that is coded one if the firm pays a dividend and zero otherwise.
Growth	Average rate of revenue growth over the past five years.
AvgRoA	Average return on Assets over a four-year period.
DPO	Dividend Payout Ratio.
AvgDPO	Average dividend payout ratio within the industry.
In Size	Natural logarithm of sales.
Debt	Total debt deflated by total assets.
In Share	Natural logarithm of the number of common shares.

3.3.2 Coefficients of correlation (R)

This study applied Coefficients of correlation to measure the relationship between two variables among the variables tapped in the study. Two types of coefficients of correlation (R) are Spearman rank coefficient of correlation and Pearson Correlations.

For further investigation, this study used Pearson Correlations in order to examine the relationship between variables. The Pearson Correlations is appropriate for interval-and ratio-scaled variables. Pearson Correlations will indicate the direction, strength and significance of the bivariate relationships of all the variables in the study.

The correlation could range between – 1 and + 1. Theoretically, there could be a perfect positive correlation between two variables, which represent + 1 or perfect negative correlation which represent – 1. However, neither of these will be found in reality when assessing correlations between any two variables expected to be different from each other.

3.3.3 Logistic regression

The independent variables in this study must be either interval scale variable or dummy variables in regression analysis. The value for dummy variables is either 0 or 1. Dummy variables allow us to compare the mean value for the dependent variable between the two groups.

Logistic regression allows researchers to test models to predict categorical outcomes with two or more categories. The independent variable can be either categorical or continuous, or a mix of both. It also allows researchers to assess how well the set of predictor variables predicts or explains the categorical dependent variable. It gave the indications of the adequacy by assessing 'goodness of fit'.

Logistics regression provides an indication of the relative importance of each predictor variables or the summary of the accuracy of the classification of cases based on the mode which allowing the calculation of the sensitivity and specificity of the model and the positive and negative predictive values.

Logistics regression does not make assumptions concerning the distributions of scores for the predictor variables; however, it is sensitive to high correlations among the predictor variables.

3.4　Summary

This chapter had clarified the methodology that had been used to test all the variables as to examine the existence of herding behavior in dividend policy in Malaysia. Out of 210 companies listed in trade and services industry, 136 companies had been randomly chosen to be analyzed.

CHAPTER 4

FINDING AND ANALYSIS

4.1   Introduction

Reflecting back to the objectives of this study, this chapter will highlight empirically the existence of herding behavior in dividend policy in Malaysia and the tendencies of a company to follow other in the same industry to pay dividend.

4.2   Descriptive Analysis

Descriptive analysis involves transformation of raw data into a form that would provide information to describe a set of factors in a situation. This is done through ordering and managing of the raw data collected. Also provided in this chapter are descriptive statistics which consist of

frequencies, measures of central tendency, and dispersion (Sekaran, 2006).

There are 210 companies in trade and services industry, from 210 companies, 136 companies are adopted randomly to carry out the findings and analysis.

Table 4.1

Statistics of Div Dummy

N	Valid	136
	Missing	0
Std. Deviation		.376
Minimum		0
Maximum		1

Table 4.2

Frequency of Div Dummy

	Frequency	Percent
Did not pay dividend	23	16.9
Pay dividend	113	83.1
Total	136	100.0

In the output presented in the above table, table 4.1 shows that the total number of sample is 136 companies and there is no missing value in the valid sample with the standard deviation of .376. Table 4.2 shows that 83.1 percent or 113 responded out of 136 companies in trade and services industry pay dividend to their shareholders in form

of cash or stock. While 23 companies (16.9 percent) did not pay dividend to their shareholders.

Table 4.3

Descriptive Statistics of All Variables

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Div Dummy	136	0	1	.83	.376
A.Growth	136	-.1745	3.9140	.211718	.4143573
A.ROA	136	-.2501	.2608	.041299	.0690572
DPO	136	-1.7699	3.8384	.258242	.5275313
A.DPO	136	.2582	.2582	.258242	.0000000
In SIZE	136	.3488	14.3179	9.838068	2.0085924
TD/TA	136	.0000	.7146	.239058	.1696912
In Share	136	8.5172	15.9491	11.779070	1.1726420
Valid N (listwise)	136				

From the result in the above table, from 136 data collected, concerning the independent variable div dummy, the range of 0 (did not pay dividend) to 1 (pay dividend), with a mean of .83 and the standard deviation of .83. From the same table, it also reported for dependent variables.

The highest mean in dependent variable is Share with 11.779070. Minimum, maximum and standard deviation value for variable Share are 8.5172, 15.9491 and 1.1726420 respectively. The

mean is quite large because there are some company had a big number of shares and some company had less number of shares.

The second highest mean statistic among the dependent variables is Size (9.838068). Variable Size is natural logarithm of sales. The range of this variable are .3488 and 14.3179 with a little bit higher of standard deviation value from variable Share, 2.0085924.

The lowest value in mean statistic in the table is A.ROA (.041299). The minimum and maximum value for this variable is small compared to other variables. The minimum and maximum values for A.ROA are -.2501 and .2608 with the standard deviation of .0690572. This small range of minimum and maximum values shows that the return on assets over a four-year period is average. Other variables are on average values.

4.3   Coefficient of Correlations

The correlation coefficient, denoted by r, is a measure of the strength of the straight-line or linear relationship between two variables. The correlation coefficient takes on values ranging between +1 and -1. It is a statistic representing how closely two variables co-vary.

Table 4.4

Coefficient of Correlations

		DIV DUMMY	A.GROWTH	A.ROA	DPO	SIZE	TD/TA	Share
DIV DUMMY	Pearson Correlation	1	.060	.638**	.208**	.143*	-.161*	.162*
	Sig. (1-tailed)		.245	.000	.007	.049	.031	.030
A.GROWTH	Pearson Correlation	.060	1	-.009	-.051	.049	-.009	-.044
	Sig. (1-tailed)	.245		.461	.279	.285	.458	.304
A.ROA	Pearson Correlation	.638**	-.009	1	.299**	.213**	-.279**	.014
	Sig. (1-tailed)	.000	.461		.000	.006	.001	.435
DPO	Pearson Correlation	.208**	-.051	.299**	1	.039	-.221**	-.004
	Sig. (1-tailed)	.007	.279	.000		.326	.005	.483
SIZE	Pearson Correlation	.143*	.049	.213**	.039	1	.103	.501**
	Sig. (1-tailed)	.049	.285	.006	.326		.117	.000
TD/TA	Pearson Correlation	-.161*	-.009	-.279**	-.221**	.103	1	.191*
	Sig. (1-tailed)	.031	.458	.001	.005	.117		.013
Share	Pearson Correlation	.162*	-.044	.014	-.004	.501**	.191*	1
	Sig. (1-tailed)	.030	.304	.435	.483	.000	.013	

[**]. Correlation is significant at the 0.01 level (1-tailed).
[*]. Correlation is significant at the 0.05 level (1-tailed).

Table 4.4 shows that, there are two independent variables are significantly correlated at the level of 0.01 (1-tailed). The two variables are A.ROA and DPO. The other three variables which are Size, TD/TA and Share are significantly correlated at the level of 0.05 (1-tailed). However, variable A.Growth is insignificant correlated with the dependent variables.

The highest value of mean for dependent variable compared to independent variables is A.ROA with .638, which means A.ROA is highly correlated to Div Dummy. Therefore, if A.ROA had small changes in the value, it will lead to huge changes in Div Dummy. For every one percent change in A.ROA, the Div Dummy will be affected up to 63.8 percent in its changes. For variable TD/TA, it is negative correlation between the variable and Div Dummy because the value is negative. It means, when the value of TD/TA decrease, the value of Div Dummy will increase.

From this result also we can check whether there is multicollinearity or not between the independent variables. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, meaning that one can be linearly predicted from the others with a non-trivial degree of accuracy. In this table, all independent variables are less than .05 which means there is no multicollinearity.

4.4   Regressions

4.4.1 Multiple regressions

Regression analysis is a statistical technique for estimating the relationships among variables. It includes many techniques for modelling and analysing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. Specifically, it helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

Table 4.5.1 and table 4.5.2 below show the results of multiple regressions for 136 companies in trade and services industry. The value for R Square is .444 (44.4 percent). This result tells that 44.4 percent of Div Dummy which is, firm's paying dividend or otherwise can be explained by the combination of six predictors which are ln Share, DPO, A.Growth, TD/TA, A.ROA and ln Size.

Adjusted R Square shows that 41.8 percent (.418) of the variance in Div Dummy has been significantly explained by one percent changes in the model. This is statistically significant contribution, as indicated by the Sig. F Change value for this line (.000). Summary of the discussion is as shown in tables below.

Table 4.5.1

Result of Multiple Regressions (a)

Model	R Square	Adjusted R Square	Std. Error of the Estimate
1	.444	.418	.287

Table 4.5.2

Result of Multiple Regressions - continue (b)

	Change Statistics			
Model	R Square Change	F Change	df1	Sig. F Change
1	.444	17.178	6	.000

a. Predictors: (Constant), Share, DPO, A.GROWTH, TD/TA, A.ROA, SIZE
b. Dependent Variable: DIV DUMMY

The ANOVA table below indicates that the model as a whole is statistically significant difference between the group means. We can see the significant value is .000 which is below .05 and therefore, there is a statistically significant difference in the variables.

Table 4.6

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.487	6	1.415	17.178	.000[a]
	Residual	10.623	129	.082		
	Total	19.110	135			

a. Predictors: (Constant), Share, DPO, A.GROWTH, TD/TA, A.ROA, SIZE
b. Dependent Variable: DIV DUMMY

Table 4.7

Variables in the Equation

		Sig.	Exp(B)
Step 1[a]	Sales	.670	2.377
	A.ROA	.001	1.822
	DPO	.446	.494
	SIZE	.376	.783
	Debt	.560	8.294
	Share	.779	.824
	Constant	.511	170.232

a. Variable(s) entered on step 1: Sales, A.ROA, DPO, ln SIZE,
    Debt, ln Share

Table 4.7 shows variable equation which influenced the dependent variable. These results prove that only A.ROA is significantly relates with Div Dummy. The result indicates that in every increase of one percent in A.ROA lead to an increase in dependent variable by 182.2 percent. This result suggests that A.ROA is the major factor influencing dependent variable. There is a significant and positive relationship between A.ROA and Div Dummy (Exp(B) = 1.822, P ≤0.001).

Equivalently stepwise regression also picked up A.ROA to be the sole influencing variable to dividend payout. What can be concluded is that, firms' looks at ROA to determine past firm's performances to pays dividend.

4.4.2 Logistic regressions

Logistic regression is an approach to predict, like OLS regression. However, with logistic regression, the researcher is predicting a dichotomous outcome. This situation poses problems for the assumptions of OLS that the error variances (residuals) are normally distributed.

Table 4.8.1 gives an overall indication of how well the model performs, over and above the results obtained with none of the predictors entered into the model. This is referred to as a 'goodness of fit' test. With the significant value is .000, which means that, the model is statistically significant. The chi-square value is 92.013 with six degrees of freedom.

Table 4.8.1

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Model	92.013	6	.000

Table 4.8.2

Model Summary of Logistic Regression

Step	Chi-square	Nagelkerke R Square
1	13.069	.823

The model summary gives the piece of information about chi-square (Hosmer and Lemeshow Test) and Nagelkerke R Square. This

table shows that, the chi-square value is 13.069 with a significance level of .110. This value is larger than .05, therefore indicating support for the model.

The Nagelkerke R Square values provide an indication of the amount of variation in the dependent variable explained by the model. Rather than the true R square values in multiple regression output, 82.3 percent of the variability can be explained by this set of variables.

Table 4.9

Classification Table

			Predicted		
Observed			DIV DUMMY		Percentage Correct
			0	1	
Step 1	DIV DUMMY	0	20	3	87.0
		1	3	110	97.3
	Overall Percentage				95.6

a. The cut value is .500

The above table is the classification table which provides how well the model is able to predict the correct category for each variable. This model correctly classified 95.6 percent of cases overall. From this table, we know that 97.3 percent of sample are paying dividend.

4.5   Discussion

Although there are seven variables used in this study, the results showed that only A.ROA is significant to dividend. The other six

variables are not significant and argumentable. This result is parallel with previous research (Caneghem and Aerts, 2011). They also found that, it is consistent with signaling theory which obtained a significantly positive coefficient for the profitability variable (AvgROA). Logically, companies depend on ROA to pay dividend to their shareholder because ROA is an indication for efficiency of what firms operation.

However, differ with this study, they found that not only A.ROA, in line with the agency argument for dividends, results reveal a significantly positive coefficient for the size proxy (SIZE) and the ownership dispersion variable (SHRH) too.

4.6   Summary

Based on the analysis, the empirical result shows that there is an existence of herding behavior in dividend policy happened in Malaysia. The result shows that 83.1 percent out of 136 companies in trade and services industry are paying dividend to the shareholders. The most independent variable that had significant and positive relations with dependent variable is A.ROA.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1   Introduction

This chapter provides the overall summary of this study. The main objective of this study is to prove the existence of herding behavior in dividend policy in Malaysia. Prior study has obtained a result which reveals a significantly positive relationship between the lagged densities of firms in industry that pay a dividend and probability of focal firm paying a dividend (Caneghem & Aerts, 2011).

5.2   The existence of herding behavior in dividend policy in Malaysia

Herd behavior is a normal behavior that happens naturally in human real life. It describes how individuals in a group can act together without

planned direction. We tend to follow others decision in making ours as to make sure that we made the right decisions. For example, when you choose a dress, you will first ask for other opinions. But what if you are alone and still need an opinion which dress to choose. So, to make this decision, you will observe other people choosing their dress. You will end up choosing the dress that might be similar to others. Herding may be more explored in finance than in other areas, but it is not unique to finance.

Contradict to the findings of this study, the results of herd behavior as documented by Christie and Huang (1995) revealed that Malaysian investors acted according to their own opinions during periods of upper market stress as indicated by positive coefficient and they did not let their investment decisions be influenced much by the collective actions of the market. Insightful and related financial events associated with market stress contexts are described.

However, Pandey (2003) in his study indicates, a large number of Malaysian firms increase payment of dividends when their earnings increase. They are reluctant to skip dividends when earnings fall. But Malaysian firms tend to omit dividends when they suffer losses. This finding shows that the imitate behavior is happened in Malaysia in making decision to dividend to their shareholders.

From this finding we can say that herding behavior is happened in Malaysia not just in dividend policy. This is because, herd behavior involved with human behavior. It's like we step into a new city which we have never been in before and we do not know anything about it. We will watch and most probably follow the surrounding behavior to avoid become freak and weirdo in that city.

These studies also find that manager in organizations are tend to imitate others in making any decisions. It happens naturally when they have to make decisions in dividend policy and dividend payout ratio. Managers from average companies tend to follow their leader in the same industry.

Not just in Malaysia, Economou, Kostakis and Philippas (2010) found that herd behavior also present in the Italian and the Greek stock market. It found to be stronger during periods of rising market in stock markets. Herd behavior too present in Portuguese stock market during periods of down returns. However, Prosad et al. (2012) found that there is no present of herding behavior in Indian stock market. This depicts that Indian investors are better informed and behave rationally in making decisions.

Caneghem and Aerts (2011) agree that the intra-industry similarity enhances conformity is consistent with arguments emphasizing cognitive and normative legitimacy concerns as engines

to made decision regarding dividend policy. Overall, they found that the behavior of firms at the industry level can be significant predictors of dividend payout practices at firm level.

Caneghem and Aerts (2011) in their study also found that there is evidence that institutional conformity plays significant role in forms; dividend policy decisions. Consistent with the first hypothesis the relative number of other firms in the industry paying a dividend in a prior year is positively related to the likelihood that the focal firm will pay a dividend in current year.

Although classification result suggesting that the model can correctly identify between firms that are paying and not paying dividend. Nonetheless, any A.ROA variable is found to significantly affect dividend payout.

Therefore, this study agreed that there is en existence of herding behavior in dividend policy in this country. This study believed that there are strong tendencies of one company to imitate another company's decision in the same industry.

5.3   Limitations and Recommendations

This study used seven variables which is based on the secondary data and collected from Thompson DataStream only. Thus, next research is recommended to use more variables that could lead to another findings and results.

The sample of this study also focused only in year 2009. Therefore, it is recommended that in future research, researcher used a sample that is in long period like from 2005 to 2009. The result would be different and more accurate.

Upcoming research is also encourage using another method as to make sure whether the findings and results are the same, or more significant or differs from this study. By using another method like GLS, next researcher could be able to find which company is the leader and which are followers in the same industry.

Last but not least, than using only one industry, in the future research is recommended to choose another industry or used a large sample of Malaysian firms that has more data. The findings and result could be different from this study.

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