ASYMMETRIC INFORMATION AND DIVIDEND POLICY TOWARDS SHARE PRICE VOLATILITY IN MALAYSIA'S CONSUMER PRODUCT INDUSTRY

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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.

(4) The word count of this research report is 28,281.

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DEDICATION

This research study will be dedicated to our supervisor, Dr. Zuriawati Binti Zakaria for her scarification as well as her encouragement in guiding and helping us in completing this research project.

Besides that, this research study will also dedicate to our beloved family, friends and others due to their supportive and useful advices and motivation.

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AG	Asset Growth
AI	Asymmetric Information
BPLM	Breusch and Pagan Lagrange Multiplier
CLRM	Classical Linear Regression Model
DPR	Dividend Payout Ratio
DPS	Dividend per Share
DSE	Dhaka Stock Exchange
DV	Dependent Variable
DY	Dividend Yield
EBIT	Earnings before Interest and Tax
EMH	Efficient Market Hypothesis
EPS	Earnings per Share
EV	Earnings Volatility
E-views 10	Electronic view 10
FEM	Fixed Effect Model
FS	Firm Size
FTSE	Financial Times Stock Exchange
GST	Goods and Services Tax
JB	Jarque-Bera
KLCI	Kuala Lumpur Composite Index

KLSE	Kuala Lumpur Stock Exchange
KSE	Karachi Stock Exchange
LEV	Leverage
LSDV	Least Squares Dummy Variable
MPS	Market Price per Share
MSCI	Morgan Stanley Capital International
NPV	Net Present Value
NSE	Nairobi Stock Exchange
OLS	Ordinary Least Square
POLS	Pooled Ordinary Least Square
REM	Random Effect Model
S&P 500	Standard & Poor's 500
SPV	Share Price Volatility
TA	Total Asset
TD	Total Debt
TOL	Tolerance
UK	United Kingdom
VIF	Variance Inflation Factor

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PREFACE

This research project is submitted in partial fulfillment of the requirement for Bachelor of Finance (Hons). We would like to thank our supervisor, Dr. Zuriawati Binti Zakaria for her valuable support and guidance throughout the entire period. Besides, the final year project is done solely by the authors but it is based on other researchers and the resources are quoted in references.

There are a lot of studies in this topic. However, there is few researchers study the asymmetric information on the share price volatility in Malaysia. Therefore, 'asymmetric information and dividend policy towards share price volatility in Malaysia's consumer product industry' is chosen as our topic for this research.

It is challenge but there are a lot of experience had gained throughout accomplishing this research. We hope this research paper will benefit for those who are related to this topic.

ABSTRACT

The purpose of this study is to examine the asymmetric information and dividend policy towards share price volatility in Malaysia's consumer product industry. After filtering the data, there are 55 out of 129 Malaysia public listed consumer product companies from year 2012 to 2016 are selected as research's sample. Additionally, Pooled Ordinary Lease Squares has been applied on panel data and Fixed Effect Model is chosen through Hausman test to run the tests and analysis.

The results indicate that asymmetric information and earnings volatility do not influence the share price volatility. Furthermore, it is found that when dividend payout ratio increases, the share price volatility decreases, and vice versa. This is because the declaration of dividends can be interpreted as a signal of the company's stability and strength. Higher dividend payout ratio may stabilize the company's share prices. In addition, dividend yield and leverage are positively significant towards share price volatility which means that when dividend yield and leverage rise, stock price will tend to be more volatile. Lastly, volatility of share price will also be affected by firm size and asset growth in an inverse way. This indicates that big companies with higher asset growth will have lesser share price fluctuation while small companies with lower asset growth will have greater stock price movement.

Lastly, this study provides useful information to investors, as well as corporate managers to enhance their understanding in considering factors like asymmetric information, dividend policy, earnings volatility, leverage, firm size and asset growth in determining share price volatility in Malaysia's consumer product industry.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This chapter includes the overview of asymmetric information, dividend policy and share price volatility in Malaysia under the consumer product sector. This chapter will then discuss the problem statement that provides the issue arose or core idea of this research. In addition, objective of this study is formed and then a comprehensive investigation is carried out later in research questions. The following sections in this chapter consist of the hypothesis of the study and the significance of the study.

1.1 Background of Study

1.1.1 Overview of Asymmetric Information

The presence of information asymmetry is when one party possesses more information than another party during the business transactions. In other words, asymmetric information also can be known as information failure in economic transactions. Generally, asymmetric information is present when the seller of the products and services acquires greater information than the buyer, and it is possible when the buyer acquires greater knowledge than the seller (Do, 2009). As an illustration, the seller can adjust the price of the products based on his or her knowledge of the prices of identical products in the market and the condition of the products. At the same time, the buyer also can have information about the prices of the identical items offered in the market. Nevertheless, there is a probability that the buyer does not have the same depth of the knowledge about the quality of the products than the seller. Hence, it is clearly indicated that people possess different information and

subsequently lead to information asymmetry between both parties. Asymmetric information may lead to adverse selection or moral hazard (Do, 2009).

First and foremost, Akerlof (1970) introduced the theory of asymmetric information and developed asymmetric information by giving an example case in the automobile market. Akerlof (1970) assumed that there are new cars and old cars in the automobile market, which can be classified as good or bad. Generally, the bad cars are known as "lemons". In the paper of The Market for "Lemons": Quality Uncertainty and the Market Mechanism, Akerlof (1970) argued that the buyer measures the quality of the products by analyzing the average of the whole market. On the other hand, the seller possesses greater private information about the quality of particular products (Auronen, 2003). When the investors are trading in the stock market, asymmetric information may cause the fluctuation of the stock prices and thus the volatility of the share price will be increased. The investors who are better-informed, can deal with advanced information as compared to the less-informed investors. Therefore, adverse selection problem may arise among the less-informed investors during noise trading (Wang, 1993).

The existence of asymmetric information is higher among family-based companies in Singapore and Hong Kong (Attig, 2006). If there is an absence of asymmetric information, this indicates that the disclosure of the information is high. Basically, the insiders possess greater information than outsiders and acquire information that outsiders do not have. Hence, there is an informational gap between insiders and outsiders, where the information that they hold are inconsistent and different (Su, 2012).

Above all, the announcement of the news and information about a particular company influences the reactions of the investors in distinct ways. For example, if a company hides the bad news and reveals good news for the

investors, the reactions of the investors will be more dramatic when the bad news is announced. If the managers quickly announcing both positive and negative private information, the asymmetric information will be reduced (Healy, Palepu & Verrecchia, 2001). Consequently, the adverse selection and moral hazard problems in the financial market will be minimized. Besides that, when the scandals within the company are disclosed, the beliefs of the external investors will be strengthened, while, the manager will have the incentives to avoid to divulge the bad news to the public. As the managers have a higher asymmetry of knowledge about the company as compared to other parties, it may lead to the agency problem between managers and shareholders (Dulwich, 2006).

1.1.1.1 Asymmetric Information in Malaysia

According to Efficient Market Hypothesis (EMH), it stated that the stock prices reflect all available information and the information is freely available to all investors. Besides that, there is no investors can earn superior profits by utilizing public information. Nevertheless, the financial markets are not fully efficient and lead to the failures of EMH in Malaysia. A weak form of EMH may cause asymmetric information arises. Chue and Lai (2007) stated that the fluctuation of the stock prices causes all available information in the market cannot deliver to the market participants. Thus, asymmetric information causes the financial market is not efficient. As a result, not all market participants can acquire available information when they need the information in order to make decisions. In other words, the market participants are less informed or received inaccurate information about the financial market and a particular company. As Malaysia stock market is an emerging market, this issue should be taken into consideration.

The presence of asymmetric information takes place when there is a conflict of interests among the parties within the organization. To put it simply, asymmetric information will arise when insiders primarily focus on the benefit of the organization, for example, the growth of the capital market in Malaysia was outperformed during the year of 1993 and 1994, where the investors involved actively in speculation. Based on the Bank Negara Malaysia Annual Report 1994, the funds raised in year 1993 were RM 9,908 million and RM 20,943 million in year 1994 (Yusof, 2000). During this period, the market is bullish where it could be interpreted as rising or booming economics. The investors involve actively in speculation in the stock market. The price of the indices is high and the dispersion of asymmetric information was narrow. This has directly affected the share price of the organization in Malaysia and caused the share price volatility occurred in the stock market (Su, 2012).

1.1.1.2 Asymmetric Information in Malaysia's Consumer Product Industry

Malaysia's consumer product industry can be treated as a highly competitive industry because there are at least 100 numbers of public listed companies in Bursa Malaysia. According to DBS Group Research, it states that there is an increasing competition in the consumer product industry in Malaysia. Besides that, the consumer market is weak and may restrict the ability of the companies to raise the costs. Hence, it may affect the earnings growth. In a highly competitive industry, market competition forces the organization to operate efficiently. Therefore, asymmetric information among the parties within the company can be reduced (Chu & Song, 2010). In consumer product sector, the seller acquires greater information and knowledge of the products and services than the buyer. This represents that one party has inherently more information against the other parties. Hence, it may lead to the hesitation of the other parties when dealing with the business transactions. However,

market mechanisms or government policies can be introduced in order to reduce the occurrence of asymmetric information in the market (Asymmetric Information in Competitive Markets, n.d.). For instance, the regulatory bodies impose packaging and labelling regulation on packaged foods such as cereals, breads and milk in Malaysia (Malaysia: Packaging and Standards, 2017). Moreover, Consumer Protection Act 1999 is introduced in order to provide greater protection to the rights of the consumers.

On the other hand, an industry with low competition increases the tendency of the insiders to obtain their private interests. The insiders will tend to engage in asymmetric information in order to protect their own interest and control the decision of the firm effectively. Thus, the issue of asymmetric information is critical in the lower competitive industry. Consequently, the cost of financing increases and the value of the firm diminishes (Chu & Song, 2010).

Apart from that, the type of news or information being published will affect the share price volatility in relation to good or bad news. When the news and information are delivered to the investors, it affects the actions of the investors in different ways. Ball and Brown (1968) have been carried out a research on the reactions of the investors after the earnings announcement. The researchers discovered that the positive news and information generally will drift the share prices upwards, on the other hand, negative news and information will drift the share price downwards. In addition, Skinner (1994 and 1997) and Kasznik and Lev (1995) discovered that the manager postponed the announcement of bad news to the public in order to mitigate the lawsuit risks by the investors. (Dulwich, 2006). The table 1.1 indicates that how the news and information influence the share price of the consumer product companies in Malaysia.

Table 1.1: The Impacts of Announcement of News towards Share Price of the Consumer Product Companies in Malaysia.

Company	The Impacts of Announcement of News Towards Share Price
Apollo Food Holdings Berhad	On 28 June 2016, the sales in Indonesia had been recovered and brought positive impact to the profit of the company and there is an increase of 17.8% in net profit. Besides that, the company also declared a dividend of RM0.30, which was higher than that of RM0.25 in the year 2015. Hence, the closing price was increased from RM5.60 to RM5.68.
Fraser & Neave Holdings Berhad	Effective from 4 July 2017, F&N had adopted a marketing strategy, which was formed a partnership between McDonald Malaysia, by selling 100Plus at all outlets in Malaysia. The share price was drifted upward to RM26.
Tomei Consolidated Berhad	On 18 April 2017, Tomei obtained a distribution right from Shenzhen Harmony Batar Jewellery Co Ltd to sell and distribute Xifu jewelry collections in Malaysia. Hence, the share price has increased to RM0.56.

Source: Zainul, I.F. (2016). *The Star Online*; Samantha, H. (2017). *The Edge Markets*; Chester, T. (2017). *The Edge Markets*; Lee, E. (2017).

1.1.2 Overview of Dividend Policy

One of the important decisions made within the firms, company or business is dividend policy. One of the most agonistical topics in finance areas is dividend policy. It also has been stated as a matter of interest in the financial literature (Abdullah, Ahmad & Roslan, 2012). It is the set of guidelines that a company or business uses to make decisions on how much the shareholders will be received the earnings, when the law is not intervened in dividend

policy (Kato, Loewenstein & Tsai, 1997). On the other hand, there have dividend payout is non-voluntary and the law is specified in some of the countries and industries. According to Denis and Osobov (2008), every country shown that has a greater discrepancy in dividend policy. National formal institutions have attracted by dividend policy and their outcome on dividend, due to the formal rules and regulations emphasis by the agency. For instance, the dividend policy regulations of Open Joint Stock Company "VolgaTelecom" in Russia during the year 2015. They were restricted from dividend have to pay in Russian Federation currency in the dividends payment procedures (Yurchenko, 2005).

According to Jiraporn (2017), decision making of the payment of dividends to shareholders can be complicated. When companies earn profits, they can choose either reinvest money within the company or distribute cash to shareholders. In an effort to maintain control, some managers may prefer to keep the profit inside the firm rather than allocate large dividend payouts to the shareholders. Retaining profit instead of returning it to shareholders can result in conflict within the company, if the companies make a choice to reinvest the money then will come out this problem. Baker (2009, p.2) stated that shareholder wealth is affected by payment of dividends, while paying dividends also affects the firm's ability to retain earnings and to develop growth opportunities in the future. In developing countries, both investors and managements have taken seriously on the decision of paying dividends or retaining earnings in their business (Jack D, Karmokolias, Miller, & Shah, 2012).

There have a lot of researchers (e.g Nishat & Irfan, 2004; Hashemijoo, Ardekani and Younesi, 2012; Sadiq, Ahmad, Anjum, Suliman, Abrar & Khan, 2013) investigate the relationship between dividend policy and volatility in stock price. Hashemijoo et al. (2012) reported that dividend policy and stock price volatility have a negative relationship between them. Sadiq et al. (2013)

stated that there have researchers found that the relationships between dividend policy and stock price volatility are both positive and negative. Based on the researcher's study, dividend yield and payout ratios vary inversely with common stock volatility was caused by a number of suggested theoretical mechanisms. Paying large dividends to shareholders will affect the stock price and is an agent for future earnings (Nishat & Irfan, 2004).

1.1.2.1 Dividend Policy in Malaysia

According to the Companies Act 1965 (section 365) stated that the dividend should be distributed from profits but does not indicate whether it should be current profits or accumulated profits. There are no specific or restrict rules and regulations on allocating the dividend to shareholders in Malaysia. Companies are generally free to make decisions on the distribution of dividends. Ling, Mutalip, Sharing and Othman (2007) has shown that in the year 2002-2005, there are numerous dividend-paying public listed companies than non-dividend-paying public listed companies in Malaysian. Since the year 2002, it has shown that to be volatile on the Malaysian public listed companies' dividend distribution.

Besides, they are not willing to skip dividends even though the earnings drop. (Pandey, 2003). Most of the firms or companies having conflict of interest on distributing the dividend to the shareholders in Malaysia. The distribution of excess cash to shareholders constitutes the most fundamental device of conflicts between corporate insiders and outsider shareholders (Jensen, 1986). Since the returns are not always guaranteed, the companies must be able to generate sufficient cash flow to pay the dividends and support their growth in the future, if they can no longer do that, they will have no choice and have to cut dividends to shareholders.

Table 1.2: FTSE Bursa Malaysia KLCI Top Ten Highest Yield Dividend Stocks on 7 July 2017

Date	**7 July 2017**		**31 May 2017**	
Stock Name	Stock Price (RM)	Dividend Yield (%)	Stock Price (RM)	Dividend Yield (%)
YTL Corp	1.48	6.46	1.50	6.33
Malayan Banking	9.65	5.38	9.44	5.51
BAT Malaysia	42.88	5.05	44.60	4.87
KLCC Property Holdings	7.85	4.51	7.81	3.85
Astro Malaysia Holdings	2.58	4.42	2.54	5.12
Digi.com	5.01	4.09	4.95	4.14
Westports Holdings	3.66	3.80	4.06	3.45
Maxis	5.50	3.64	6.15	3.25
Misc Berhad	7.43	3.63	7.50	3.60
Ammb Holdings	4.99	3.44	5.21	2.98

Source: *Top Yields.* (2017).

Table 1.2 indicates the top ten highest dividend yields in Malaysia on 7 July 2017. Dividend yields are how much a corporation gives the dividends every year related to stock price to its shareholders. It can be calculated the amount of the dividend divide by the current stock price. The researchers conduct a study found that the relationship between dividend yield and stock price is negative (Arslan & Zaman, 2014). One of the trading-services company, YTL

Corporation Berhad (YTL Corp) is the highest dividend yield stock which is 6.46% among Bursa Malaysia KLCI based on the table. However, the stock price is the lowest price which is RM1.48 within FTSE Bursa Malaysia KLCI 10 High Yield Dividend Stocks. On 7 May 2015, the stock price for YTL Corp is RM 1.67, but the dividend yield is 6% only. This indicates that when decrease in stock price, will increase in the dividend yields. In contrast, British American Tobacco (BAT) Malaysia is one of the consumer product companies, the company has the highest stock price which is RM 42.88, but the dividend yields are 5.05% only. It shows that when stock price increase lead to dividend yields decrease. This may be due to the amount of dividend paying to shareholders is lesser and the present stock price is high.

The share price for Astro Malaysia Holdings has increased by 4 cents from 31 May 2017 until 7 July 2017, but the dividend yield has dropped significantly from 5.12% to 4.42%. This shows that a small change in share price can lead to a huge change in dividend yield. The British American Tobacco (BAT) Malaysia's share price has declined from RM 44.60 to RM42.88, there has slightly raised in dividend yield which is 0.18%. This proved that a large change in dividend yield can affect a little change in dividend yield. It can be said that there is a negative relationship between share price volatility and dividend yield.

1.1.2.2 Dividend Policy in Malaysia's Consumer Product Industry

Pandey (2003) found that there are significant industrial differences on dividend payout ratios. Based on his research, plantation and consumer products industries have lesser chances of growth and larger surplus cash, thus they pay high dividends to the shareholders in the year 2003. In contrast, due to the low profit thus paying less dividend in trading and service sector. Because of the financing growth opportunities need more cash or money, therefore the construction industry has the lowest payout ratio.

Pandey (2003) indicated that it is not relevant with dividend policy of the consumer product sector is not steady as trends in previous dividends when determining current dividends from year 1993 until the year 2000. Thus, they concluded that there is significance for current dividends affected by the past dividends. Hashemijoo et al. (2012) conducted a study and found that there are two major measurements of dividend policy is a significant negative relationship between share price volatility which are dividend payout ratio and dividend yield from consumer product industry.

Table 1.3: Top Ten Dividend Stock in Malaysia

Company	**Dividend payout ratio (%)**	**Dividend Yields (%)**
CYL Corporation Bhd	239.72	8.58
Star Media Group Bhd	120.88	7.34
Formosa Prosonic Industries Bhd	109.48	6.41
UCHI Technologies Bhd	80.88	6.14
Magnum Bhd	96.94	6.07
British American Tobacco (M) Bhd	108.42	5.82
Tower REIT	91.9	5.82
Apollo Food Holdings Bhd	126.68	5.76
Classic Scenic Bhd	99.81	5.64
Fima Corporation Bhd	51.16	5.63

Source: *The Star Online*. (2017).

Table 1.3 shows the top ten dividend stock in Malaysia. Star Media Group Berhad has a good performance over the last ten years, the company has a consistent dividend payout ratio among the top companies on Bursa Malaysia. But its dividend payout ratio is 120.88%, are not the highest one. The highest dividend payout ratio and dividend yield are 239.72% and 8.58%, which is

CYL Corporation Berhad (Industry sector). The second highest payout ratio is Apollo Food Holdings Berhad, one of the consumer products companies, with a ratio of 126.68%. But the company's dividend yield is quite low (5.76%) compare to the CYL Corporation Berhad. According to Donaldson (1961), a company with low dividend payout ratio and low dividend yield can tend to invest the growth opportunities in the future. The Fima Corporation Berhad (Industry sector) has lower payout ratio and dividend yield, which is 51.16% and 5.63%.

1.1.3 Overview of Share Price Volatility

The objective of the investors is to maximize expected returns at a certain preferred level of risk. Thus, investors, stockbrokers, fund managers and investment analysts have great concerns on the factors that affect the share prices. Due to the incident of Black Monday or October 1987 market crash which, research on the share price volatility is receiving more attention.

The common stock's volatility is a benchmark for measuring risk. Hussainey, Mgbame and Chijoke-Mgbame (2011) explained that ordinary stock volatility is a way of measuring risk. Thus, the greater the volatility indicates that there is greater the risk. Similarly, larger changes of the market volatility have a negative impact towards the risk-adverse investor.

Additionally, the volatility of share price is the systematic risk which can collapse of an entire financial system (Guo, 2002). In the term of EMH, the stock market price volatility is explained as true investment value changes throughout sufficient time to justify changes of price (Shiller, 1987). Further, when the information related true investment value of stock is available to public, thus the price volatility will occur. Further, Schwert (1989) argued that the stock market volatility is reflecting the uncertainty of the future cash flows

as well as the discount rate. Thus, it indicates the crucial information about the future economic activity. Besides, the periods of high volatility also lead to coincide with downward market movements.

Table 1.4: Index Risk and Return Characteristics on 30 June 2017

Index Risk and Return Characteristics (Jun 30, 2017)				
	Annualized Standard Deviation (%)			
	Turnover (%)	3 Years	5 Years	10 Years
MSCI World	2.38	10.64	9.89	16.48
MSCI Emerging Markets	3.93	16.06	14.40	23.39
MSCI ACWI IMI	2.28	10.80	9.99	17.16

Source: The data retrieved from The MSCI World Index.

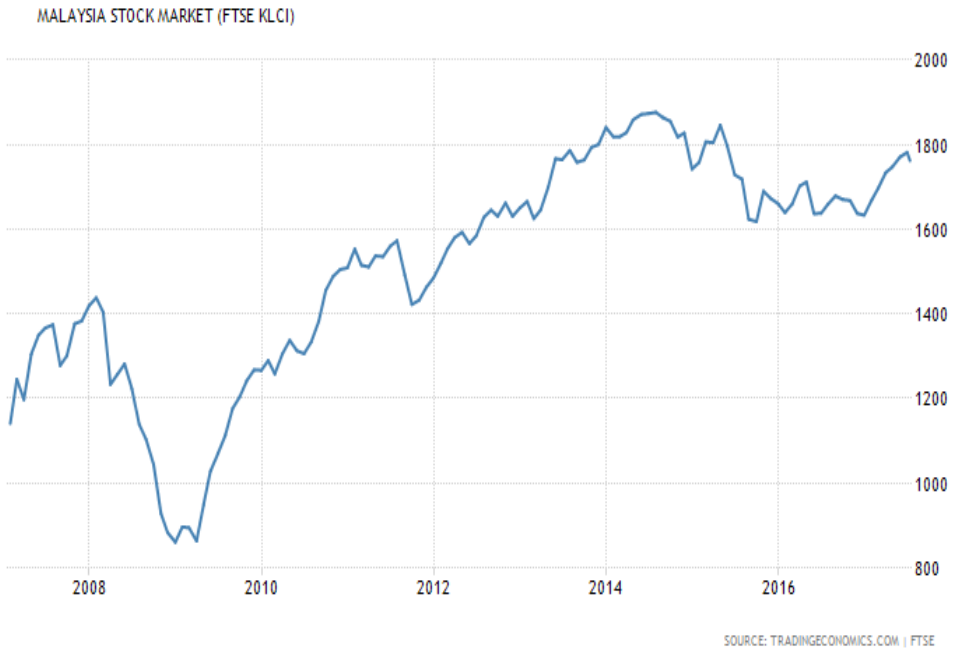
Table 1.4 shows the index risk and return characteristics on 30 June 2017. The historical data of the MSCI World Index is obtained as this index is capturing the international stock volatility across 23 Developed Markets countries. As an illustration, the standard deviation representing the volatility for recent 3 years, 5 years, and 10 years are 10.64%, 9.89%, and 16.48% respectively. There is a high volatility for the recent 10 years due to the incident of the year 2008 and 2009 crash and recession.

1.1.3.1 Share Price Volatility in Malaysia

In Malaysia, Kuala Lumpur market had faced 65.37 percent of share price volatility. With this tremendous volatility, the country had undergone recessions and crashes (Mohammad & Md Nassir, 1993).

Due to the condition of the stock market is representing a country's macroeconomic development. Zakaria, Muhammad and Zulkifli (2012) explained the corporate equity's value at the aggregate level depend on the condition of economic activity. Thus, real economic activities fluctuate could affect the volatility of stock markets. Therefore, it is crucial to clarify the determinants of share price volatility in Malaysia as it could aid in forecasting the future stock market.

Figure 1.1: The Malaysia Stock Market (FTSE KLCI) Overall Performance during year 2007 to 2017.



Source: The figure retrieved from Trading Economics

Figure 1.1 shows an overall performance in Malaysia's stock market within the period of 2007 to 2017. During the year 2008 and 2009, the stock performance had a huge dispersion and achieved the lowest performance in the period. The share price movement afterward is likely to be stable and have an upward trend till the end of year 2014. Historically, the Malaysia Stock Market (FTSE KLCI) reached an all-time high in May of 2014. Then, the stock market is likely to fluctuate along the year 2015 onward.

1.1.3.2 Share Price Volatility in Malaysia's Consumer Product Industry

In year 2013, the consumer product sector is getting slow. According to the research of DBS, the key share price drivers of Old Town Berhad is profitability and prospects, they are facing challenges because of the F&B earnings contribution to the group has declined over the years. Due to the numerous competition in the food & beverage, consumer spending would drag down the performance of profitability thus affect the share price volatility. There are few companies, for instance, Apollo Food Holdings Berhad, Fraser & Neave Holdings Berhad and Tomei Consolidated Berhad, are chosen to illustrate the current trend of the share price volatility in Malaysia's consumer product sector.

Figure 1.2: The Share Price of Apollo Food Holdings Berhad from year 2011 to year 2017 mid-year

Source: The figure retrieved from Bursa Malaysia.

Figure 1.2 shows the share price of Apollo Food Holdings Berhad from year 2011 to year 2017 mid-year. The share price of Apollo is quite stable from year 2011 to year 2013, however; the share price from year 2013 to year 2014 had a greater volatility. The share price movement afterward is likely to be stable. Additionally, there are fluctuating continuously from the year 2014 to the year 2016.

Figure 1.3: The Share Price of Fraser & Neave Holdings Berhad from year 2011 to year 2017 mid-year

Source: The figure retrieved from Bursa Malaysia.

Figure 1.3 shows the share price of Fraser & Neave Holdings Berhad from year 2011 to year 2017 mid-year. The movement of Fraser & Neave's share price was generally flat from year 2012 to 2015. In other words, the share price volatility was lower within these periods. Nevertheless, from year 2016 to 2017 mid-year, the share price started to fluctuate.

Figure 1.4: The Share Price of Tomei Consolidated Berhad from year 2011 to year 2017 mid-year

Source: The figure retrieved from Bursa Malaysia.

Figure 1.4 indicates the share price of Tomei Consolidated Berhad from year 2011 to year 2017 mid-year. The movement of share prices of Tomei Consolidated was generally fluctuated along the years. Starting from year 2012, the share price was decreasing until year 2016, and then having a slightly increasing in year 2017.

1.2 Problem Statement

This research project attempts to investigate asymmetric information and dividend policy on share price volatility in Malaysia under consumer product sector from year 2012 to 2016. According to Chue and Lai (2007), the financial markets become inefficient due to asymmetric information. Information asymmetry arose when the investors and management do not share the same amount of information, for example, the managers choose not to disclose the information to the public. Nevertheless, this information is particularly significant for the investors for decision making (Dulwich, 2006). Therefore, not all the investors can obtain the information when they need to make decisions. Under asymmetric information, the information available in the market to the investors plays an important role and subsequently the decision making by the investors may affect the share price volatility (Wang, 1993). As Malaysia is an emerging market, this issue is especially crucial for Malaysia to take this into account (Chue & Lai, 2007).

Subramaniam and Devi (2011) explained that there are no specific laws or rules that manage and govern the distribution of dividends in Malaysia. The companies in Malaysia can decide on the declaration of dividends to the investors. In other words, different companies will employ different types of dividend policy as the companies are free to decide to issue the dividends to the investors. Thus, inconsistency of administration of dividend policy arises in Malaysia. In this case, the declaration of dividends to the investors can affect the share price volatility in Malaysia's consumer product industry. This is because when the company issue dividends to the investors, it can be interpreted that the financial strength of the company is strong. Therefore, the investors evaluate a company's future performance based on the distribution of dividends (Hooi, Albaity & Ibrahimy, 2015). Based on the previous studies, the findings of dividend policy on share price volatility are inconsistent. Hussainey et al. (2011) and Asghar, Shah, Hamid, and Suleman (2011) claimed that there is a positive relationship between dividend policy and share price volatility. On the other hand, Allen and Rachim (1996), Nazir, Nawaz, Anwar and Ahmad (2010) and Shah and

Noreen (2016) explained that dividend policy has negative impacts on share price volatility. Thus, this research project attempts to investigate the relationship between dividend policy and share price volatility in Malaysia under consumer product industry.

Apart from that, to be specific, this research project concentrates on the consumer product industry in Malaysia with the period of 2012 to 2016. There are several reasons that encourage us to study this sector. First of all, in the fourth quarter of 2012, there was a moderately weak revenue and growth in earnings in the consumer product sector, even considering the delayed shipment timing for the period of Chinese New Year. There was a further slowdown sign in year 2013, which mainly because of consumer discretionary with the absence of pre-election handouts (Malaysia's Consumer Sector, 2013). Next, in year 2015, the government had implemented the Goods and Services Tax (GST), thus it is observed that there was a slow, uneven and fragile sign in recovery of domestic consumer spending (DBS Group Research, 2016). Nor Zahidi Alias, the chief economist of Malaysian Rating Corporation Berhad (MARC), claimed that the execution of GST would be affected the consumer spending in Malaysia. Zahidi explained that due to the price of some goods and services was expected to increase in the future, the alleviation in consumer spending growth tended to be larger (Leong, 2015). Besides that, different public messages on the prices of goods and services had been disseminated and it had confused the Malaysian consumers. Eugene (2015) reported that the consumers chose to stay on the sidelines on the prices of goods and services after the implementation of GST. Definitely, this had affected the retail sales of consumer product industry. The retail sales have directly affected the profitability of a company. When the retail sales increase, the earnings of the company also increase. Based on the Kenanga Research, it states that the execution of GST brings positive impacts to the companies that are engaged in food and beverage sectors. This was due to the products sold by the food and beverage companies can be classified as necessity goods for the consumers. Nestle (M) Berhad is one of the beneficiaries and derives advantage from the impacts of GST. It is noted that the share price of Nestle was drifted upward. On

the other hand, under the automotive sector, the performance of share price was dull and uninspired, for example, from 1 April to 15 April 2015, the share price of DRB-Hicom Berhad has dropped by 1.05%, which was RM1.88, while; the share price of Berjaya Auto Berhad remained constant at RM3.80 for the first 15 days. This is because the execution of GST raised the costs of living and gave impacts to the consumer spending on big ticket items. Therefore, how the consumer product industries cope with the share price volatility while these issues are surrounding in Malaysia's economy is this paper's main concern.

1.3 Objective of the Study

To examine the effects of asymmetric information and dividend policy on the share price volatility in Malaysia's consumer product industry.

1.3.1 Specific Objectives

- To examine the relationship between asymmetric information and share price volatility.
- To examine the relationship between dividend payout ratio and share price volatility.
- To examine the relationship between dividend yield and share price volatility.
- To examine the relationship between earnings volatility and share price volatility.
- To examine the relationship between leverage and share price volatility.

1.4 Research Questions

- What is the relationship between asymmetric information and share price volatility?
- What is the relationship between dividend payout ratio and share price volatility?
- What is the relationship between dividend yield and share price volatility?
- What is the relationship between earnings volatility and share price volatility?
- What is the relationship between leverage and share price volatility?

1.5 Hypotheses of Study

This research is carried out to examine or study the significant relationship of asymmetric information, dividend payout policy, earnings volatility, and leverage on share price volatility in the consumer product industry of Malaysia.

1.5.1 Asymmetric Information

H_0: There is no significant relationship between asymmetric information and share price volatility.

H_1: There is a significant relationship between asymmetric information and share price volatility.

1.5.2 Dividend Payout Ratio

H_0: There is no significant relationship between dividend payout ratio and share price volatility.

H_2: There is a significant relationship between dividend payout ratio and share price volatility.

1.5.3 Dividend Yield

H_0: There is no significant relationship between dividend yield and share price volatility.

H_3: There is a significant relationship between dividend yield and share price volatility.

1.5.4 Earnings Volatility

H_0: There is no significant relationship between earnings volatility and share price volatility.

H_4: There is a significant relationship between earnings volatility and share price volatility.

1.5.5 Leverage

H_0: There is no significant relationship between leverage and share price volatility.

H_5: There is a significant relationship between leverage and share price volatility.

1.6 Significance of Study

In corporate finance, there are significant decisions made by firm in determining how much the profit should be given to the shareholders as well as how much from the profit needed to reinvest in other investment or business. In order to decide and allocate the profit well, management should take full consideration by looking into and analyzing the company's dividend policy and figure out what kind of policy approach may be the best in maximizing the income and assets of the shareholders. Dividend is related to the stock prices and therefore the impacts on share prices should be emphasized. Hence, this research is carried out to study and understand deeper between both of them and from our result might be beneficial and useful for common investors and corporate managers.

In the perspective of investors, the more the fluctuation of share price, the more the risk of potential benefits or losses. If the particular stock is known as volatile, it means that the company might face difficulties in forecasting what the future share price of its company will be. Many investors prefer to have a more predictable earnings stock that carry lesser risks. Hence, when comes to determine an investment strategy, dividend policy tends to become one of the important factors that the investors will emphasize on. Therefore, from this study, it may help investor to know and understand well the relationship between the dividend policy and stock price instability. By equipping with enormous details regarding a particular firm's dividend payout ratio and dividend yield, investor can carry out a more overall, accurate financial analysis to determine whether that certain company is worth to invest. Just like everyone is aware that information is important to shareholders and investors in their decision making and different investors have their different preferences in capital gain, return, risk, and cash dividends. By looking into this research, it can aid the investors in constructing their own investment portfolio based on their personal preferences at the same time make the correct judgments, evaluation to generate an accurate decision making or investment making. By having an accurate measurement of stock market volatility as well as a deep understanding on the importance of the

factors will lead the investors to profit maximization as it is beneficial to predict the future price movement as well as maintaining the confidence.

An effective strategy formulation to minimize the risk, such as hedging, risk management, portfolio diversification may even be carried out by the domestic and foreign investors after they discover in this study. Therefore, this research acts as a pathway to forecast future stock price movement and influential factors that must be considered by the investors so that risks that might face can be minimized to the lowest level at the same time gaining the potential profits.

From the research, it can be said that corporate managers can utilize the dividend policy in an optimum way to have share price volatility being well-managed. Corporate managers may simply increase the dividends just to lower down the share price volatility if dividend policy and share price volatility are negatively related. For a company that wishes to determine whether the alternative ways of financing are more suitable to finance their company's operations instead of using their retained earnings, the firm can choose to apply cost-benefit analysis. By looking through the study, corporate managers will find out what dividend policy is the best for their company and they may come out with a certain specific policy that might bring advantages to their organization. For example, ones might develop a constant payout residual dividend policy which involves the idea that the company will operate to maintain their payout ratio. The company will then base on the quarterly earnings to adjust the amount of dividend being paid out to their shareholders to prevent the fluctuation of share price.

1.7 Conclusion

To recapitulate, this chapter has covered a basic understanding of this research project by providing an overview of the background of the study. A total of five research questions are determined and to be answered. This study provides significant information to both investors and corporate managers to acquire more knowledge about how asymmetric information and dividend policy affect share price volatility of the companies. Additionally, the impacts of both earnings volatility and leverage on share price volatility are examined. A further theoretical review of this research and conceptual framework will be discussed in the literature review in the next chapter.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In this chapter, journals regarding this research topic from different sectors and countries have been reviewed. Explanation and discussion of dividend irrelevance theory, signaling theory, bird-in-hand theory and agency theory will be presented in the beginning of this chapter. Besides, this chapter will also consists of the literature review in explaining the relationship between share price volatility and the variables like asymmetric information, dividend policy, earnings volatility, leverage, firm size, and asset growth that studied by previous researchers in order to provide a better understanding on the research topic. On the other hand, theoretical framework will be presented which displays the connection between the independent variables and dependent variables in this study. Lastly, correlation between each independent variables and dependent variable will be discussed whether there is any significant effect as well as positive or negative effects that the independent variables might bring to the dependent variable.

2.1 Review of Relevant Theoretical Models

2.1.1 Dividend Irrelevance Theory

Shah and Noreen (2016) stated that it is very unfair without taking Miller and Modigliani (1961) (MM) as a reference in the study of the stock prices and dividend policy. Miller and Modigliani (1961) commented that the dividends of a company and share price volatility does not possess a relationship with each other and found out they are irrelevant with each other under the condition of a perfect capital market, which are no taxes, no information

asymmetry, EMH, no transaction costs, rational investors and no issue of agency. They then further debated that the price of a firm's shares depends on the company's earnings while the future cash flows and earnings will be influenced by the corporate investment policy (Kenyoru, Kundu & Kibiwott, 2013). Hussainey et al. (2011) stated that there are no any changes towards the shareholder wealth when the entire aspects of the investment policy are remaining constant or unchanged and the sales of shares which is fairly priced will be used to finance any increment in the latest payout. The primary source to determine the firm value are firm risk and the earning power, which are the income from the company's assets (Habib, Kiani & Khan, 2012). Referring to MM (1961) propositions on dividend, any increment in the firm value or dividend will cause a decrease in exactly the equivalent amount of the ex-dividend stock price during the end period and thus actions like buying (reinvesting dividend) or selling stocks can be carried out by a dissatisfied shareholder to change or alter the company dividend policy (Rashid & Rahman, 2008). Consequently, there is no certain benefit that one company might select for one dividend policy and the shareholders are indifferent of capital gain and dividends. This MM proposition has been supported by a lot of researchers like Brennan (1971), Black and Scholes (1974), and Hakansson (1982) on different world markets and they all agreed that neither information effect nor dividends are relevant to share prices and there is zero relationship between each other. Issues regarding the rejection of the dividend irrelevant theory will be followed by the rejection of EMH and questions on the symmetric market information that impossible in current market were argued by Brennan (1971). Nevertheless, there is never a perfect market with no transactions, tax costs incurred. Besides, not all the investors or the shareholders in the market are rational all the time and some of them might think or judge illogically and end up making some irrational investment decisions. Under the wider perspective of behavioral finance, all of the illogical or reckless selling or buying decisions made by the shareholders can be known as behavioral decisions (Shah & Noreen, 2016).

There are loops or gaps in the assumptions of EMH which provides the chances or opportunities to others researches to challenge the dividend irrelevant theory. Empirical findings from Gordon (as cited in Shah & Noreen, 2016) proved that a company's dividend policy can affect the market value of the firm. There are other studies from Krainer, DeAngelo and DeAngelo (as cited in Rashid & Rahman, 2008) criticized the MM theory and debated that an organization's dividend policy is dependent on its investment policy, while Dybvig and Zender (1991) stated that only large class of models with asymmetric information will support for the MM dividend irrelevance theory.

2.1.2 Bird-in-Hand Theory

Investors value dividends in a very diverse way from the capital gains under the uncertainty as well as the information asymmetry world. This can be shown from the statement, "A bird in hand (dividend) is worth more than two in the bush (capital gains)" presented in Al-Malkawi (2007). This is supported by Gordon (1959), Ross (1977) and Bhattacharya (1979) which they declared that even a larger future dividend is promised, current dividend is much more preferred by the investors than the capital gains. According to Husam-Aldin (as cited in Hooi et al., 2015), shareholders favor dividends over the capital gains is because of the certainty of dividends while capital gains are uncertain. There are few assumptions being made which included (1) the information regarding the firm's profitability that acquired by an investor is imperfect (2) cash dividends will be highly-taxed compared to the capital gain obtained from the sales of stock (3) dividends play a role as a sign of expected cash flow. To provide a good signal to potential investors regarding the forthcoming prospects of a company, management will insist to pay dividends even though it imposed a tax disadvantage to the firm (Hussainey et al., 2011).

Bird-in-Hand theory debated that even though different shareholders might have different flavour whether to receive capital gain or dividend, most of the investors owned a risk-averse characteristic or personality. By comparing dividends and capital gains, the payout of dividends will tend to provide a clearer and a more expectable capital return. This idea is further supported by the Al-Malkawi's Signaling Hypothesis. This hypothesis treated dividends as a method to connect or link the information gap between the shareholders and the management team. It is hard to make people believe that firms and the shareholders will share the same equal amount of information and knowledge regarding the financial performance or strength of their organization. Therefore, corporations will often choose to inform their shareholders that the company is remained healthy, efficient and profitable by payout a dividend (Profilet & Bacon, 2013). Nevertheless, some particular investors that already in the high tax brackets condition were less likely to prefer the current dividends than the capital gains (Miller and Scholes, 1982). The future capital gain will be generated in the form on share price increment when there is a retention of earnings from the dividend of shares. Elton and Gruber; Bhattacharya; Kalay (as cited in Rahsid & Rahman, 2008) claimed that clientele effect will then occur due to the taxes of capital gain are normally lesser than the personal marginal income tax.

2.1.3 Signaling Theory

This theory treated dividends as a method to connect or link the information gap between the shareholders and the management team. It is hard to make people believe that firms and the shareholders will share the same equal amount of information and knowledge regarding the financial performance or strength of their organization. Therefore, corporations will often choose to inform their shareholders that the company is remained healthy, efficient and profitable by payout a dividend (Profilet & Bacon, 2013). Nevertheless, some

particular investors that already in the high tax brackets condition were less likely to prefer the current dividends than the capital gains (Miller and Scholes, 1982). The future capital gain will be generated in the form on share price increment when there is a retention of earnings from the dividend of shares. Elton and Gruber; Bhattacharya; Kalay (as cited in Rahsid & Rahman, 2008) claimed that clientele effect will then occur due to the taxes of capital gain are normally lesser than the personal marginal income tax. Assumption of Miller and Modigliani (1961) and EMH stated that share prices fully reflect all the available data when there is no information asymmetry. However, there are researchers such as Miller and Rock (1985) claimed that the management in the firm basically or normally will acquire more accurate as well as secret information compared to the outsiders like the customers and investors. Thus, there will be a gap present between the investors and managers and in order to bridge or link the gap, dividend plays an important role in conveying the private information to the investors. The dividend announcement can be used as a tool to provide a signal to the market regarding the bright future and expected future cash flows of a particular company (Al-Malkawi, 2007).

Bhattacharya (1979) supported the statement by stating that the dividend announcement indeed sending a good information about the financial health of an organization. An increment in the amount of dividend given can be interpreted or can reflect a company's good financial health with brighter future prospects while decrease in the amount of dividend might be interpreted as bad news towards the investors. Lintner (1962) stated that this kind of data will then reflect or shows the stock prices accurately when the market receives them and therefore in order to keep the stability of the share prices during the recession period or negative net income, the management team of the company will hesitate or reluctant whether to cut in their dividend payout. Allen, Bernardo and Welch (2000) mentioned that soon after the announcement of increase in large dividends, the number of transactions

showed a peak increase through the ex-dividend date under the institutional as well as individual investors.

2.1.4 Agency Theory

Under this theory, it treated the announcement of dividends as one of the way or method to resolve the agency issues between the managers and investors. This is because investors will much more prefer the current dividends than the capital gains or retained earnings. If cash dividend is not distributed, there will be an opportunity or chance to the management to utilize the money for their own personal usage or even to invest in a non-profitable investment that benefit the insiders instead of outsiders (Easterbrook, 1984; Rozeff, 1982). What can be seen from the "Free Cash Flow Hypothesis" of Jensen (1986), the increment in the free cash flow will encourage the management to increase the dividends instead of wasting the funds by investing in low profitable return projects.

Dividends paid to the investors will tend to reduce the resources which controlled by the manager and thus the manager will suffer losses of his or her power. This type of declaration or announcement of dividends can be an indicator to the shareholders that the management is acting in the investors' best interest. There is study proposed that institutional investors who may indirectly or directly took part in the corporate governance process and might result in enabling to run the company effectively are tend to more prefer the taxable dividends. Nevertheless, Matherly (as cited in Rashid & Rahman, 2008) claimed that the share price may be manipulated by the directors through the declaring of a stock dividend.

2.2 Review of Literature

2.2.1 Asymmetric Information and Share Price Volatility

The company's share price provides additional information to the investors in the stock market. So, the investors are able to be aware of the private information of the companies, and subsequently constituting a more informational efficiency of the market (Jennifer & Wang, 1997). When the private information exists, the managers can choose to disclose the information to the investors, and vice versa. The managers have the authority to affect and influence the share price of the company. Hence, the asymmetric information exists when the managers choose not to reveal the information to the public (Dulwich, 2006). Besides that, both trading opportunities and amount of trade allocation increase will increase the movement of the share prices. Thus, the share prices become less informative while at the same time, decreasing the informational efficiency of the market (Jennifer & Wang, 1997). To put it simply, under asymmetric information, the less informed investors depend on the share prices and dividends to forecast the future dividend growth. As the stock prices rise with both current and expected future dividend growth, the information available to the investors in the market may affect the volatility of the share prices (Wang, 1993).

Myers and Majluf (1984) stated that the managers hold more information and knowledge about the company based on their working experiences. If the company distributes the information about their investment strategies to the investors, it may threaten the interests of the company and place the company in an unfavorable position in the competitive market. This is because the company distributes the information and details would be advantageous to the others business rivalries. Furthermore, when the company reveals information to the public, either good or bad, the reputation of the firm definitely will be affected. Dulwich (2006) found that the response of the investors towards bad

news is more intensive as compared to good news. The findings of Dulwich (2006) was supported by Skinner (1994) and Kasznik and Lev (1995). Both of the researchers found that the reaction of the investors towards bad news affects the stock price volatility in relation to good and bad news. The researchers also found that the managers tend to delay the announcement of bad news to the investors in order to minimize the litigation risk. Additionally, Gelb and Zarowin (2002) claimed that when the firm reveals a vast amount of information to the investors, it may contribute a higher trading volume and a lower bid-ask spread in the stock market. Thus, the share price volatility is low when the uncertainty and risk are at a minimum.

Apart from that, the trend followers buy the assets upon an appreciation in the price and sell them upon a depreciation in the price in the stock market. Nevertheless, the contrarians trade the stock in an opposite way. When the information quality in a high volatility equilibrium, the volatility of stock price increases. However, the stock price volatility decreases in a low volatility equilibrium. When there is an asymmetric information among the agents, less informed agents will behave like the trend-followers and tend to buy the securities upon an appreciation in the price. Besides that, less informed agents depend more heavily on the public price signals because they hold poorer private information. So, they trade the securities in the similar direction when the price changes. On the contrary, well informed agents will behave like the contrarians and adapt the profitable contrarian strategy. They will sell the securities upon a depreciation in the price. If the agents possess more accurate information, it can weaken the trend following and contrarian behavior among the agents. With accurate information, it can mitigate the asymmetric information (Watanabe, 2007).

Vieira and Pinho (2011) explained that firm disclosure has a negative impact on the share price volatility. This is because when the level of information disclosure increases, asymmetric information is reduced with more

transparency. Thus, it reduces the share price volatility. In addition, if the company discloses its information regularly to the public, the impact of new information towards the company's performance will reduce. Hence, it causes a lower variation on the share prices. Besides that, the higher the transparency, the investors will tend to trust the company, and subsequently it will decrease the share price volatility. The level of information disclosure and transparency could reduce the share price volatility of the company. It also can motivate the organizations to disclose more information in the market.

In short, there is a positive relationship between asymmetric information and share price volatility. Therefore, if more information is disclosed, share price tends to become more volatile while if there is lesser asymmetric information in the company, the share price will tend to fluctuate lesser.

2.2.2 Dividend Policy and Share Price Volatility

When it comes in determining the investors' investment strategy, dividend policy will always be the main determinants that emphasized by the investors. To generate a more accurate as well as better firm's financial analysis, an investor should acquire information on the financial ratios and also data regarding the dividend payout ratio and dividend yield. It can be said that the dividend policy might have some effects on the stock price volatility as investors normally look into the particular firm's dividend yield and payout ratio when they want to decide which investment is much worthier or may produce high returns (Hooi et al., 2015). Dividend policy is a practice applied to decide and define the quantity of the dividend payment to the company's stockholders as well as the reinvestment amount by the firm's management team in their decision making (Pandey, 2003). An excellent dividend policy is the one that found the balance between the future growth and current dividends as well as stroke the maximization of the companies' share prices

(Ali, Ali Jan & Sharif, 2015). Dividend payment was then defined by Ross (1977) as the firm's distribution of profits to their stockholders while the dividend payout ratio can be meant as the portion of earnings, which used in paying dividends to the stockholders while dividend yield can be stated as the investment returns earned.

There are two common approaches used in measuring the dividend policy of a particular organization which includes the dividend payout ratio and dividend yield (Hashemijoo et al., 2012). Baskin (1989) then used these two approaches in carrying out research of 2344 U.S common stocks to examine the relationship of share price volatility and dividend policy from 1967 to 1986. His findings showed the dividend yield and prices of shares are inversely significant. Thus, he provided a suggestion whereby the share price fluctuations can be controlled by using the dividend policy as a tool. His research concluded that if the dividend yield rises 1%, the standard deviation of share price volatility will drop by 2.5 %. He claimed that the instability of the discount rate does not much impact on high dividend yield stocks. This is because high dividend yield can always reflect a more near-term cash flow. Hence, a company that possesses a bigger dividend yield is estimated to have lesser instability of stock price compared to company that have less dividend yield which in line with the duration effect.

Empirical study in UK by Hussainey et al. (2011) also took part in discovering the correlation between dividend policy and share price movements by selecting a total of 123 UK firms with ten years period started from 1998 to 2007. They took Baskin (1989) as basis and used a multiple regression analysis in finding their study. From their findings, both dividend payout ratio and dividend yield showed are negatively related with stock price fluctuation. Hussainey et al. (2011) then further claimed the payout ratio as the main factors in determining share price volatility. They explained that an optimistic signal about the company's future performance can be shown in a high

dividend payout and yield, which leading to increase of share price while in case there is a decrease in the dividend payout ratio or dividend yield will provide a pessimistic sign that causing share prices to decrease.

There is another previous study consisted of 73 non-financial companies registered in Pakistan's Karachi Stock Exchange (KSE) with six-year period started from 2003 to 2008 was conducted by Nazir et al. (2010). Their data was being analyzed by applying panel data analysis. The result explained the dividend yield as well as dividend payout ratio and the fluctuations of share prices are negatively related. This finding is consistent with studies of Nishat and Irfan (2001) which stated dividend yield and dividend payout are having significant impact towards the stock price movements in developing economics. From their results, they found out firm size and stock price instability are positively correlated while there is negative correlation with dividend yield and dividend payout ratio. This explains that small firms have lesser investment chances which causing them to pay more dividends to their shareholders. Due to the lesser investments made by the company, less investors will tend to invest in the company and eventually causing less share price instability.

On the other hand, Khan et al. (2011) from Pakistan investigated a total of 55 non-financial companies registered in Karachi 135 Stock Exchange with the result generated a positive relationship of dividend yield towards the share price movements (Nazir, Abdullah & Nawaz, 2011). This result was supported by Asghar et al. (2011) which studied the data of five important sectors in KSE from 2005 to 2009 analyzed by using multiple regression technique. They claimed the dividend policy in the country they investigated are affected by the market conditions, cost structure and regulatory restrictions, which directly causing the fluctuation of the share price of the firms. Research of 79 firms listed at KSE from 2004 to 2007 found that the announcement of

dividends in form of stock dividend and cash dividend had positive to impact to the share prices (Akbar & Baig, 2010).

While looking into the Malaysian context, the relationship between share price volatility and dividend policy within the consumer product industry for six years period started from 2005 to 2010 which generated a negative correlation between the dividend policy and stock price fluctuation was examined by Hashemijoo et al. (2012). Besides that, another research carried out in Malaysia by Zakaria et al. (2012) from 2005 to 2010 emphasizing in the construction and material sector. Dividend payout ratio showed a positively significant influence towards the movements of share prices from this study. The negative association between stock price instability and dividend policy is due to the effect from duration effect, rate of return effect, information effect and pricing arbitrage effect. It might show a little bit different comparing to other countries or various industries in term of the relationship between dividend policy and fluctuation of stock price by taking the entire Malaysian market into consideration (Hooi et al., 2015). Besides, the entire Malaysian market cannot be represented by only a particular or certain sector in Kuala Lumpur Stock Exchange (KLSE) in terms of market capitalization because in comparison to the entire Bursa Malaysia, the capitalization of the market for the particular sectors might be extremely small.

Okafor, Mgbame, and Chijoke-Mgbame (2011) stated that dividend policy negatively influences volatility of stock price in Nigerian Stock Exchange market. This might due to little attention is given to dividend payout ratio by shareholders in forming their investment behavior. They notion dividend payouts as the contributory to share riskiness. Besides, cyclical variation happened in the operation of the firm as well as the economic factors that affecting company activities might cause the investors to view the payouts as a bait to let them to have their investments kept. They sometimes sell the

shares soon after accepting the dividend and buy more dividend payment shares after that which finally causing the increase of share price volatility.

A study also being carried out by Rashid and Rahman (2008) whereby a total of 104 non-financial company were used as their sample size for eight years duration which started from 1999 to 2006 in Bangladesh. From their study in the capital market of Dhaka Stock Exchange, the relationship between the share price volatility and dividend yield generated is positive but insignificant. Furthermore, they also discovered that there is no relation can be seen in the developed capital markets between earnings declaration and the stock prices. This might happen due to stock price volatility and dividend policy are irrelevant by stating it might due to dominant shareholders who working in the company board held the majority of shares or because of the capital market inefficiency in Bangladesh.

On the other hand, dividend policy stands as controversial problems in empirical and theoretical study for several years and therefore its connection with stock price fluctuations was affected as well (Allen & Rachim, 1996). Their research in Australia that studied through total sample size of 173 Australian listed stocks stated that there is a significant negative correlation between stock price movements and the dividend payout ratio while the dividend yield and share market price are positively related. Firms with little growth opportunities as well as less incentive to invest will normally have a high dividend yield, which will lead to its share price to react less sensitive to the estimated rate of return that changing over time.

Another study from Kenyoru et al. (2013) examined the firm at Nairobi Stock Exchange (NSE) from 1999 to 2008 by applying correlation and multiple regression analysis techniques. This research claimed that dividend yield is positively connected with the stock price movements while the dividend payout ratio is negatively associated with share price changes. In NSE,

dividend yield and share price volatility are positively related due to companies that provide high dividends used most of their earnings to afford it rather to make new reinvestment making the share price to be more volatile. They found out that the dividend payout ratio is an essential element for share price instability. They proposed that high limiting of company's manager in managing the stability and increasing the future earnings based on the information from public and private is the cause for a payout ratio to reduce the price volatility.

Ilaboya and Aggreh (2013) conducted their research by using the firms accepted at Nigeria stock exchange and the results concluded that dividend return and the company's share price fluctuations are positively significant. Nevertheless, an insignificant negative relationship was found between dividend payment and stock price movements. Therefore, firms are suggested to be careful in taking the methods or ways in meeting the company's financing requirement as well as increase the shareholders' capital and assets. Research also being carried out in developed countries by Pandey (2003) which indicated that the share prices and dividends have significant association with each other. So, investors' confidence and trust will tend to increase or improve when there is an increase in the dividends, which will eventually lead them to discount the organizations' cash flow at an inferior required rate and no doubt increase in the stock price. An increase in the uncertainty of shareholders caused by a lower dividend will then lead to a fall down in prices (Ngugi, 2017).

Kamyabi and Nazemi (2014) studied 73 non-financial companies accepted in Tehran stock exchange from 2008 to 2012 by using Baskin (1989) and Hashemijo et al (2012) as references in their model. The findings showed that dividend yield and dividend payout ratio are significant and positively associated with the fluctuation of stock price which consistent with Zakaria et al. (2012) and Ilaboya & Aggreh (2013). Al Qudah and Yusuf (2015) found

that there is a negative association between the dividend payout ratio as well as dividend yield and movements of stock price. They examined the Jordanian industrial companies started from 2001 to 2011 through multiple least square regression approach and it can be said that if the dividend yield of Jordanian industrial companies increases, it will stabilize the share prices and thus the fluctuation of stock prices will decrease and eventually lowers the risks. Their outcomes generated also claimed when the dividend payout ratio becomes high, the volatility of stock price will tend to drop. Thus, they concluded that dividend policy should be taken into consideration for the Jordanian industrial firms to attract their investors. They further argued that the dividend payout ratio can be treated as a tool in estimating the company's future growth and development as well as chances of investment. The higher the stability of a company, it will give a higher dividend payout ratio, which leading to a lesser fluctuation in their company's share price.

By referring to previous studies, it can be expected that the dividend yields as well as dividend payout ratio to have a significant negative connection with the stock price volatility. This indicates that when the dividend yields as well as dividend payout ratio is higher, the share price will become less volatile. While high volatility of share price movements will occur if the firm's dividend yields as well as dividend payout ratio is lesser.

2.2.3 Earnings Volatility and Share Price Volatility

The objective of financial accounting is to provide measurement to investors' risk assessments. Beaver, Kettler, and Scholes (1970), examined that markets use accounting information of a firm to assess investment risk. In their study, there is a high correlation between share price volatility and earnings volatility. Besides, the studies suggest accounting data able to provide superior forecast to determine risk, the data provide a tangible demonstration that can lead to an

improvement in prediction of decision making. This result also proved by Beaver (1968), investors react directly to the accounting data of the firm, it can be said that accounting data affects a security's risk.

Similarly, to Allen and Rachim's study (1996), their finding suggests that the major determining factor of stock price volatility is the basic earnings volatility of the firm. They conduct the research based on a sample of 173 Australian listed companies for the duration from 1972 to 1985. Besides, their hypothesis recommends that the earnings volatility and other variables like payout ratio, the firm size, and the debt level are the dominant determinants. From their findings, it proved that the relationship between earnings volatility and share price volatility is a significant positive correlation. According to the authors, firms' earnings volatility has significant negative correlations with the dividend payout policy. Companies which have volatile earnings would tend to pay lower dividends and it is likely to be riskier. Thus, when the companies pay a low dividend, their share price in the futures will tend to increase due to the inverse relationship between the dividend payout and share prices. For instance, the authors assume that operating risk is remaining constant, so they expected that the higher the levels of debt will raise the share price volatility. Thus, it is crucial to include firms' operating earnings in this paper.

Hashemijoo et al. (2012), indicated that the earnings volatility of a firm has a positive impact on share price volatility. The study focuses on consumer product listed companies in Malaysian stock market, they took around 84 companies listed in main market of Bursa Malaysia. Based on the findings of their study, earnings volatility of the firm will have a significant positive outcome on share price movement. This is because high earning volatility will result to high risk for the firm. Thus, the firms with more earnings volatility will induce higher volatility in their share price.

When earnings volatility of the firm increased, the stock price volatility also increased (Baskin, 1989). Earnings volatility as control variables in his research paper is for determining the relationship between share price volatility and dividend yield. In his findings, earnings volatility not only affects the optimal dividend policy of firms, it also demonstrated that a positive effect on share price volatility. By studying their result, the variables have shown an obvious effect on stock price as well as dividend yield. Therefore, it is crucial to consist operating earnings as a control variable when predicting the stock price variability.

A firm with a higher stock price volatility likely caused by high earnings volatility or high leverage. This reflected in the result of a study from Nishat and Irfan (2004) and seems to contradict; the impact of earnings volatility is negatively influencing the stock price, but significant only during the reform period. Their empirical estimations are mainly based on a cross-sectional regression analysis to study the relationship between volatility of stock price and dividend policy. Although their result is not strong enough in developed markets, but it is constant with the behavior of emerging markets.

Based on Abrar-ul-haq, Akram, and Imdad Ullah (2015), they have found out that earnings volatility has no relationship with share price volatility, because the data taken in their research was insufficient by compared to the previous study done by Nazir et al. (2010). Besides, in their empirical results, most of the variables are having weak or medium correlation with each other. Furthermore, the research result may also have affected due to the economic conditions during their study period are much better as compared to others authors' research economic situation (Abrar-ul-haq et al., 2015). This is similar to Hussainey et al. (2011), it is because they used different theories in their study in order to support the variables, however the results showed no difference whether earnings volatility was considered or not. However, in the

reality, the earnings volatility will affect directly and positively to dividend payout ratio and it will impact greatly to price volatility.

The research from Zakaria et al. (2012) is differs from most of the previous researchers because their study is based on all listed companies in the exchange. This research is covered for a duration of six years (2005 to 2009) on Malaysian listed construction and material companies. In the empirical result, among the controlled variables, there is no significant impact between earnings volatility on the share price volatility. This is because based on dividend irrelevance theory by Miller and Modigliani (1961), in the research stated that firms' earnings do not affect the firms' values. With the assumption of a perfect market, they documented that dividend policy is irrelevant to share price volatility. It is argued that the future earnings and the investment risk will affect the value. In fact, investors will pay higher taxes on dividend instead of capital gains. Therefore, the investors will be taxable once their shares are sold. Hence, a company that without paying dividends will be more attractive compared to the company that gives dividends payment (Black, 1976). This result is consistent with Rashid and Rahman (2008) but it is inconsistent to Allen and Rachim (1996), Nazir et al. (2010).

In a nutshell, it is expected there is negative and significant and the relationship between earnings volatility and share price volatility based on previous author' studies. This means that when the earnings volatility of the companies is higher, it will cause the share price fluctuations to become lesser.

2.2.4 Leverage and Share Price Volatility

According to Black (1976), the "leverage effect" refers to the volatility and asset returns can be negatively correlated, where the volatility increases when the stock price decreases. The price movements can result in increased volatility. Similarly, a crash could generate a greater volatility.

There are two ways to explain the leverage effect. Firstly, it is based on the relationship between the volatility and expected return. That is, the greater the volatility, the larger the tendency of expected return to increase, thus resulting the stock price decreases. In other words, there is negative correlation between volatility and stock return. Secondly, it is based on financial leverage. When the stock prices decline, financial leverage would rise, thus leading the stock return volatility increases (Albaity and Ahmad, 2011).

Banumathy and Azhagaiah (2011) have found out that the bad news would increase more than good news. Similarly, Aydemir et al. (2007) also found that the financial leverage would rise as the level of volatility of equity, whereby the equity volatility is relied on the time-varying interest rate and risk. Thus, the financial leverage is more likely contributed a greater impact on smaller firm's volatility. In short, keeping the interest rates and the price of risk constant, small firm's stock volatility would have a more significant impact than market when financial leverage generates a variation.

There are some authors found out that there is a relationship or no relationship between leverage and stock price volatility such as Nazir, Musarat, Waseem and Ahmed (2010) indicated that the leverage have negative and non-significant influence on stock price volatility. Additionally, Zakaria et al. (2012) and Profilet and Bacon (2013) also have the same result that there is a significant negative relationship between leverage and share price volatility. It is because the leverage effect will result to rise in stock market volatility as

when there is a response to bad news and drop when there is a good news. According to the Tauchen, Zhang and Liu (1996), the impact of leverage effect is small or it is indirectly on the stock price volatility, it could be said as there is almost no statically significant. Yet, the leverage effect is short term and declined within two or three days after the price shock.

In this paper, it is expected that there is negative relationship between leverage and share price volatility. This provides the meaning that when the company is holding a large or huge debt, the share price movements will tend to be lesser while if the company possesses a smaller leverage, the stock price will fluctuate at higher frequency.

2.2.5 Firm Size and Share Price Volatility

Firm size can also be the determinants that influence the volatility of stock price and a promising link can be found between these two variables. Study from Nishat and Irfan (2001) stated that there is a negative association between the size of the company and stock price fluctuation. This statement was then further supported by another study carried out in the United Kingdom by Hussainey et al. (2011) who claimed firm size and volatility of stock price are highly correlated between each other. Besides having significant relationship, both of the variables have negative relationship between each other which are inconsistent with the findings of Allen and Rachim (1996) and Abrar-ul-haq et al. (2015) which stated a positive relationship between stock price movement and market value of firm. This might due to larger companies are well-informed, more liquid which subject to less price fluctuations while a greater share price movement might be observed from the small size of firms due to being less-informed, more illiquid of the stock market. Result from Allen and Rachim (1996) and Abrar-ul-haq et al. (2015) discovered that the share price volatility and firm size is

positively related might probably due to the amount of all types liabilities a company hold. They stated that the larger firm might incur a higher amount of liabilities compared to the smaller company and this cause the share price of big firm to volatile more. They further insisted that bigger firms normally hold more tangible assets, much more diversified and subject more to market scrutiny which entitled them to hold more liabilities. This statement can be supported through their significant negative correlation between earnings volatility and size. Firms which are big will relatively possess lower earnings volatility before taxes and interest, thus support more debt and this huge liability will lead to a higher share price volatility.

Karathanassis and Philiappas (1988) (as cited in Zakaria et al. 2012) claimed that size and volatility exist a potential relationship between them and an explanation on the stock prices can always derive by referring to the firm size. Atiase (1985) indicated that the bigger the company, the higher the likeliness for the share price to decrease. However, result from Zakaria et al. (2012) showed a highly correlated association between company size and share price movements where the larger the size of the company, the larger the movements of stock prices. There is less than 0.05 in any lag level for their p-values of both directions, this indirectly proved a feedback exit between share price movements and company size (Dewasiri & Weerakoon Banda, 2015). In other words, company size and volatility of stock price are positively associated in short run.

From research of Ilaboya & Aggreh (2013), they emphasized on total 26 companies registered on the Nigerian Stock Exchange market through multiple regression approach from 2005 to 2011. The empirical results of their study put firm size as one of the control variables and the outcome showed that firm size is negatively significant at 10% towards share price volatility. Through Ilaboya & Aggreh (2013), big companies are usually possessing more information and involves in lesser risk compared to small firms. Bigger

firms normally have more investment opportunities which lead investors to invest more in their company and eventually causing the share price volatility to fluctuate lesser. This negative relationship was being proved through the findings with the correlation between price volatility and the size of the firm.

2.2.6 Asset Growth and Share Price Volatility

Syed & Umara (2016) used a sample of 50 non-financial firms which are listed of Karachi Stock Exchange, during the year 2005 to year 2012 and utilized random effect model on panel data. The result revealed that there is a significant positive relationship between growth of asset and share price volatility. It explained that the firms at growth stage have a more volatile stock in Pakistan. This is because the firms which are at growth stage retain most of their earnings and less dividend payout. The result is similar with Habib et al. (2012) and Sadiq et al. (2013), they had found out that there is positive relationship of stock price volatility and asset growth of firms. Additionally, Ilaboya & Aggreh (2013) used 26 samples of companies listed on Nigerian Stock Exchange Market for the period for year 2004 to year 2011. The result showed that the asset growth positively impacts on stock price volatility.

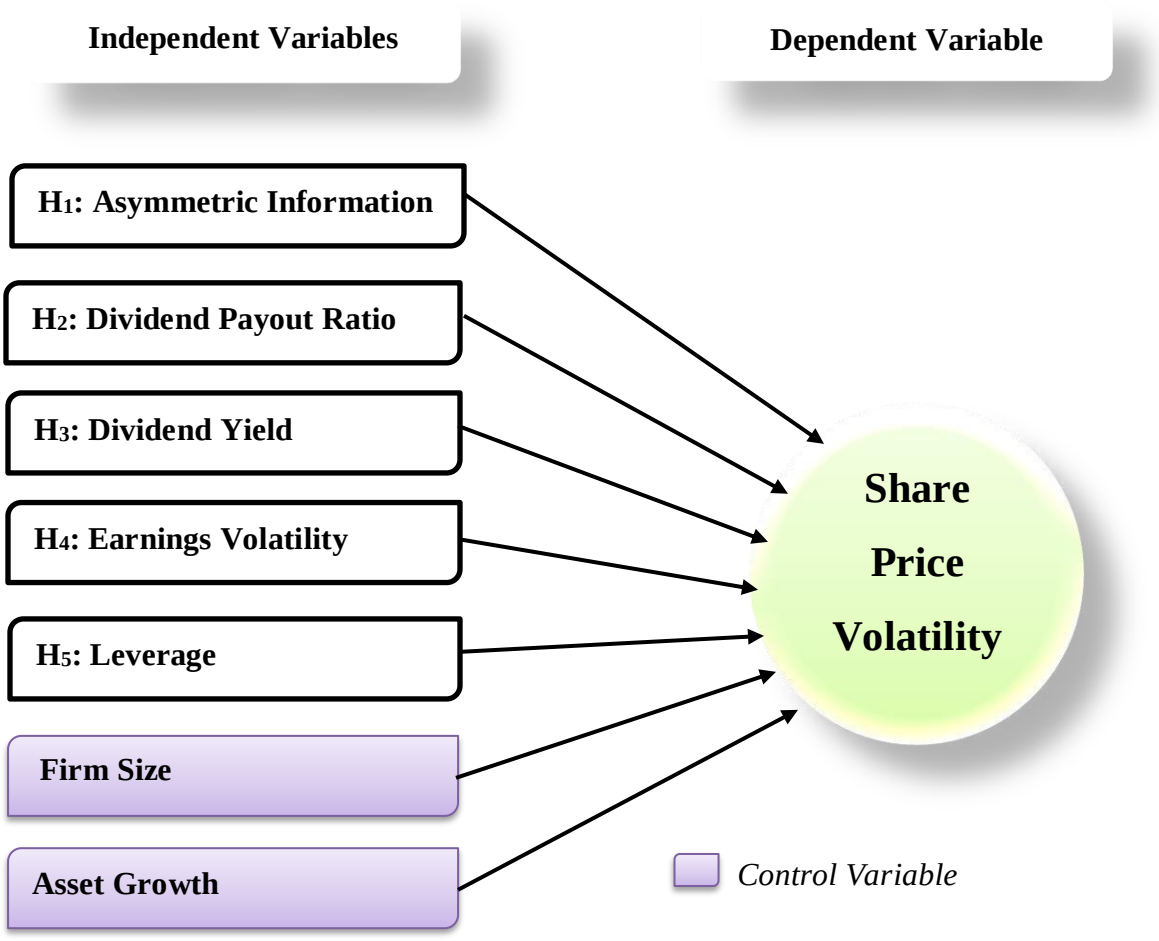
Furthermore, it is shown that the asset growth of firms which were continuously listed and paid dividends for 5 years cannot have no effect on share price volatility. Onsomu & Onchiri (2014) examine the factors influence share price volatility by using 30 firms listed on Nairobi securities exchange, Kenya, for the period year 2008 to year 2012. They found out that asset growth has no significant relationship with share price volatility. Apart from that, Dewasiri & Weerakoon Banda (2015) collect a sample of 40 companies listed in the Colombo Stock Exchange for period from year 2003 to year 2012. The result indicated that the asset growth has no impact on stock price

volatility. They explained that it is due to the reason that based on the rate of return effect, the small dividend payout companies have a high possibility to be assessed as more valuable than their assets in place because of their growth potential. Furthermore, Hooi et al. (2015) studied the relationship of variables and stock price volatility, by using 319 companies from the Kuala Lumpur stock exchange for the period year 2003 to year 2013. The result showed that there is no significant relationship between asset growth and stock price volatility. Profilet & Bacon (2013) examine the impact of variable on the stock price volatility, by collecting 500 traded firms through Value Line Investment Survey database and using method of Ordinary Least Squares (OLS) Regression. They found out that there is negative relationship between asset growth and stock price volatility. The result is similar to Baskin's (1989), who determined that there is negative relationship between stock price volatility and growth.

2.3 Proposed Theoretical/ Conceptual Framework

In this section, the projected conceptual framework will be used to examine and study the relationship between asymmetric information, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size, asset growth and share price volatility in Malaysia Consumer Product Industry from 2012-2016. The endogenous variable is share price volatility while the exogenous variables, including asymmetric information, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size and asset growth. Firm size and asset growth will be set as the control variable in this research.

Figure 2.1: Determinants of Share Price Volatility in Malaysia's Consumer Product Industry



2.4 Hypotheses Development

H_1: There is a positive relationship between asymmetric information and share price volatility.

Jennifer and Wang (1997) mentioned that when the informational asymmetry exists in the stock market, the share price volatility tends to increase. On the contrary, when the asymmetric information is absent, the share price volatility tends to reduce. This was supported by Vieira and Pinho (2011). The researchers stated that the higher the level of information disclosure and transparency, the lower the asymmetric information in the market. Thus, it allows the share price volatility smoothing. In addition, Myers and Majluf (1984) and Dulwich (2006) explained that the managers possess more private information about a company and the distribution of the information to the public depends on the choice of the managers. The information helps the managers to formulate some strategies for the company, such as investment decisions. If the company discloses the investment strategies to the public, it would be advantageous to the business rivalries. Furthermore, Skinner (1994), Kasznik and Lev (1995), and Dulwich (2006) claimed that the response of the investors towards bad news is more dramatic than good news. Apart from that, Watanabe (2007) mentioned that the share price volatility increases with the information quality in a high volatility equilibrium. With vast amount and accurate information, it can mitigate the asymmetric information in the market. This was supported by Gelb and Zarowin (2002). The better-informed investors can weaken the trend-followers and reduce contrarian behavior among the agents.

H_2: There is a negative relationship between dividend payout ratio and share price volatility.

Information effect and rate of return were used by Baskin (1989) to prove the negative connection between stock price fluctuations with dividend payout ratio. He mentioned that dividend payout ratio is a powerful tool to forecast the investment and growth opportunities. This prediction can help companies with high dividend payout ratio to reduce the movements in their stock prices. Research from Allen and Rachim (1996) in Australia also supported the findings by stating that volatility of stock price and dividend payout ratio is significant and negatively correlated. Same goes to the outcome generated by Nishat and Irfan (2001); Nazir et al. (2010); Hussainey et al. (2011) which found the dividend payout ratio possesses negative impact towards the movements of stock price. The dividend payout ratio can be treated as one of the important elements in determining a company's stability and plays a significant role in reducing the volatility of share price.

H_3: There is a negative relationship between dividend yield and share price volatility.

By referring to the arbitrage pricing effect, a negative relationship between share price volatility and dividend yield can be explained by Baskin (1989). It assumed that the financial market is inefficient and profit from mispricing can be obtained by investors with well-equipped knowledge. Empirical study in UK by Hussainey et al. (2011) also took part in discovering the correlation between dividend yield and share price movements and found out their findings are consistent with Baskin (1989). This is further supported by Nazir et al. (2010); Nishat and Irfan (2001) which provided that the dividend yield is negatively significant to stock price instability.

H_4: There is a negative relationship between earnings volatility and share price volatility.

According to Nishat and Irfan (2004), they have revealed that the impact of earnings volatility is negatively affected the stock price, but significant only during the reform period. Similarly, based on Abrar-ul-haq et al. (2015), due to the data taken was insufficient, therefore the earnings volatility has no relationship with share price volatility. Zakaria et al. (2012) were also found out that there is no significant relationship between earnings and the company share prices. This result is similar to Hussainey et al. (2011), whether the earnings volatility is included or not, there is no significant impact between earnings volatility and share price volatility. It could be concluded that there is negative relationship between share price volatility and earnings volatility of firms.

H_5: There is a negative relationship between leverage and share price volatility.

It is supported by Nazir, Musarat, Waseem and Ahmed (2010). They mention that leverage has a negative insignificant impact on volatility of stock price. Additionally, Zakaria et al. (2012) and Profilet and Bacon (2013) also have same result which the leverage is negatively significant and will not impact the share price volatility. It is because the leverage effect can affect stock market volatility to rise when bad news is announced and decline when good news is distributed. According to the Tauchen et al. (1996), the impact of leverage effect is small or it is indirectly on the stock price volatility, it could be said as there is almost no statically significant. Yet, the leverage effect is short term and declined within two or three days after the price shock.

2.5 Conclusion

Chapter 2 discusses on the share price volatility and several independent variables that used in this study by providing detailed explanation or review on the association between each independent variable and stock price fluctuations. Theories regarding this research topic were explained in this chapter and the literature review on each independent variables and dependent variable also presented. Some of the previous studies showed the same result with each other while some of them are contradicted due to certain reason. This chapter examines in Malaysia's consumer product sector from 2012 to 2016. Previous researches are very helpful in providing direction and guidance. Expected relationship between share price volatility and the determinants is formed in this chapter and the further information as well as methodology used are presented in the coming chapter.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter consists of the methodology used. Besides that, the research design, collection of data, design of sampling, target population, data processing and research instruments as well as data analysis will be included in this chapter. This chapter will provide a clear information and guidance in showing how the research is carried out. Secondary data is applied and was derived from Bloomberg database. Details of share price volatility and the determinants are presented in the data processing part to provide a more detail and knowledgeable understanding. Electronic View 10 (E-Views 10) software is utilized to perform the analysis of data. Besides that, panel data techniques, Pooled OLS Model, Random Effect Model (REM), Fixed Effects Model (FEM), Hausman Test tend to be carried out. Lastly, this chapter will also involve in detecting the econometric problems like normality test, autocorrelations and multicollinearity.

3.1 Research Design

The objective of this research is to investigate the asymmetric information and dividend policy towards volatility of the share price in the Malaysian consumer product industry. Secondary data are collected from Bloomberg in order to conduct this study. The total number of observations is 275, which consists of five years' time series data (2012-2016) and 55 consumer product industry companies listed on Bursa Malaysia. The data are collected to examine how the explanatory variables, which include asymmetric information, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size and asset growth affects the share price volatility in Malaysia's consumer product industry.

Apart from that, the quantitative research methods will also be applied in this research. This is because the quantitative research involves numerical data Thus, mathematical and statistical method can be implied to analyze the data (Quantitative and Qualitative Research Methods, n.d). Due to the qualitative research does not involve numerical data; therefore, the quantitative research is much more structured than the qualitative research (DeFranzo, 2011).

3.2 Data Collection Method

This research is aimed to examine how the asymmetric information and dividend policy affects the share price volatility in Malaysia's consumer product industry. Variables are chosen such as asymmetric information, dividend per share, dividend yield, earnings volatility, leverage, firm size and asset growth. Additionally, the secondary data are collected from Bloomberg for a period of 5 years from 2012-2016. Therefore, Table 3.1 shows the data sources and method of collection of variables.

Table 3.1: The Data Sources and Method of Collection of Variables

Type of Variables	Variables	Unit of Measurement	Sources and Method
Dependent Variable	Share Price Volatility	Percentage	Bloomberg
Independent Variables	Asymmetric Information	Percentage	
	Dividend Payout Ratio	Percentage	
	Dividend Yield	Percentage	
	Earnings Volatility	Percentage	
	Leverage	Percentage	
Control Variable	Firm size	Percentage	
	Asset Growth	Percentage	

3.3 Data and Sample Selection

In this paper, the E-Views technique was used, which stands for Econometric Views, as our sampling technique. It provides sophisticated data analysis, regression, and forecasting tools which can instantly develop a statistical relation to forecast future values of the data. It is used because there will not limit its efficiency to economic time series, even quite large cross-section can be solved (E-Views, 2017). In this paper, panel data or cross-sectional time series data are obtained to run a panel data analysis of Poolability Hypothesis test, Breusch and Pagan Lagrange Multiplier (BPLM) test, Hausman test and others.

Moreover, there are a total of 129 companies in Malaysia's listed consumer product sector. However, it had only 55 consumer product companies been chosen because of missing or incomplete data. Some of the companies have missing or incomplete data

in some particular years. Thus, we use balanced data sampling to filter out the 74 companies which are incomplete data. In summary, the panel data are based on 55 companies which are under consumer product industry started from year 2012 – 2016. The total observation is 275.

Table 3.2: Number of Observations

	Number of Companies	**Observations**
Beginning Data	129	645
Missing Data	74	375
Final Data	55	275

3.4 Data Processing and Research Variables

3.4.1 Data Processing Chronological

Data processing is a progression from preparation of data to the interpretation of data. It helps in managing the data and transforming the numerical data into understandable information through statistical tools such as E-Views. Steps included will be data collection, data checking, filtration and selection, analysis of data and lastly the outcome generation and interpretation. The dependent variable and independent variables are set by reviewing the previous journals studied by past researchers in order to have a better understanding of the research topic. Data checking, filtration and selection are important as any errors occurred will cause misleading to the results generated. Therefore, the data accuracy and consistency will be reconfirmed and rechecked to avoid any human errors in the calculation. Analysis of data will be done through statistical tools and the results generated will be interpreted into word form to make it more understandable. Comparison with the

expected outcome and the real results is needed to find out the reason that causing the inconsistency in the study.

3.4.2 Research Variables

3.4.2.1 Share Price Volatility

$$\textbf{Share price volatility} = \sqrt{\frac{Hi-Li}{\left(\frac{Hi+Li}{2}\right)^2}}$$

where,

H_i = *Highest stock price for year i*

L_i = *Lowest stock price for year i*

i (from 1-5) indicates years from 2012 to 2016

Share Price Volatility (SPV) will be the dependent variable for this study, which it follows the measurement used in the research of Parkinson (1980). The value of the highest and lowest share price is derived from Bloomberg data source. The lowest stock price is then minus by the annually highest stock price and the value obtained is divided by the average of the summing of the highest and lowest value and raising second power to it. At last, square root transformation was applied to obtain standard deviation comparable from the variance. The value of the highest and the lowest share prices were used as this approach is far more accurate or superior than taking annual closing and opening stock prices, which is further supported by the research of Abrar-ul-haq et al. (2015), Al Qudah & Yusuf (2015), Asghar et al. (2011), Baskin (1989), Hussainey et al. (2011), and Rashid and Rahman (2008).

3.4.2.2 Asymmetric Information

$$\textbf{Asymmetric Information} = \frac{MV\ of\ share\ i}{BV\ of\ share\ i}$$

where,

$MV\ of\ share_i$ = Market value of share for year i

$BV\ of\ share_i$ = Book Value of share for year i

Asymmetric Information will be used as an independent variable in this study, which is computed by using the market value of share to divide the book value of share of the companies for each year from 2012 to 2016. The value of market value of share and book value of shares are derived from the database from Blommberg. This formula is in line in the researches of McLaughlin, Safieddine & Vasudevan (1998).

3.4.2.3 Dividend Payout Ratio

$$\textbf{Dividend Payout Ratio} = \frac{DPS_i}{EPS_i}$$

where,

DPS_i = Dividend paid to each common shareholder in year i (dividend per share)

EPS_i = Earnings after tax in year i to each common shareholder (earning per share)

The dividend payout ratio is computed by dividing the dividend paid to each common shareholder by total net profit to each common stockholder. The value of dividend per share and earning per share are directly obtained from Bloomberg. The term "profit available for shareholders distributions" should be refrained as this term can be viewed to consist previous period of retained earnings. The dividend payout ratio should confine to the certain year's

dividends as well as earnings to obtain a more accurate result. Most of the researchers like Allen and Rachim (1996), Hussainey et al. (2011), Al Qudah & Yusuf (2015), Dewasiri & Weerakoon Banda (2015), and Jahfer & Mulafara (2016) are also applied this formula to get dividend payout ratio.

3.4.2.4 Dividend Yield

$$\textbf{Dividend Yield} = \frac{DPSi}{MPSi}$$

where,

DPS_i = *Dividend per share for year i*

MPS_i = *Closing Market Price per share for year i*

Dividend yield as suggested by Hussainey et al. (2011), Habib et al. (2012), Al Qudah & Yusuf (2015), and Dewasiri & Weerakoon Banda (2015) to measure by using dividend per share (DPS) to divide the closing market price per share (MPS). The source that available in getting the value of DPS and MPS is Bloomberg. However, completed value of dividend yield can also derive from the database directly.

3.4.2.5 Earnings Volatility

$$\textbf{Earnings Volatility} = \sqrt{\left(\frac{EBIT}{TA}\right)}$$

where,

EBITi = Earning before interest and taxes at year i

TA = Total Asset at year i

This formula also used by Rashid and Rahman (2008), Nazir et al. (2010), Hussainey et al. (2011), and Hooi et al. (2015) in their studies before this. The ratio of earnings before taxes and interest (EBIT) to total assets was first calculated followed by squared root it to make it as standard deviation of the EBIT to total assets of the particular year. The values or figures of EBIT and total assets of each company from 2011 to 2016 are collected from the main data source which is Bloomberg.

3.4.2.6 Leverage

$$\textbf{Leverage} = \frac{TD_i}{TA_i}$$

where,

TD_i = Total debt at year i end

TA_i = Total asset at year i end

It is known as leverage when the fixed cost of a company's cost structure is being used to finance the company operations, investment, and development. Therefore, it is an essential component in evaluating a firm's risk and capital return (Bong, 2012). In this study, leverage is used as one of the determinants towards share price volatility and the formula applied is based on a study from Zakaria et al. (2012) which used total debt to divide total assets of the particular year. Bloomberg was used to obtain the figures of total debt and

total assets for each company from 2011 to 2016. The higher a company holds the debt, the risk of the firm might increase. Share price volatility might eventually affect.

3.4.2.7 Firm Size

Firm Size = Log (Market value of share)

The formula used is the natural log of market value of share of the company for the particular year. Bloomberg will be the data source to derive the figures of market value of firm share for each of the company. This procedure is in line with Allen and Rachim (1996), Rashid and Rahman (2008), Abrar-ul-haq et al. (2015), and Jahfer and Mulafara (2016). Market capitalization is suitable to measure firm size as it consists the share market condition and take firm growth opportunities into consideration which is market oriented and much more forward looking.

3.4.2.8 Asset Growth

$$\textbf{Asset Growth} = \frac{Total\ Asset_i - Total\ Asset_{i-1}}{Total\ Asset_i}$$

where,

$\Delta Asset_i$ = *Total asset in year i – Total asset in year i-1*

$Total\ Asset_i$ = *Total asset at the beginning of year i*

i (from 1 to 5) indicates years from 2011 to 2016

The percentage of changes in the increment and decrement of total assets in respect to the last year's total assets is known as asset growth and it is measured by dividing the decrease or increase of total assets to the total assets

of the beginning year. The numbers of company's total assets are obtained from Bloomberg while this formula can be found in the study from Rashid and Rahman (2008), Nazir et al. (2010), and Jahfer & Mulafara (2016).

3.5 Data Analysis

3.5.1 Econometric Model

This study examines the effects of asymmetric information and dividend policy on the share price volatility in Malaysia's consumer product industry from year 2012 to year 2016.

Model:

$$SPV_{it} = \beta_0 + \beta_1 AI_{it} + \beta_2 DPR_{it} + \beta_3 DY_{it} + \beta_4 EV_{it} + \beta_5 LEV_{it} + \beta_6 FS_{it} + \beta_7 AG_{it} + \varepsilon_{it}$$

Notation

SPV	Share Price Volatility
AI	Asymmetric Information
DPR	Dividend Payout Ratio
DY	Dividend Yield
EV	Earnings Volatility
LEV	Leverage
FS	Firm Size
AG	Asset Growth

i refer to cross-sectional unit
t refers to time unit
Ɛ refer to error term
β_0 refer to intercept of regression model

3.5.1.1 Pooled OLS Model (POLS)

Pooled Ordinary Lease Squares (OLS) estimation is simply an OLS technique run on Panel data and used to estimate the regression model (San & Heng, 2011). The common slope and intercept coefficients is estimated by a Pooled OLS regression model, it assists to reduce the errors (Jager, 2008). There have five core assumptions for POLS model:

(1) Linearity in parameter.
(2) Exogeneity: Disturbances are not associated with any independent variables.
(3) Disturbances have fixed variance and are not associated with each other.
(4) Variability in X values and X values are fixed in repeating sampling.
(5) No multicollinearity problem.

If individual effects are not zero, heterogeneity (personal concrete feature is not captured in the independent variables) may influence assumptions (2) and (3). Hence, the best unbiased linear estimator is not the OLS estimator anymore. In order to solve these problems is using panel data models by provide a method.

3.5.1.2 Fixed Effects Model (FEM)

Fixed effects model stated that individual effect is allowed to be correlated with other regressors, since the time invariant is also an individual specific effect and known as a part of the intercept, it is permitted to be correlated with other independent variables. FEM is a linear regression of dependent variables on independent variables, which increase the norm a series of indicator variables. The fixed effects model will come out unbiased estimates of β, but

the estimates have to be high sample-to-sample variability (Clark & Linzer, 2015).

Fixed effects model can be estimated by two methods, which are within affect methods and Least Squares Dummy Variable methods. First, it can estimate by within effect estimation methods or fixed-effect within-group (WG) estimator, where only the within cross-section variations of the variables are considered for the estimation of coefficients. Apart from this, Baltagi (2005) stated that FEM also is estimated by Least Squares Dummy Variable (LSDV) regression (OLS with a set of dummies), by allowing every entity to have itself intercept value, it allows for heterogeneity between the subjects. The equation for FEM is as below:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \mu_{it}$$

where:

Y_{it} = is the dependent variable (DV) where i = individual effect and t = time effect

β_0 = intercept value

β_1 = the coefficient for that independent variables

X_{it} = independent variables

μ_{it} = error term

3.5.1.3 Random Effects Model (REM)

Random effect model also known as Error Component Model. It assumes individual effect are not correlated with any regressors which allows for time-invariant variables to play a role as independent variables. In other words, time series and cross-sectional cannot be correlated with error term. The only way to manage the error is to assume that a random outcome variable for the

intercept. The random outcome variables mean that random error plus the function of mean value (Yaffee, 2003).

Hence, μ_i is an individual specific random heterogeneity or a component error term. There is the same between intercept and slope of regressors. The individual specific errors are the discrepancy between individuals or time periods, is not their intercept. The intercept and slope of regressors are the same. The difference among individuals or time periods lies in their individual specific errors, not their intercept. By frictionally pooling information across units, it has enabled estimation of β with lower sample-to-sample variability (Clark & Linzer, 2015). The equation for REM is as below:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + (\varepsilon_i + \mu_t)$$

where:

Y_{it} = is the dependent variable (DV) where i = individual effect and t = time effect

β_0 = intercept value

β_1 = the coefficient for that independent variables

X_{it} = independent variables

$\mathcal{E}_i$ = Within-entity error

μ_t = Between-entity error

3.5.2 Panel Data Techniques

3.5.2.1 Poolability Hypothesis Test

Poolability hypothesis test is usually applied to test the Fixed Effects Model (FEM) against the Pooled Ordinary Lease Squares (OLS) Model. The poolability test also known as Likelihood Ratio, it used to investigate either the slopes of regressor are same and the panel data are poolable across the

time periods (Park, 2011). In other words, the null of a common intercept and slope coefficients compared to another running individual regressions for every cross-section is tested by a poolability test. The null hypothesis of poolability assumes homogeneous slope coefficients. In panel data models, the poolability across cross sections can be tested by using the F test. All coefficients involve slopes and intercepts are the alike across time series and cross-sections series is the more restrained definition of poolability (Jager, 2008).

H_0: There is a common intercept on all the company.
H_1: There is no a common intercept on all the company.

Decision rule: Reject H_0 if p-value is less than 10% significance level. Otherwise, do not reject H_0.

Reject H_0 indicates that the individual effects exist and then Fixed Effects Model (FEM) is more preferable than Pooled Ordinary Lease Square (OLS) Model.

3.5.2.2 Breusch and Pagan Lagrange Multiplier (BPLM) test

Breusch and Pagan Lagrange Multiplier (BPLM) test is usually applied to test the Random Effects Model (REM) against the Pooled Ordinary Lease Squares (OLS) Model. In order words, BPLM test is to test the null hypothesis that the individual effects do not exist ($\sigma^2_i=0$) in the model and OLS is applicable. For instance, if the variance of the individual effect is equal to zero, REM reduces to Pooled OLS Model (Gujarati & Porter, 2009).

H_0: There is no random effect, σ^2_i, where i=1,2,3, ……
H_1: There is a random effect, σ^2_i, where i=1,2,3, ……

Decision rule: Reject H_0 if p-value is less than 10% significance level. Otherwise, do not reject H_0.

Reject H_0 indicates that the individual effects exist and then Random Effects Model (REM) is more preferable than Pooled Ordinary Lease Square (OLS) Model.

3.5.2.3 Hausman test

Hausman test is usually applied to test the Fixed Effects Model (FEM) against the Random Effects Model (REM). Sometimes, Hausman test is to test for the model misspecification. If there is model misspecification in the model, it represents that the model has biased coefficients and disturbance and is more likely to have a biased parameter estimation. Additionally, endogenous regressors can be detected by using the Hausman test. If endogenous regressors exist in the model, it may cause Ordinary OLS estimation to fail. This is because there is no correlation between the dependent variables and disturbances based on OLS assumptions (Stephanie, 2017).

H_0: There is no correlation between individual effect and $X_{it.}$
H_1: There is a correlation between individual effect and $X_{it.}$

Decision rule: Reject H_0 if p-value is less than 10% significance level. Otherwise, do not reject H_0. Reject H_0 indicates that the individual effects exist and then Fixed Effects Model (FEM) is more preferable than Random Effects Model (REM).

3.5.3 Diagnostic Test

The diagnostic checking is conducted to ensure that there are no econometric problems in the regression model. The examples of econometric problems are normality of the error term, multicollinearity and autocorrelation. Thus, few hypothesis testings are conducted to ensure that the regression model is free from these econometric problems.

3.5.3.1. Normality Test

Jarque-Bera (JB) test is utilized to test for the normality of the error term. According to Central Limit Theorem, it states that if the independent and identically distributed random variables are large, then the distribution of the variables tends to a normal distribution. Generally, if the sample size is greater than 100, the model can be treated as normally distributed (Gujarati & Porter, 2009). In this research, JB test is conducted to ensure that the error term is normally distributed in the regression model. Besides that, JB test is an asymptotic test and usually applied to a vast data set. This is due to when the sample size is large, other normality tests are not reliable (Stephanie, 2016). The formula of JB test statistic is as below:

$$JB = n\left[\frac{S^2}{6} + \frac{(K-3)^2}{24}\right]$$

n = sample size

S = skewness coefficient

K = Kurtosis coefficient

H_0: The error terms are normally distributed.

H_1: The error terms are not normally distributed.

Decision rule: Reject H_0 if the probability of the test statistics is less than 10% significance level. Otherwise, do not reject H_0.

3.5.3.2 Multicollinearity

The existence of a linear relationship among the independent variables of a regression model will lead to multicollinearity problem. In other words, multicollinearity problem means that the independent variables are overlapping. There are few ways to detect whether the regression model consists of multicollinearity problem or not. First, a high R^2 but with few significant t-ratios show that the regression model consists of multicollinearity. If R^2 is more than 80%, there is a multicollinearity problem. However, if R^2 is less than 80%, there is no serious multicollinearity problem. (Gujarati & Porter, 2009).

According to Gujarati and Power (2009), multicollinearity problem exists in the regression model when there is a high pair-wise correlation among the regressors. If the correlation coefficient between two variables is more than 0.8, it represents that the regression model has a high pair-wise correlation among the regressors. In other words, the regression model has a serious multicollinearity problem.

In addition, Variance Inflation Factor (VIF) can be calculated to detect the multicollinearity problem. The higher the value of VIF, the higher the degree of collinearity among the independent variables. If VIF is more than 10, it reveals that the independent variables tend to be highly correlated size (Gujarati & Porter, 2009). Based on the rule of thumb, O'Brien (2007) claimed that if a TOL value is less than 0.10 or 0.20, it means that there is a serious multicollinearity problem in the regression model. A TOL value of 0.10 or 0.20, which is identical to a VIF level of 5 or 10 (Reuben & Emenonye, 2013). The formula of TOL is as below:

$$VIF = \frac{1}{1 - R^2}$$

Apart from that, Tolerance (TOL) factors is also one of the methods to measure multicollinearity problem. If the value of TOL is close to zero, the higher the degree of collinearity among the explanatory variables. Nevertheless, if the TOL value is close to one, the explanatory variable is not collinear with other explanatory variables size (Gujarati & Porter, 2009). The formula of TOL is as below:

$$TOL = \frac{1}{VIF}$$

3.5.3.3 Autocorrelation

Gujarati and Porter (2009) stated that autocorrelation is the relationship between the number of observation ordered in time. In other words, correlation in error term will lead to autocorrelation problem According to Classical Linear Regression Model CLRM), it assumes that the error term is not autocorrelated. Durbin-Watson test can be used to detect the autocorrelation problem in a regression model.

H_0: The autocorrelation, ρ, is equal to or less than zero. (Assumes that ρ is equal to zero)
H_1: The autocorrelation, ρ, is more than zero.

Decision rule: Based on a rule of thumb, do not reject H_0 if the test statistic value is in between 1.5 and 2.5 (Prusty, 2010). Otherwise, reject H_0.

3.6 Conclusion

To conclude, Bloomberg is used to collect the secondary data of 55 companies from 2012 to 2016 from consumer product sector. A panel data technique is used in the data analysis and the econometric problems of the models were checked through diagnostic checking. In the next chapter, the statistical and analysis result will be presented and discussed.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

This chapter details the descriptive statistic and the panel data analysis for 55 consumer product companies has been run between year 2012-2016. It is presented by using various tests which comprise of Poolability Hypothesis test, Hausman test, multicollinearity test, autocorrelation test, normality test and others. Lastly, the result is examined and determines the relationship between the variables and share price volatility in Malaysia's consumer product industry.

4.1 Descriptive Analysis

Descriptive statistics are used to explain and describe the characteristics of a data set. In other words, descriptive statistics are the numbers that summarize a data set. The descriptive analysis has been conducted in this study, which includes mean, median, mode, standard deviation, minimum and maximum variables, kurtosis and skewness (Thompson, 2009). A total of 275 observations, which consists of 55 public-listed consumer product industry companies in Malaysia over the period of 2012 to 2016. Table 4.1 shows the results of descriptive statistics for share price volatility and the independent variables.

Table 4.1 Results of Descriptive Statistics for Share Price Volatility and the Independent Variables over the Period of 2012 to 2016

	SPV	AI	DPR	DY	EV	LEV	FS	AG
Mean	0.6312	2.9277	0.4712	0.0500	0.3397	0.6648	8.5311	0.1494
Median	0.5419	1.1300	0.4000	0.0381	0.3188	0.4859	8.3670	0.0596
Maximum	2.6395	36.5100	5.0000	0.8366	1.0089	3.8762	10.2818	10.3394
Minimum	0.0367	0.2700	-0.3333	0.0000	0.0599	0.0232	7.0170	-0.9000
Standard deviation	0.4425	5.7851	0.4965	0.0797	0.1649	0.6586	0.7103	0.8777
Skewness	1.3097	3.7421	3.7835	6.2082	1.4193	2.4973	0.8063	11.0340
Kurtosis	5.3383	17.7499	29.5044	50.7765	5.5248	10.5136	3.0198	126.6320

Note: SPV= share price volatility, AI= asymmetric information, DPR= dividend payout ratio, DY= dividend yield, EV= earnings volatility, LEV= leverage, FS= firm size, AG= asset growth.

4.1.1 Share Price Volatility

The mean value is 0.6312, which indicates that 55 consumer product industry firms face 63.12% share price volatility during the period of 2012 to 2016. The median value of share price volatility is 0.5419. The maximum and minimum values are 2.6395 and 0.0367 respectively. A small value of standard deviation (0.4425) shows that the dispersion of the data set from its mean is small. Besides that, the skewness value is 1.3097 and kurtosis value is 5.3383.

By comparing with the findings by Zakiara, Muhammad and Zulkifli (2012), the researches found out that the share price volatility is 0.9441 for construction and material companies in Malaysia for a period of six years from 2005 to 2010. The share price volatility for Malaysian construction and material companies is relatively high. A higher share price volatility means that the stocks are not stable and higher risks. The construction and materials sector had a higher share price volatility may be due to the credit crisis in 2007, bankruptcy of Lehman Brother 2008 and others (Zakiara, Muhammad & Zulkifli, 2012). Hashemijoo et al. (2012) reported that the mean value of share price volatility is 0.6592. This indicates that 84 consumer product firms listed on Bursa Malaysia experienced 65.92% share price volatility during the period of 2005 to 2010.

To recapitulate, the mean value of 0.6592 reported by Hashemijoo et al. (2012) is relatively close to the average share price volatility of 0.6312 in this study. This represents that the share price volatility has been reduced during the period from 2012 to 2016. A lower share price volatility shows that the consumer stocks have a lower risk and offer a higher return to the investors. Leong (2016) explained that the consumer sector displayed its defensive nature as compared to other sectors. This was due to the investors believe that the consumer product companies in Malaysia could make a profit from low commodity prices.

4.1.2 Asymmetric Information

For asymmetric information, the mean value is 2.9277 and median value is 1.1300. Besides that, the maximum value is 36.5100 and minimum value is 0.2700. Asymmetric information has the highest standard deviation value as compared to other explanatory variables. The standard deviation of 5.7851 is relatively large and this indicates that the dispersion of panel data is quite large. Additionally, the skewness value is 3.7421 and kurtosis value is 17.7499. The distribution was skewed right and positive.

According to the findings obtained by Kong, Xiao and Liu (2011), the researchers were using three types of measurement to estimate the asymmetric information in Chinese stock market within the period of 2001 to 2006. The three classes of measurements are price non-synchoronization ($1-R^2$), price delay (DELAY) and information disclosure score (InfoIndex). By using the methods of $1-R^2$, DELAY and InfoIndex, the mean values were reported as 0.550, 0.040 and 1.783 respectively.

In conclusion, the mean value of asymmetric information in this research is 2.9277, which is significantly higher than the findings get by Kong et al. (2011). Rahman, Mohd Sidek and Tafri (2009) claimed that the Malaysian stock market was less efficient as compared to the developed markets. This was because Malaysian companies took non-fundamental factors into account, such as bonus issues. The researchers also explained that the degree of EMH for Malaysian stock market could be classified as weak form efficiency and it did not follow the random walk theory. In other words, the stock market behaved irrationally. This was supported by Ling and Abdul-Rahim (2016). The researchers stated that the stock market was weak form inefficiency and it did not capture good or bad news.

4.1.3 Dividend Payout Ratio

The mean value of dividend payout ratio is 0.4712, which shows that Malaysian consumer product companies had an average of dividend per share is 47.12% of the earnings per share for the period 2012 to 2016. The median value is 0.4000. Besides that, the maximum value is 5.0000 and the minimum value is -0.3333. The standard deviation of 0.4965 represents that the data dispersion is small in this data set. Furthermore, the skewness value is 3.7835 and kurtosis value is 29.5044.

The average of dividend payout ratio obtained by Allen and Rachim (1996) is 0.4950 for the Australian companies. This mean value of 0.495 is relatively close to the findings conducted by Shah and Noreen (2016) in Pakistan, which is 0.4910. Both mean values of 0.4950 and 0.4910 are slightly higher than the mean value (0.4712) in this research. Smales (2017) explained that Australian businesses have chosen to return cash to the shareholders. The shareholders with extra cash on hand will increase the consumption, which may stimulate the businesses to invest in the near future.

This mean value (0.4712) is higher than the findings obtained by Hashemijoo et al. (2012). The researchers reported that, from 2005 to 2012, the mean value of dividend payout ratio is 0.3726 with a standard deviation of 0.4982. This explained that the average of dividend payout ratio is 37.26% for a total of 84 consumer product companies listed in Bursa Malaysia. Additionally, Hooi et al. (2015) presented an average of dividend payout ratio of 0.3 for a total of 319 KLSE companies within the period of 2003 to 2013.

To conclude, the consumer product firms in Malaysia were willing to distribute higher dividends to the investors, for example, in year 2015, British American Tobacco (M) Sdn Berhad gave RM3.12 and Nestle paid RM2.60 to the investors (Cecilia, 2016). This was due to the consumer product firms expect their retail sales to recover this expense.

4.1.4 Dividend Yield

The mean value of dividend yield is 0.0500, which means that the average of dividend per share is 5% of the market per share for the Malaysian consumer product companies during the period of 2012 to 2016. The median value is 0.0381. Furthermore, the maximum value and minimum values are 0.8366 and 0.0000 respectively. A small value of standard deviation of 0.0797 represents that the data dispersion is quite small in this panel data. The skewness value is 6.2082; while, the kurtosis value is 50.7765.

The average of dividend yield recorded 5%, which is higher than the average of dividend yield of 3.81% reported by Ardekani and Younesi (2012) selecting Malaysian consumer product companies from 2005 to 2012. In the findings conducted in Malaysia by both Hooi et al. (2015) and Zakiara, Muhammad and Zulkifli (2012), the mean value of dividend yield recorded 3% and 2.2% respectively.

Hence, the mean value of dividend yield of 5% is higher in this research. Cecilia (2016) claimed that the consumer product firms in Malaysia were able to maintain their reputation as flexible and high dividend yield stocks. During the period of 2012 to 2016, Apollo Food Holdings Berhad had the highest dividend yield as compared to other consumer product firms in Malaysia, for instance, dividend yield of 84% in year 2016 is relatively high among the companies.

4.1.5 Earnings Volatility

The mean value of earnings volatility is 0.3397 with its standard deviation of 0.1649. The median value is 0.3188. Besides that, the maximum value is 1.0089 and the minimum value is 0.0599. In addition, the skewness value and kurtosis value recorded 1.4193 and 5.5248 respectively.

This mean value of earnings volatility is inconsistent with the findings conducted by Hashemijoo et al. (2012) for 84 consumer product companies in Malaysia during the period of 2005 to 2010. The researchers presented that the earnings volatility has a mean value of 0.0428 with its standard deviation of 0.0393. Apart from that, Hooi et al. (2015) reported the mean value is 0.04 for a total of 319 companies from all industries listed in KLSE. The average of earnings volatility obtained by Zakiara, Muhammad and Zulkifli (2012) was 0.0570 for a total number of 106 construction and material companies in Malaysia.

Thus, the mean value of earnings volatility of 0.3397 is remarkably higher than the other researchers' findings. Based on the Analyst Report 2013, it stated that the Malaysian consumer products firms faced unstable earnings from 2012 to 2013. Besides that, the actual earning was different from the expected earning probably happened during that period. Based on UOB KayHian Research, it explained that the consumer product firms faced a weak earnings growth in the end of 2012 and the slowdown of earnings would continue to experience in 2013.

4.1.6 Leverage

The mean value and median for leverage are 0.6648 and 0.4860 is moderate compared to other variables. The standard deviation is 0.6586. According to Mehta (2012), based on their results shown that the mean value and standard deviation for leverage are 2.1406 and 17.8994 which is greatly higher than 0.6648 and 0.6586. The researcher studied 149 numbers of observations listed on the Abu Dhabi Stock exchange within year 2005-2009.

In addition, Sulong and Nor (2008) stated that the mean value and standard deviation for leverage is 0.217 and 0.201 which lower than 0.6648 and 0.6586. They examined 406 listed firms on the Main Board of Bursa Malaysia from the year 2002 to 2005. The skewness and kurtosis of leverage are 2.4973 and 10.5136 also is moderate among the variables. Based on Sulong and Nor (2008) research, the skewness and kurtosis for leverage are 1.087 and 2.116 which quite lower than 2.4973 and 10.5136.

In short, the mean value of leverage is moderate if compared to other researcher's studies. Based on this study, the 55 listed customer product companies are still can cover the debt in their operation during the period 2012 to 2016. There have 225 out of the total 275 number of observations can cover their debt. For instance, Teo Guan Lee Corporation Berhad has the lowest leverage which is 0.02, it means that the company only use 2 % of equity to cover debts in year 2016.

4.1.7 Firm Size

The mean value and median of firm size is the highest compared with other variables which are 8.5311 and 8.3700. The standard deviation stands at 0.7103. Based on others research, the mean value for firm size is 4.9154 which lower than 8.5311 and standard deviation is 1.5453 which higher than 0.7103. In their study, the researchers examined 84 consumer product companies listed in Malaysian stock market for year 2005 to year 2010 (Hashemijoo et al., 2012). The skewness and kurtosis of firm size are 0.8063 and 3.0198 which is the lowest among the variables. According to Al-Shawawreh (2014), he studied that 53 companies listed in main market of Bursa Amman on Jordanian stock market, the skewness for firm size is 0.4524 which lower than 0.8063 and kurtosis is 3.5854 slightly higher than 3.0198. The mean value of Jordanian stock market research is 7.8466, which is a bit less than 8.5311.

To sum up, the mean value for firm size is relatively high if compared to other researcher's studies. This is because this study has a bigger firm size than a smaller firm size, which is 142 out of the total 275 number of observations. Based on the data collection, the lowest market capitalization is Yoong Onn Corporation Berhad which is RM 10.4 million and the highest market capitalization is PPB Group Berhad which is RM 19.13 billion.

4.1.8 Asset Growth

The mean value and median for asset growth are 0.1494 and 0.0596, it is moderate compared to other variables. The standard deviation for asset growth is the second highest within the variables which is 0.8777. Hussainey et al. (2011) studied 123 numbers of observations in the UK stock market listed on the London Stock Exchange. In their research, the mean value of asset growth is 0.1609, which is slightly higher than 0.1494, for the median is 0.1108 which higher than 0.0596 and the standard deviation is 0.3776 which lower than 0.8777. Other than that, Shah and Noreen (2016) found that mean value and median for asset growth are 0.1822 and 0.1439 which higher than 0.1494 and 0.0596, but standard deviation is 0.2302 which quite low compared to 0.8777. They studied 50 firms listed on Karachi Stock Exchange (KSE) in Pakistan during the period of 2005-2012. The skewness and kurtosis of asset growth are 11.0340 and 126.6320 which is the highest among the variables.

As a result, the mean value and the median for asset growth is relative low and the standard deviation is relatively high if compared to other researcher's studies. Based on the data collection, the growth in asset for 55 listed customer product companies is quite lower within year 2012 to 2016. For example, the Hong Leong Industries Berhad had declined sharply, which is 0.26 or 26% in asset growth from year 2014 to 2015. Annual report 2015 stated that the nature and amount of items influencing total assets that are abnormal due to their nature, size and incidence.

4.2 Panel Data Analysis

4.2.1 Poolability Hypothesis Test

Table 4.2: Poolability Hypothesis Test Result

Models	Cross-Section Chi-Square	Decision
Result	408.6357***	Fixed Effects Model is preferable

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

Poolability Hypothesis test is usually to determine whether is the Fixed Effects Model (FEM) or the Pooled Ordinary Lease Squares (OLS) Model. Based on the result of Pooliability Hypothesis test, the value of cross-section chi square is 408.6357, it shows that is significant at 1% significance level. Therefore, it will reject the null hypothesis (H_0), which can be concluded that there is no common intercept on all the companies.

4.2.2 Breusch and Pagan Lagrange Multiplier (BPLM) test

Table 4.3: BPLM Test Result

Models	Cross-Section	Decision
Result	240.7676***	Random Effects Model is preferable

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

Breusch and Pagan Lagrange Multiplier (BPLM) test is usually to determine whether is the Random Effects Model (REM) or the Pooled Ordinary Lease Squares (OLS) Model. Based on the result of BPLM test, the value of cross-section is 240.7676, it shows that is significant at 1% significance level. In

this study, the p-value is 0.0000 which is less than 10% significant level. Therefore, it will reject the null hypothesis (H_0), which can be concluded that there is a random effect.

4.2.3 Hausman test

Table 4.4: Hausman Test Result

Models	Chi-Square Statistic	Decision
Result	16.2547**	Fixed Effects Model is preferable

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

Hausman test is usually to determine whether is the Fixed Effects Model (FEM) or the Random Effects Model (REM). Based on the result of Hausman test, the value of chi square statistic is 16.2547, it shows that is significant at 5% significance level. In this study, the p-value is 0.0229 which is less than 10% significant level. Therefore, it will reject the null hypothesis (H_0), which can be concluded that there is a correlation between individual effect and independent variables. Under this test, it indicates that the FEM is more preferable than the REM.

After testing the model, all results concluded that FEM model are chosen to run the following test and analysis.

4.3 Diagnostic Checking

4.3.1 Normality Test

Table 4.5: Normality Test Result

Models	Jarque-Bera Test	Decision
Result	291.7720***	Not normally distributed

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

Jarque-Bera (JB) test is used to test for the normality of the error term. Based on the result of normality test, the value of Jarque-Bera is 291.7720, it shows that is significant at 1% significance level. In this study, the p-value is 0.0000 which is less than 10% significant level. Therefore, it will reject the null hypothesis (H_0) which represent that the error terms are not normally distributed. Gujarati and Porter (2009) found that according to the Central Limit Theorem, it states that the distribution of the variables tends to be normally distributed, if the independent and identically distributed random variables are large. Based on this study, the number of observations is 275 which is greater than 100, then the model can be treated as normally distributed.

4.3.2 Multicollinearity

Table 4.6: Correlation Matrix for the Variables

	SPV	AI	DPR	DY	EV	LEV	FS	AG
SPV	1.0000							
AI	-0.4000	1.0000						
DPR	-0.3383	0.2808	1.0000					
DY	-0.1466	-0.0094	0.2692	1.0000				
EV	-0.2473	0.6905	0.2392	0.1404	1.0000			
LEV	0.0304	0.3572	0.0633	-0.1989	0.0728	1.0000		
FS	-0.6789	0.6319	0.3241	0.0442	0.4268	0.0749	1.0000	
AG	-0.0179	0.0237	0.0074	-0.0193	0.0253	0.0056	0.0574	1.0000

Notes: SPV = share price volatility, AI = asymmetric information, DPR = dividend payout ratio, DY = dividend yield, EV = earnings volatility, LEV = leverage, FS = firm size, AG = asset growth

Pair-wise correlation is used to detect that whether have multicollinearity problem among the variables. The meaning of high pair wise correlation between two variables is a serious multicollinearity problem in the regression model. The regression model has a high pair-wise correlation among the independent variables when the correlation coefficient between two variables is more than 0.8 or 80%. Based on the results, the lowest pair-wise correlations coefficient is LEV and AG which is 0.0056 or 0.56 %. The highest pair-wise correlations coefficient is AI and EV which is 0.6905 or 69.05%. As a result, it can conclude that the model does not suffer multicollinearity problem.

4.3.2.1 Variance Inflation Factor (VIF)

Table 4.7: VIF Result

Variables	R^2	VIF	Decision
AI	0.7024	3.3606	Multicollinearity does not exist
DPR	0.1859	1.2283	Multicollinearity does not exist
DY	0.1393	1.1618	Multicollinearity does not exist
EV	0.5284	2.1203	Multicollinearity does not exist
LEV	0.2465	1.3271	Multicollinearity does not exist
FS	0.4527	1.8273	Multicollinearity does not exist
AG	0.0070	1.0070	Multicollinearity does not exist

VIF can be used to measure multicollinearity problem. The higher value of VIF means that the higher degree of collinearity. The regressors tend to be highly correlated size when VIF is more than 10. Based on the table 4.7, the VIF value for all independent variables are not more than 10. The highest VIF is asymmetric information which is 3.3606 and the lowest VIF is asset growth which 1.0070. As a result, it can indicate that there does not exist multicollinearity problem in this model.

4.3.2.2 Tolerance (TOL) factors

Table 4.8: TOL Result

Variables	R^2	TOL	Decision
AI	0.7024	0.2976	Not Multicollinearity
DPR	0.1859	0.8141	Not Multicollinearity
DY	0.1393	0.8607	Not Multicollinearity
EV	0.5284	0.4716	Not Multicollinearity
LEV	0.2465	0.7535	Not Multicollinearity
FS	0.4527	0.5473	Not Multicollinearity
AG	0.0070	0.9930	Not Multicollinearity

Tolerance (TOL) factors also can be used to detect multicollinearity problem. If the value of TOL is close to zero, which mean the higher the multicollinearity among the independent variables. Therefore, the value of TOL for asymmetric information is 0.2976 which close to zero, means that there has a bit high collinearity with other variables. However, O'Brien (2007) stated that if TOL value not less than 0.10 (10%) or 0.20 (20%), can be considered as not serious multicollinearity problem. Since all the variables not achieved the benchmark of TOL, so can concluded that there is no multicollinearity problem in the model.

4.3.3 Autocorrelation

Table 4.9: Autocorrelation Results

Models	Durbin-Watson Statistic	Decision
Result	1.7475	No Autocorrelation

Notes: Non-rejection range of null hypothesis fall within 1.5 to 2.5.

Durbin-Watson test is used to detect the autocorrelation problem in a regression model. Based on the result, the value of Durbin-Watson statistic is 1.7475 which falls between the ranges of 1.5 to 2.5 (Prusty, 2010). Therefore, do not reject the null hypothesis (H_0), which can be concluded that there is no autocorrelation in the model.

4.4 Inferential Analysis

4.4.1 Empirical Result

The panel data method is used and is run by E-views 10 by using fixed effect model (FEM) to analyze the regression model in studying the theoretical relationship between the determinants of share price volatility and share price volatility of 55 Malaysia's consumer product firms from 2012 to 2016. Table 4.4 presents the regression results generated that can be used to explain the economic model.

Table 4.10: Regression Results of the Model

Variables	Dependent Variable: Share Price Volatility		
	Model		
	Coefficient	t-statistics	p-values
Constant	5.118610 *(1.129189)*	4.532996	0.0000***
Independent Variables			
AI	-0.003855 *(0.007064)*	-0.545734	0.5858
DPR	-0.074052 *(0.019395)*	-3.818033	0.0002***
DY	1.148891 *(0.293438)*	3.915282	0.0001***
EV	-0.037568 *(0.070451)*	-0.533251	0.5944
LEV	0.086217 *(0.049112)*	1.755505	0.0806*
Control Variables			
AG	-0.011253 *(0.004935)*	-2.280344	0.0236**
FS	-0.532357 *(0.131880)*	-4.036684	0.0001***
R-squared	0.885476		
Adjusted R-squared	0.852678		
F-statistic	26.99799 Prob (0.000000)***		
No. of observations	275		
Hausman Statisitc	16.254662 Prob (0.0229)**		
Durbin Watson Test	1.747504		

Notes: **1**. The asterisks *, **, and *** denotes 10% (p<0.10), 5% (p<0.05), and 1% (p<0.01) significant levels, respectively; **2.** Values in parentheses in Italic form are standard errors; **3**. The panel data in this study runs for five years period, from years 2012 to 2016. With total 55 firms involved, N. Total number of panel data observations for five years = 275; **4**. AI = Asymmetric information, DPR = Dividend payout ratio, DY = Dividend yield, EV = Earnings volatility, LEV = Leverage, AG = Asset growth and FS = Firm size

4.4.2 Interpretation of R-squared and Adjusted R-squared

R-squared is a descriptive statistic that provides the proportion of the "variance" of the endogenous variable explained by the exogenous variables (Dufour, 2011). The value of R-squared provides the percentage of explained variation which assumes that the endogenous variable inside the model is affected by all the exogenous variables. Value of R-squared does not decrease when more and more exogenous variables are added into the model, it will only keep increasing as the amount of independent variables increase, even the added determinants do not have any relevance with the model (Learner, 1999). Therefore, by only referring to the figures of R-squared might be inaccurate. There comes with adjusted R-squared, which provides the percentage of variation explained by only those exogenous variables that will actually affect the endogenous variable in reality (Dufour, 2011). Values of adjusted R-squared will only rise only if the new variables improve or enhance the model beyond what is expected to obtain by probability (Learner, 1999). It will also decrease when the new variables do not enhance the model more than what is predicted. Therefore, adjusted R-squared can be said to compensate for the weakness of R-squared. Below will be the interpretation of R-squared and adjusted R-squared in this study.

R^2 (Goodness of Fit) = **0.885476**

The R^2 from the result generated is found to be 0.885476. This means that 88.55% of the variation in share price volatility may be described by the variation in asymmetric information, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size and asset growth.

$\widehat{R^2}$ = **0.852678**

From the result, the adjusted R^2 is 0.852678. This explains that 85.27% of the variation in share price volatility may be described by the variation in asymmetric information, dividend payout ratio, dividend yield, earnings

volatility, leverage, firm size and asset growth, by taking the degree of freedom into account.

Hence, by looking at the figures of R-squared and adjusted R-squared from the model, it can be concluded that both of the models are fit and reliable in this study due to the high value (>0.80) of R-squared and adjusted R-squared recording to Artois (2016) who stated that the best and most appropriate R-squared and adjusted R-squared value is ranged between 0.70 to 0.90.

4.4.3 F-test

The purpose of carrying out the F-test is to examine the overall significance of the model by including all the exogenous variables which asymmetric information are, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size and asset growth. The result of F-test is presented below:

Hypothesis development:

H_0: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = 0$ (None of the independent variables are significant in explaining share price volatility.)

H_1: At least one of the βi is different from zero, where i = 1,2,3,4,5,6,7 (At least one independent variable is significant in explaining the share price volatility.)

Decision Rule:

Reject H_0, if p-value of F-test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Reject H_0, because p-value of F- test statistics is 0.000000, which is less than the significance level of 10%. In conclusion, there is enough evidence to

explain that at least one of β_i is not equal to zero at the significance level of 10%, which indirectly means that there are at least one of the determinants (Asymmetric information, dividend payout ratio, dividend yield, earnings volatility, leverage, firm size and asset growth) can significantly explain the share price volatility of firms from Malaysia's consumer products sector.

4.4.4 T-test

Unlike F-test, t-test will examine the significance of each exogenous variable with the share price volatility by referring the p-value of t-test at the significance level of 10%. From the result of t-test, it gives the relationship between each independent and dependent variable.

4.4.4.1 Asymmetric Information (AI)

Hypothesis Development:

H_0: $\beta_i = 0$

H_1: $\beta_i \neq 0$; where i = 1,2,3,4,5,6,7

Decision Rule:

Reject H_0, if p-value of test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Do not reject H_0 because p-value of test statistic is 0.5858 (0.5858 > 0.1000) which is bigger than the significance level of 10%. In conclusion, there is enough evidence to prove that there is an insignificant relationship between asymmetric information and share price volatility.

H_1: There is a positive relationship between asymmetric information and share price volatility.

Asymmetric information (AI) and share price volatility (SPV) is insignificant at 10% significance level as its p-value is 0.5858 which is bigger than 0.1000. By looking at the regression result, the coefficient of asymmetric information is -0.003855. This means that on average, the share price volatility will decrease by 0.0039% if the asymmetric information rises by 1 percent, holding other variables constant. This result is inconsistent with the hypothesis made in chapter 2 which stated that asymmetric information is positively related to share price volatility.

4.4.4.2 Dividend Payout Ratio (DPR)

Hypothesis Development:

H_0: $\beta_i = 0$

H_2: $\beta_i \neq 0$; where i = 1,2,3,4,5,6,7

Decision Rule:

Reject H_0, if p-value of test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Reject H_0 because p-value of test statistic is 0.0002 (0.0002 < 0.1000) which is smaller than the significance level of 10%. In conclusion, there is enough evidence to prove that there is a significant relationship between dividend payout ratio and share price volatility at significance level 10%.

H_2: There is a negative relationship between dividend payout ratio and share price volatility.

Dividend payout ratio (DPR) is negatively significant at a level of 1% with share price volatility in the model as its p-value is 0.0002 which is smaller than 1% significant level. The coefficient of dividend payout ratio in the model showed -0.074052 which means that on average, the share price volatility will decrease by 0.0741% if the dividend payout ratio increases by 1 percent, by holding other variables constant. From the regression results, it can be concluded that the outcome are in line with the hypothesis stated that there is a negative relationship between dividend payout ratio and share price volatility.

4.4.4.3 Dividend Yield (DY)

Hypothesis Development:

H_0: $\beta_i = 0$

H_3: $\beta_i \neq 0$; where i = 1,2,3,4,5,6,7

Decision Rule:

Reject H_0, if p-value of test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Reject H_0 because p-value of test statistic is 0.0001 (0.0001 < 0.1000) which is smaller than the significance level of 10%. In conclusion, there is enough evidence to prove that there is a significant relationship between dividend yield and share price volatility at 10% significance level.

H_3: There is a negative relationship between dividend yield and share price volatility.

Dividend yield (DY) and share price volatility (SPV) is positively significant at 1%, which possesses p-value of 0.0001. It is found that 1.1488891 is the coefficient of dividend yield, which explained that on average, the share price volatility will increase by 1.1489% if the dividend yield rises by 1 percent, by holding other variables constant. There is inconsistency found between the result and the expected outcome. The expected hypothesis stated there will be a negative relationship between dividend yield and share price volatility, but the actual result presents they are positively related.

4.4.4.4 Earnings Volatility (EV)

Hypothesis Development:

H_0: $\beta_i = 0$

H_4: $\beta_i \neq 0$; where i = 1,2,3,4,5,6,7

Decision Rule:

Reject H_0, if p-value of test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Do not reject H_0 because p-value of test statistic is 0.5944 (0.5944 > 0.1000) which is bigger than the significance level of 10%. In conclusion, there is enough evidence to prove that there is an insignificant relationship between earnings volatility and share price volatility at significant level of 10%

H_4: There is a negative relationship between earnings volatility and share price volatility.

By referring to the regression result generated, it can be seen that earnings volatility does not have a significant relationship towards share price volatility in the model. This can be proved through the p-value of 0.5944. Besides that, the actual result presented is inconsistent with the expected result. The actual result showed earnings volatility and share price volatility are negatively related with coefficient of -0.037568. The coefficient gives the meaning that on average, the share price volatility will decrease by 0.0376% if the earnings volatility rises by 1 percent, by holding other variables constant.

4.4.4.5 Leverage (LEV)

Hypothesis Development:

H_0: $\beta_i = 0$

H_5: $\beta_i \neq 0$; where i = 1,2,3,4,5,6,7

Decision Rule:

Reject H_0, if p-value of test statistics is less than the significance level of 10%. Or else, do not reject H_0.

Decision-Making:

Reject H_0 because p-value of test statistic is 0.0806 (0.0806 < 0.1000) which is smaller than the significance level of 10%. In conclusion, there is enough evidence to prove that there is a significant relationship between leverage and share price volatility in the model at 10% significance level.

H_5: There is a negative relationship between leverage and share price volatility.

Leverage is significant at 5% significance level, which has 0.0806 p-value. Besides, it has a coefficient of 0.086217, which means that leverage and share price volatility are positively related. The higher the leverage, the higher the share price volatility. From the figure it can be stated that on average, the share price volatility will increase by 0.086217% if the leverage rises by 1 percent, by holding other variables constant. However, the result obtained is not same with the expected hypothesis. Hence, the hypothesis made in chapter 2 stated that there is a negative relationship between leverage and share price volatility is rejected.

4.5 Conclusion

In conclusion, the relationship between share price volatility and all other variables in Malaysia's consumer product industry was disclosed in this chapter. The empirical results and interpretations were clearly presented. It is found that dividend yield and leverage have significantly positive relationship with share price volatility. In addition, there is a negatively significant relationship between the dividend payout ratio and share price volatility. However, asymmetric information and earnings volatility are insignificantly affect the share price volatility. Besides, the Fixed Effects Model is chosen in this research through Hausman test. It is normally distributed and does not suffer multicollinearity. Lastly, there is no autocorrelation is detected in the model. In the following chapter, major findings, limitations and recommendations will be further discussed.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATION

5.0 Introduction

This chapter consists of the overall conclusion for entire research and summarize the regression result in Chapter 4. Discussion about the major findings in research and hypothesis for each of the independent variables, where how the asymmetric information, dividend policy, earnings volatility and leverage affect the share price volatility. Besides that, it also includes the implication of this study, limitation of study and recommendation for future research. In the end, a conclusion will be made in this research.

5.1 Summary of Statistic Analysis

The main objective of this research is to study how the dividend policy and asymmetric information influences the share price volatility, which majoring in 55 listed companies in the consumer product sector in Malaysia within the period of year 2012 to year 2016. Instead of time series data, panel data are used in this research while annual data was being collected. Thus, the total number of observations in this research is 275. The independent variables under this study are asymmetric information, dividend payout ratio, dividend yield, earnings volatility and leverage, while the control variables are firm size and asset growth.

Table 5.1 Summary of the Decision of the Hypothesis and Results

Hypothesis of study	Expectation	Result	Decision
H_1: There is a positive relationship between asymmetric information and share price volatility.	Positive & significant	Negative & insignificant	Do not reject H_0
H_2: There is a negative relationship between dividend payout ratio and share price volatility.	Negative & significant	Negative & significant	Reject H_0
H_3: There is a negative relationship between dividend yield and share price volatility.	Negative & significant	Positive & significant	Reject H_0
H_4: There is a negative relationship between earnings volatility and share price volatility.	Negative & significant	Negative & insignificant	Do not reject H_0
H_5: There is a negative relationship between leverage and share price volatility.	Negative & significant	Positive & significant	Reject H_0

Based on the result, dividend yield and leverage are positively significant with share price volatility. On the other hand, dividend payout ratio is negatively significant with share price volatility while asymmetric information and earnings volatility are negatively insignificant with share price volatility in this study. The only regression result consistent with the expectation of the hypothesis of study in this research are dividend payout ratio and earnings volatility. Nevertheless, the regression results for the other variables such as asymmetric information, dividend yield and leverage are inconsistent with the expectation of the hypothesis of study in this research.

5.2 Major Findings

5.2.1 Asymmetric Information and Share Price Volatility

Asymmetric information has negative impacts on share price volatility but is insignificant to affect share price volatility. It implies that when asymmetric information increases, the share prices tend to less volatile. Additionally, it also means that asymmetric information would not affect share price volatility, regardless information asymmetry has a positive or negative sign. This is supported by Bird-in-Hand theory. This theory proposed that the investors would prefer to receive dividends rather than capital gains. This is because dividends are certain, while capital gains are uncertain (Hooi et al., 2015). In addition, dividends are used to link the information gap between shareholders and managers. Since the managers do not disclose the company's information, this may cause asymmetric information increases with less transparency. Hence, the firms will distribute the dividends to the shareholders in order to increase their confidence in firms' future prospects. Although the managers and shareholder do not share the same amount of information, the distribution of dividends is another instrument to notify the shareholders that the company is stable and profitable (Profilet & Bacon, 2013). When the dividends are promised to pay to the shareholders, it will lower the share price volatility (Hashemijoo et al., 2012). Sadiq et al. (2013) claimed that the private information can be transmitted through dividend announcement, which is immediately affected the share price of the firms. Nevertheless, the researchers stated that although the dividend announcement may deliver the information to the investor, it is not significant to affect the share prices.

Additionally, the result of this paper is also consistent with Wang (1993), which reveals that the share price is more volatile when there is less information given to investors. Under asymmetric information, investors with different information would use different investment strategies. The invested

with less information would act more rationally and world chase the trends. This is also similar to Kong et al. (2011), asymmetric information has a significant negative relation to the investment sensitivity to share price. There is, when making decisions, the managers will learn from the market movement. Thus, the more the information, the less volatile the share price will be.

Apart from that there is a negative relationship between asymmetric information and share price volatility. This implies that when the more the information distributed to people, the less asymmetric information will be, thus the share price volatility will increase. In year 2013, there is an announcement of implementation of Good and Services (GST) would be introduced in year 2015 (Budget 2014, 2013). The information of GST had been distributed earlier to let the consumers, companies and investor to get ready, thus the asymmetric information is lower because they are received same amount of information. In addition, the government had prepared the seminar or course of GST to let them to know the principle of GST, but when coming to applying it, they are lost (Khoo, 2015). There is a lot of difficulties needed to be faced when a country had to make this implementation, even New Zealand which introduced GST in year 1986 need to make several of times to update to become more mature and stable (Malley, 2016). Thus, Malaysia will face challenges and uncertainty more especially there is the first time that it implements. The uncertainty is proved by there is a prolong period of macroeconomic environment's adjustment in a variety of aspects, such as household spending and economic growth conditions to offset the new shocks of GST (Aziz, 2016). Due to the uncertainty, the economy of Malaysia is under adjustment and not stable after the implementation of GST, thus the share price volatility is higher. This can probably show that, even though the announcement had been distributed widely, the asymmetric information is less; however, the share price volatility is higher due to the uncertainty in new policy and the environment.

5.2.2 Dividend Policy and Share Price Volatility

In this research, there are two types of main measurements of dividend policy, which are dividend payout ratio and dividend yield. The coefficient of dividend payout ratio is negative, which is consistent with the expected sign. However, the coefficient of dividend yield is positive, which is contradicted with the expected sign.

There is an inverse relationship between dividend payout ratio and share price volatility. This implies that the higher the dividend payout ratio, the lower the share price movements. In other words, a higher dividend payout ratio will cause a lower share price volatility. This was supported by the findings of Allen and Rachim (1996), Hashemijoo et al. (2012) and Nazir et al. (2010). According to the information effect, it claims that the company's information could be delivered to the public through the dividend payments. If a company gives the dividend to its shareholder at the time of declaring the earnings announcement, it can instill the investor confidence in the company's performance (Allen & Rachim, 1996). This is consistent with the research by Baskin (1989). Baskin (1989) claimed that the managers can use dividend policy to control the share price volatility. When the company declares the dividend, while at the same time distribute the earnings announcement, this can be interpreted as the level of the stability and strength of the company. For example, a higher dividend payout ratio may stabilize the share prices of the company (Hashemijoo et al., 2012).

The distribution of dividend can be interpreted as a signal of the company's stability and its strength. This is also supported by signaling theory. Hooi et al. (2015) explained that the investors are responsive to the information distributed by the company. Based on the dividend announcement and potential positive net present value (NPV) projects, the investors will assess and identify the company's future outlook. Through the declaration of the dividend, it can be treated as a signal for the investors to evaluate a company's

future outlook, for instance, Sidhu (2016) reported that British American Tobacco (M) Berhad (BAT) distributed a dividend of RM0.55 per share during the first quarter of 2016. Previously, BAT declared a dividend of RM0.78 per share. BAT decreased the dividends was due to the its profitability has been crucially affected by the illegal trading of cigarettes. As the dividend payout was dropped, the investors started to get worried about the future prospects and sold the BAT stock. The stock has dropped remarkably from RM54.50 to RM47. To recapitulate, the drop in dividend cause the rise in share price volatility.

On the other hand, the dividend yield has a positive sign, which is different from the expected sign. To put it simply, a lower dividend yield will lead to a lower share price volatility in this research. It indicates that a lower dividend yield offers lower returns and lesser risks. The dividend stocks with lower yielding are frequently offered by more stable companies, which the companies are usually having a stable and consistent growth (Grant, 2010). Apart from that, Leong (2016) also explained that the consumer stocks in Malaysia have captured the interest from investors. This was because the consumer stocks could be classified as a defensive sector and the stocks offered a stable and increasing flows of dividends and capital gain to the investors. Thus, the Malaysian consumer stock with a lower dividend yield may cause lesser volatility of the share price. A positive relationship between dividend yield and share price volatility is supported by the findings of Hussainey et al. (2011), Asghar et al. (2011) and Rashim and Rahman (2008).

In this study, the coefficient of dividend yield is expected to have a negative sign. This was supported by the findings of both Nazir et al (2010) and Shah and Noreen (2016). Shah and Noreen (2016) explained that if the firm raises its dividend, it can increase the confidence among the investors. The impact of increasing the dividend can lead to the investors trust on the performance of a

particular company. Thus, it will stabilize the share prices and reduce the volatility.

In short, both dividend payout ratio and dividend yield has significant impacts on the share price volatility. This impact can be either positive or negative depends on a country's financial and political system (Shah & Noreen, 2016). Based on the findings obtained from this research, the managers can change the share price volatility through the dividend policy. The managers can change both dividend payout ratio and dividend yield in order to control the volatility of the share prices. For instance, the managers can reduce the share price fluctuation by raising the dividend payout ratio (Hashemijoo et al., 2012).

5.2.3 Earnings Volatility and Share Price Volatility

According to the regression result, earnings volatility and share price volatility are negatively insignificant related on the period of year 2012 to year 2016. That is, there is no relationship between the earnings volatility and the volatility of share price. This is similar to the result of Hussainey, et al. (2011), the results showed no difference whether earnings volatility was considered or no, even though there are different theories are used in their study to support the variables. According to Miller and Modigliani (1961), they found out that the company's earnings do not affect the firms' values. With the assumption of a perfect market, the dividend policy is irrelevant to the volatility of share price is documented.

Additionally, the result is similar to Nishat and Irfan (2004), the research showed that earnings volatility is negatively related to higher stock price volatility only during the reform period. It is mentioned that although the result is not strong enough in developed markets, but it is constant with the

emerging markets' behavior. According to Analyst Report (2013), the consumer product industry in Malaysia is slowing down; the earnings volatility is small, whereas the share price is fluctuating especially there is a pre-election period in year 2012. It is proved that the share price movement of Felda Global Ventures Holdings Berhad (FGV), Media Prima Berhad, Utusan Melayu (M) Berhad, KUB Malaysia Berhad and Destini Berhad is likely to be volatile during the slowdown period (Leong, 2017). During the economy slow down period, the earnings of the market was not attractive and in slow path, but the stock price was surging from 2% to 100%, and even had the ongoing trend. This might be when the economy is slowing down, the consumer demand and preference were affected, thus firm's earning is not growing much as usual, and therefore it is not much volatile. Additionally, during the slowdown period, the consumer products sector in Malaysia no longer offers exciting valuations, the investors are might be less confident toward the share market, therefore the share price volatility tends to be higher. This may imply that earnings volatility is negatively insignificant related to share price volatility only during the reform period.

5.2.4 Leverage and Share Price Volatility

Based on the results in Chapter 4, leverage shows a significant positive relationship towards share price volatility in a listed consumer product sector in Malaysia within the year 2012 to year 2016. It means that the higher the leverage, the higher the share price volatility, as well as the leverage will directly affect the share price volatility. This is consistent with Hussainey et al. (2011), it showed that leverage is a significant positive relationship with price volatility. The relationship between them is positive because the more leveraged a firm may lead to the more volatile of stock price. It implied that if the debt for industry increase can lead to a larger volatilization in share price, while the debt drop in the companies may cause small changes in the share price volatility. Meanwhile, Hooi et al. (2015) stated that leverage positive and statistically significant to the share price volatility in Malaysian market. Leverage is the amount of debt used to finance assets. When a firm has highly leveraged means that the firm has more debt than equity.

In addition, there is another research also consistent with this study result. Nishat and Irfan (2004) also shown that leverage has a positive and significant impact on stock price volatility. In other words, firms with relatively higher leverage will tend to display higher stock price volatility. Black (1976) and Schwert (1989) have proof that higher financial leverage is related to greater stock market volatility. When firms issue new debt securities in a larger proportion to new equity as compared to their prior financial structure, the stock volatility will increase. A rise in financial leverage is expected to incite greater share price volatility, when operating risk is assumed to be constant. Next, a firm has higher leverage means more debt in financial, investors might be considered that the firm having bad performance in financial condition and may be involved default risk, so that they might sell their stock quickly caused to the fluctuation in share price greater. Nevertheless, according to Zainudin, Mahdzan and Yet (2018), based on their research shown that leverage is

positively related to share price volatility, but the relationship is not statistically significant.

Besides that, the positive result in between leverage and share price volatility is associated with the agency theory. Jensen (1986) stated that free cash flow is the money that left or excess cash after the firm pay out the money required. A firm with more debt will reduce the amount of excess cash available for use by managers and cut the agency costs between investors and managers. The higher the leverage will lead to a decrease in investment opportunity for the management in the future and a decline in dividend payment to investors. Most of the investors get or receive less dividends might cause them do not want invest in this company, thus lead to a greater fluctuation in share price. In short, it said that the leverage is indirectly influence the share price volatility.

However, the result obtained from this study is inconsistent with the finding of Nazir et al. (2010). They found that leverage has an insignificant negative effect on share price volatility. Leverage could have a negative impact on share price volatility due to the operational risk. Given operational risk, there should be a direct link between share price volatility and leverage (Hashemijoo et al., 2012). It can explain if the industry's debt increase can lead to an uncertainty and risk in operational, then may affect a decrease in share price volatility, while the debt drop in the industries may have slightly influenced in operational, so it raises in the share price volatility. Zakaria et al. (2012) also found that leverage is negatively significant and not affected seriously on the movement of share price volatility.

5.2.5 Control Variable

5.2.5.1 Firm Size and Share Price Volatility

In this study, firm size is negatively related to share price volatility. This implies that the larger the firm size, the lower the share price volatility. It was supported by Atiase (1985), Hussainey et al. (2011), Ilaboya & Aggreh (2013), Nishat and Irfan (2001). It could be explained that the larger the firm size, the risk would be lesser. Therefore, the investors would be attracted to invest and gradually the share price would stable and would volatile less. In addition, it firm size could probably affect the share price volatility because the small size firm would usually have less diversification in their development (Hashemijoo et al., 2012). It is also could be justified as a larger firm probably would have well established in their capital market and have lower risk, thus the volatility of share price is lower. Moreover, it is consistent with "leverage effect" contributed by Black (1976), that is, it gives more effect on small firm compared to big firms. Thus, the share price volatility would show a greater movement in small firms. It could be also implied that small firm is viewed as higher risk compared to larger firms. They are less well known, which means that there is a lot of space to improve and outperform. Meanwhile, there are also a great number of failure and setbacks. Thus, the share price volatility in small firms might be higher (Investing in Small, 2015).

5.2.5.2 Asset Growth and Share Price Volatility

In addition, the result of this study indicates that there is a negative relationship between asset growth and share price volatility. It is supported by Baskin's (1989), Profilet & Bacon (2013) and Asghar et al. (2011) who determined that the asset growth is negatively associated with share price volatility. This implies that the higher the asset growth, the higher the share

price volatility. It is supported by Hashemijoo et al. (2012), there is the larger the asset growth, the lower the share price volatility. This might be justified as the higher the asset growth, thus the company is reflected as sound and healthy, thus the share price volatility would be less. Additionally, the higher asset growth reflects that the firm has exhausted part of its growth and opportunity of expansion, thus they will give more dividends in order to make the share less risky, therefore the share price volatility would be lower (Okafor et al., 2011).

5.3 Study Implications

It is suggested that the investors who wish to limit volatility invest in a dividend-paying company. This is because by looking through the result, high dividend payout ratio leads to a lower share price volatility. The period of how long the firm has given out dividend as well as the consistency of the amount of the dividend payment amount should take into consideration before an investor wants to invest in the particular firm. According to a study by S&P Dow Jones Indices, firms that had increased their dividends for the past 25 years outperformed the S&P 500 and also were less volatile during the 5-year, 10-year, and 15-year periods ending June 30, 2015. Therefore, the investors can build their own portfolio by evaluating the period the dividend payment, the amount of dividend yield. Besides, the size and the leverage of firm can also take into account in forming their investment portfolio. Larger size of firm normally will pay a higher amount of dividend due to they are mature and possesses lesser investment opportunities and this leads to a smaller share price volatility; while highly leverage firm often gave a signal that they use debt to finance their investment and their earnings are normally given out as dividend which also decrease the stock price volatility (Ozuomba, Anichebe, & Okoye, 2016). Thus, investors can refer this study and consider the factors like dividend policy, size, and leverage of the firm when deciding to invest their money into companies from the consumer product sector in Malaysia.

From the results, firm managers can set their dividend policy either in the form of managed or a passive residual. Managers can monitor the behavior of the firm activities by deciding to apply managed dividend policy or passive residual type. When the company dividend is smoothened by fixing the payment at the certain level of earnings, it can be known as the managed dividend policy. However, if the dividend payments have to depend on the earnings residual after the potential investment, it is called as passive residual policy. In this case, dividends will tend to be highly variable and often zero. Therefore, it is important for corporate managers to know what dividend policy that might maximize the shareholders' interest well. Managers can always evaluate or predict how much earnings their investment projects can provide over a particular time period, such as ten years, 15 years and so on and average out the payout ratio or dividends they might give out for these periods of time. This kind of policy might provide a much more stable and dependable dividend that might convince the investors that the firm is in a good financial condition. This is because normally high dividend payout ratio provides a signal to investors that the firm is generating profit and doing all the way good; while low dividend payout tends to signal the shareholders that the company might not perform in their expected way. Thus, this will affect the trust and confidence of the investors if the dividends is fluctuating and unstable, which might cause the shareholders in planning to purchase or sell the company's stocks which will eventually cause the share price to volatile more.

On the other hands, corporate manager will know that the asymmetric information problem does not play a role in determining the share price volatility. Generally, individual that wishes to make decision rationally in investing in a particular firm will need to have access of a certain amount of information that support their decision. Adequacy of information can help in benefiting the investors as well as provide the quality businesses that might enhance the firm value (Nasri, 2013). However, based on this study's result, investors might not stand a better position in determining the share price volatility even they obtain more information than other investors due to

the insignificant relationship between the asymmetric information and share price fluctuation. With the higher disclosure of information, investors can only be able to evaluate and see through the firm's future development plan, investment opportunities which might aid in deciding whether to invest or not. With the higher the transparency of a firm, there will only build or enhance the trust and confidence of investors towards the company, but not in determining the share price volatility of the company. Therefore, corporate managers should aware that the disclosure of information to the public through a completion of databases access, such as the company's official website, forum, news and others will only let the stakeholders aware what is the current situation of the company and what action should be done but not the way for their shareholders to predict the share price and effect the movements of stock price. In other words, asymmetric information does not take an important role in affecting the stock price instability and corporate managers should focus more on other factors like dividend policy, firm size, leverage that might eventually affect the fluctuation of stock price when managing their company.

5.4 Limitations of Study

There are seven exogenous variables studied in this research consists of asymmetric information, dividend payout ratio, dividend yield, leverage, earnings volatility, firm size and asset growth which have effects towards the stock price fluctuations. However, this study only specifies in examining the microeconomic variables that affect share price volatility instead of discovering the impact of macroeconomic variables towards stock price instability. This is because the study aims to purely explore the effect of microeconomic variables towards the share price fluctuation in Malaysia's consumer product sector and thus the macroeconomic variables are not included.

On the other hands, the research only focuses in examining the relationship between the seven determinants and stock price instability in Malaysia's consumer product sector. Other corporate sectors like financial sector, industrial sectors, technological sector, automotive sector, electrical sector, chemical sectors and others are not being investigated. Different kind of nature of business that performed in a variety of manners might produce different outcomes. Besides that, company's own regulations and policies in different sectors might not same with others which making the results to be differ and inconsistent with previous studies. This study outcome can be said to be only applicable and useful towards the future researches that focus in the consumer product industry.

In the beginning, there are total 129 companies were listed in Bloomberg as consumer product industry firms. This study is then applying its data filteration by referring to balanced data sampling and this cause quite a lot of number of firms are being excluded, which only took 55 companies as sample size in this research. Removing companies from the sample might cause the result generated to be less precise and consistent. This is because a smaller sample size might affect the preciseness and consistency of the study.

5.5 Recommendations of the Research

Some of the exogenous variables like inflation rates, country's GDP, interest rate, and etc. can be inserted to investigate their relationship with share price volatility. This can help to examine a different factor that might affect the share price volatility by considering the macroeconomic variables. It can help to know better what action should be taken to prevent the share price movement to fluctuate too seriously.

Not only that, the research area is recommended to enlarge to industry area like trading and services, construction, non-financial sectors or even to different countries. This can guide the future researchers to examine the determinants on the volatility of stock price of Malaysia's cross-industries public-listed firms as well as other countries' companies. The result generated can be compared among different sectors or different countries to capture the different effects of share price instability at the same time leading to a higher sample size and higher accuracy of the outcome.

Furthermore, it is encouraged to study using unbalanced data sampling so that different outcomes can be generated to examine the effects towards share price volatility. Companies with incomplete data can all be included which leading to an increment in the sample size of the research.

5.6 Conclusion

Based on this research is to examine and study the effects of asymmetric information and dividend policy on the share price volatility in Malaysia's consumer product industry from year 2012 to year 2016. The total number of observations in this research is 275. As a conclusion, dividend yield and leverage are significantly positive influence the share price volatility. However, dividend payout ratio is negatively significant affect the share price volatility while asymmetric information and earnings volatility are insignificantly negative affect the share price volatility. This study provided some implications to investors and corporate managers. Lastly, this study proposes and suggests some limitation and recommendations. The limitation that may influence the result in this study are included macroeconomic variables, only focus on consumer product sector and small sample size. Thus, recommend to the future researchers included macroeconomic variables, enlargement of different industry area and using unbalanced data sampling.

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APPENDICES

Appendix 1: Total 129 Consumer Product Companies Listed in FTSE Bursa Malaysia

NO.	COMPANY
1.	ACOUSTECH BERHAD
2.	APEX HEALTHCARE BERHAD
3.	AJINOMOTO (MALAYSIA) BERHAD
4.	AMTEK HOLDINGS BERHAD
5.	APOLLO FOOD HOLDINGS BERHAD
6.	ASIA BRANDS BERHAD
7.	ASIA FILE CORPORATION BHD
8.	BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD
9.	BIOALPHA HOLDINGS BERHAD
10.	BIO OSMO BERHAD
11.	BONIA CORPORATION BERHAD
12.	CAB CAKARAN CORPORATION BERHAD
13.	CAELY HOLDINGS BHD
14.	CAM RESOURCES BERHAD
15.	CARLSBERG BREWERY MALAYSIA BERHAD
16.	CCK CONSOLIDATED HOLDINGS BERHAD
17.	CCM DUOPHARMA BIOTECH BERHAD
18.	C.I. HOLDINGS BERHAD
19.	CHINA OUHUA WINERY HOLDINGS LIMITED
20.	COCOALAND HOLDINGS BERHAD
21.	CLASSIC SCENIC BERHAD
22.	CHINA STATIONERY LIMITED
23.	CWG HOLDINGS BERHAD
24.	D.B.E. GURNEY RESOURCES BERHAD
25.	DEGEM BERHAD

26.	DUTCH LADY MILK INDUSTRIES BERHAD
27.	EKA NOODLES BERHAD
28.	EMICO HOLDINGS BERHAD
29.	ENG KAH CORPORATION BERHAD
30.	EURO HOLDINGS BERHAD
31.	EUROSPAN HOLDINGS BERHAD
32.	FRASER & NEAVE HOLDINGS BHD
33.	FCW HOLDINGS BERHAD
34.	FEDERAL FURNITURE HOLDINGS (M) BERHAD
35.	FORMOSA PROSONIC INDUSTRIES BERHAD
36.	G3 GLOBAL BERHAD
37.	GUAN CHONG BERHAD
38.	GOLDIS BERHAD
39.	HB GLOBAL LIMITED
40.	HEINEKEN MALAYSIA BERHAD
41.	HONG LEONG INDUSTRIES BERHAD
42.	HOMERITZ CORPORATION BERHAD
43.	HOVID BERHAD
44.	HUP SENG INDUSTRIES BERHAD
45.	HWA TAI INDUSTRIES BERHAD
46.	IQ GROUP HOLDINGS BERHAD
47.	JAYCORP BERHAD
48.	JERASIA CAPITAL BERHAD
49.	JOHORE TIN BERHAD
50.	KANGER INTERNATIONAL BERHAD
51.	KAREX BERHAD
52.	KAWAN FOOD BERHAD
53.	KUANTAN FLOUR MILLS BHD
54.	KHEE SAN BERHAD
55.	KHIND HOLDINGS BERHAD

56.	KOTRA INDUSTRIES BERHAD
57.	K-STAR SPORTS LIMITED
58.	LATITUDE TREE HOLDINGS BERHAD
59.	LAY HONG BERHAD
60.	LEE SWEE KIAT GROUP BERHAD
61.	LII HEN INDUSTRIES BHD.
62.	LKL INTERNATIONAL BERHAD
63.	LONDON BISCUITS BERHAD
64.	LTKM BERHAD
65.	MAGNI-TECH INDUSTRIES BERHAD
66.	MAXWELL INTERNATIONAL HOLDINGS BERHAD
67.	MINTYE BERHAD
68.	MALAYAN FLOUR MILLS BERHAD
69.	MILUX CORPORATION BERHAD
70.	MSM MALAYSIA HOLDINGS BERHAD
71.	MULTI SPORTS HOLDINGS LTD
72.	MWE HOLDINGS BERHAD
73.	NESTLE (MALAYSIA) BERHAD
74.	NEW HOONG FATT HOLDINGS BERHAD
75.	NICHE CAPITAL EMAS HOLDINGS BERHAD
76.	NI HSIN RESOURCES BERHAD
77.	NTPM HOLDINGS BERHAD
78.	O&C RESOURCES BERHAD
79.	ORIENTAL FOOD INDUSTRIES HOLDINGS BERHAD
80.	ORIENTAL HOLDINGS BERHAD
81.	PADINI HOLDINGS BERHAD
82.	PANASONIC MANUFACTURING MALAYSIA BERHAD
83.	PAOS HOLDINGS BERHAD
84.	PARAGON UNION BERHAD
85.	PCCS GROUP BERHAD

86.	PELIKAN INTERNATIONAL CORPORATION BERHAD
87.	PENSONIC HOLDINGS BERHAD
88.	PAN MALAYSIA CORPORATION BERHAD
89.	POH KONG HOLDINGS BERHAD
90.	POH HUAT RESOURCES HOLDINGS BERHAD
91.	PPB GROUP BERHAD
92.	PELANGI PUBLISHING GROUP BHD.
93.	PROLEXUS BERHAD
94.	PWF CONSOLIDATED BERHAD
95.	POWER ROOT BERHAD
96.	QL RESOURCES BERHAD
97.	REX INDUSTRY BERHAD
98.	SALUTICA BERHAD
99.	SASBADI HOLDINGS BERHAD
100.	SAUDEE GROUP BERHAD
101.	SERN KOU RESOURCES BERHAD
102.	SPRING GALLERY BERHAD
103.	SHH RESOURCES HOLDINGS BERHAD
104.	SIGNATURE INTERNATIONAL BERHAD
105.	SINOTOP HOLDINGS BERHAD
106.	SINMAH CAPITAL BERHAD
107.	SAND NISKO CAPITAL BERHAD
108.	SPRITZER BHD
109.	SUNZEN BIOTECH BERHAD
110.	SWS CAPITAL BERHAD
111.	SYF RESOURCES BERHAD
112.	TAFI INDUSTRIES BERHAD
113.	TAN CHONG MOTOR HOLDINGS BERHAD
114.	TEK SENG HOLDINGS BERHAD
115.	TEO SENG CAPITAL BERHAD

116.	TEO GUAN LEE CORPORATION BERHAD
117.	TOMEI CONSOLIDATED BERHAD
118.	TPC PLUS BERHAD
119.	UMW HOLDINGS BERHAD
120.	UPA CORPORATION BHD
121.	WANG-ZHENG BERHAD
122.	XIDELANG HOLDINGS LTD
123.	XIAN LENG HOLDINGS BERHAD
124.	XINGHE HOLDINGS BERHAD
125.	XINGQUAN INTERNATIONAL SPORTS HOLDINGS LIMITED
126.	YEE LEE CORPORATION BHD
127.	YOONG ONN CORPORATION BERHAD
128.	Y.S.P. SOUTHEAST ASIA HOLDING BERHAD
129.	ZHULIAN CORPORATION BERHAD

Appendix 2: Total 55 Consumer Product Companies used as Sample Size after Data Filteration and Selection

NO.	**COMPANY**
1.	APEX HEALTHCARE BERHAD
2.	AJINOMOTO (MALAYSIA) BERHAD
3.	APOLLO FOOD HOLDINGS BERHAD
4.	ASIA FILE CORPORATION BHD
5.	BRITISH AMERICAN TOBACCO (MALAYSIA) BERHAD
6.	BONIA CORPORATION BERHAD
7.	CAM RESOURCES BERHAD
8.	CARLSBERG BREWERY MALAYSIA BERHAD
9.	CCK CONSOLIDATED HOLDINGS BERHAD
10.	CCM DUOPHARMA BIOTECH BERHAD
11.	COCOALAND HOLDINGS BERHAD

12.	CLASSIC SCENIC BERHAD
13.	DEGEM BERHAD
14.	DUTCH LADY MILK INDUSTRIES BERHAD
15.	ENG KAH CORPORATION BERHAD
16.	EURO HOLDINGS BERHAD
17.	FRASER & NEAVE HOLDINGS BHD
18.	FORMOSA PROSONIC INDUSTRIES BERHAD
19.	GUAN CHONG BERHAD
20.	HEINEKEN MALAYSIA BERHAD
21.	HONG LEONG INDUSTRIES BERHAD
22.	HOMERITZ CORPORATION BERHAD
23.	HOVID BERHAD
24.	HUP SENG INDUSTRIES BERHAD
25.	JOHORE TIN BERHAD
26.	KHIND HOLDINGS BERHAD
27.	KOTRA INDUSTRIES BERHAD
28.	LATITUDE TREE HOLDINGS BERHAD
29.	LEE SWEE KIAT GROUP BERHAD
30	LII HEN INDUSTRIES BHD.
31.	LONDON BISCUITS BERHAD
32.	MALAYAN FLOUR MILLS BERHAD
33.	MSM MALAYSIA HOLDINGS BERHAD
34.	NESTLE (MALAYSIA) BERHAD
35.	NEW HOONG FATT HOLDINGS BERHAD
36.	ORIENTAL HOLDINGS BERHAD
37.	PADINI HOLDINGS BERHAD
38.	POH KONG HOLDINGS BERHAD
39.	POH HUAT RESOURCES HOLDINGS BERHAD
40.	PPB GROUP BERHAD
41.	PELANGI PUBLISHING GROUP BHD.

42.	PROLEXUS BERHAD
43.	SIGNATURE INTERNATIONAL BERHAD
44.	SINOTOP HOLDINGS BERHAD
45.	SINMAH CAPITAL BERHAD
46.	SPRITZER BHD
47.	SYF RESOURCES BERHAD
48.	TEO SENG CAPITAL BERHAD
49.	TEO GUAN LEE CORPORATION BERHAD
50.	TOMEI CONSOLIDATED BERHAD
51.	UPA CORPORATION BHD
52.	WANG-ZHENG BERHAD
53.	YOONG ONN CORPORATION BERHAD
54.	Y.S.P. SOUTHEAST ASIA HOLDING BERHAD
55.	ZHULIAN CORPORATION BERHAD

Appendix 3: E-views Results

Table 4.2.1: Poolability Test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.486660	(54,213)	0.0000
Cross-section Chi-square	408.635724	54	0.0000

Cross-section fixed effects test equation:
Dependent Variable: SPV
Method: Panel Least Squares
Date: 02/09/18 Time: 13:49
Sample: 2012 2016
Periods included: 5
Cross-sections included: 55
Total panel (balanced) observations: 275

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AI	-0.001696	0.006105	-0.277862	0.7813
DPR	-0.106574	0.043008	-2.478019	0.0138
DY	-0.458654	0.260417	-1.761232	0.0793
EV	0.236216	0.170101	1.388679	0.1661
LEV	0.048954	0.033698	1.452725	0.1475
FS	-0.415385	0.036665	-11.32925	0.0000
AG	0.011064	0.022026	0.502318	0.6159
C	4.138520	0.314995	13.13839	0.0000

R-squared	0.493902	Mean dependent var	0.631178
Adjusted R-squared	0.480634	S.D. dependent var	0.442497
S.E. of regression	0.318895	Akaike info criterion	0.580749
Sum squared resid	27.15228	Schwarz criterion	0.685964
Log likelihood	-71.85297	Hannan-Quinn criter.	0.622975
F-statistic	37.22373	Durbin-Watson stat	0.445802
Prob(F-statistic)	0.000000		

Table 4.2.3: Hausman test

Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.254662	7	0.0229

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
AI	-0.003855	0.002583	0.000077	0.4638
DPR	-0.074052	-0.062834	0.000088	0.2322
DY	1.148891	0.619059	0.034340	0.0042
EV	-0.037568	0.018123	0.008203	0.5386
LEV	0.086217	0.069940	0.003257	0.7755
FS	-0.532357	-0.486439	0.001834	0.2837
AG	-0.011253	-0.007647	0.000006	0.1430

Cross-section random effects test equation:
Dependent Variable: SPV
Method: Panel Least Squares
Date: 02/09/18 Time: 13:52
Sample: 2012 2016
Periods included: 5
Cross-sections included: 55
Total panel (balanced) observations: 275

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.118610	0.548897	9.325262	0.0000
AI	-0.003855	0.011694	-0.329644	0.7420
DPR	-0.074052	0.030653	-2.415795	0.0165
DY	1.148891	0.347894	3.302417	0.0011
EV	-0.037568	0.188086	-0.199740	0.8419
LEV	0.086217	0.076191	1.131594	0.2591
FS	-0.532357	0.064768	-8.219483	0.0000
AG	-0.011253	0.013281	-0.847329	0.3978

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.885476	Mean dependent var	0.631178
Adjusted R-squared	0.852678	S.D. dependent var	0.442497
S.E. of regression	0.169842	Akaike info criterion	-0.512472
Sum squared resid	6.144228	Schwarz criterion	0.302946
Log likelihood	132.4649	Hannan-Quinn criter.	-0.185222
F-statistic	26.99799	Durbin-Watson stat	1.747504
Prob(F-statistic)	0.000000		

Table 4.3.1: Normality Test