THE CYCLE RELATIONSHIP BETWEEN ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) DISCLOSURE AND COMPANY FINANCIAL PERFORMANCE

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DECLARATION

We hereby declare that:

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

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

(3) Equal contribution has been made by each group member in completing the research project.

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LIST OF ABBREVIATIONS

CFP	Company Financial Performance
CSP	Corporate Social Responsibility Performance
CSR	Corporate Social Responsibility
EMH	Efficient-market Hypothesis
EPS	Earning Per Share
ESG	Environmental, Social and Governance
F4GBM	FTSE4Good Bursa Malaysia
GTA	Growth in Total Assets
IDX	Indonesia Stock Exchange
Min	Minimum
Max	Maximum
MYX	Bursa Malaysia
PBT	Profit Before Tax
PLCs	Public Listed Companies
PM	Profit Margin
PSE	The Philippine Exchange
PTB	Price to Book Ratio
RBV	Resource-based View
ROA	Return on Assets
ROAA	Return on Average Assets
ROC	Return on Capital
ROE	Return on Equity
SC	Securities Commission Malaysia
SD	Standard Deviation
SEC	Securities and Exchange Commission
SET	The Stock Exchange of Thailand
SGX	Singapore Exchange

Sig.	Significant/Significance
SPH	Singapore Press Holdings Ltd.
THSI	Thailand Sustainability Investment
Tobin	Tobin's Q Ratio
TOL	Tolerance
VIF	Variance Inflating Factor
WLS	Weighted Least Square

PREFACE

ESG disclosure is an information disclosure practice of a corporate regarding Environmental, Social and Governance issues, which is also known as part of the sustainability disclosure. As compared to western countries, the adoption level of ESG disclosure practices in Malaysia is still considered as infant stage as Malaysia launched its first sustainability index in 2014 and enforced mandatory ESG reporting of listed companies in 2016, both events show adoption level of Malaysia regarding ESG reporting is lagging.

There are a lot of relevant studies regarding the relationship of ESG disclosure and corporate financial performance, especially in western context. Although there are some studies found the cycle relationship exists between ESG disclosure and financial performance, however the results are inconclusive as the finding varies from each other. Therefore, this study is conducted to provide a better understanding towards the relationship of ESG disclosure and corporate financial performance in Malaysia context.

ABSTRACT

In recent decades, non-financial information such as ESG disclosure has become a trend for investors in making investment decision. Hence, many researches regarding ESG disclosures have been conducted in order to justify the effect of the ESG disclosures, especially in western context. The main purpose of this study is to examine the existence of cycle relationship between ESG disclosure and corporate financial performance among the countries selected in FTSE4Good ASEAN 5 Index, which are Malaysia, Thailand and Singapore. The secondary data was extracted from Bloomberg database for period 2011 to 2016. Besides, top 100 companies based on market capitalization in each respective country is used as study sample. The ESG disclosure of corporate is represented by ESG disclosure score, while ROE, ROA, EPS, Tobin's Q, and Price to book ratio are used to measure the corporate financial performance. All of these data are collected from Bloomberg. This study is known as cross sectional study, whereby analyses are conducted in period basis and two years lag effect was assumed in this study, to test how corporate financial performance in period 1 (2011-2012) influences ESG disclosure score in period 2 (2012-2014), and how period 2 ESG disclosure score affects corporate financial performance in period 3 (2015-2016). The empirical results of this study found positive cycle relationship exists in Malaysia, no cycle relationship in Thailand, and a negative cycle relationship in Singapore.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

Chapter 1 comprised of five sections. The first section introduces about the research background of the concept of cyclic relationship, ESG dimension and disclosure, FTSE4Good ASEAN 5 Index, ESG disclosure practice in Malaysia, Thailand, Singapore, Indonesia and Philippines, as well as the concept of financial performance and measurement. Next, the second section presents the problem statement of the study. Then, the third section provides the research objectives, which includes both the general objective and specific objectives. The fourth section discusses the significance of the study. Lastly, a chapter summary is given at the fifth section.

1.1 Research Background

Information is the crucial element for the financial markets to work efficiently (Gorte, 2017). According to Tarmuji, Maelah, and Tarmuji (2016), the disclosure practice of Environment, Social and Governance (ESG) information has become an increasing trend throughout the years and it acts as a guideline for investors and management to encourage a company to remain sustainable. In order to understand the ESG disclosure trend deeper, the relationship between ESG disclosure score and company financial performance will be investigated. Therefore, the introduction regarding to ESG dimension and disclosure, FTSE4Good ASEAN 5 Index, and company financial performance (CFP) will be included in the research background.

1.1.1 Cycle Relationship

Cycle is the sequences of events that are regularly repeat themselves in the same order (Oxford University Press, 2017). It can be a very simple cycle such as the seasons of the year represents a cycle in that they always repeat and come back to the beginning– Spring, Summer, Fall, Winter and then back to Spring. Whereas, some cycle can be very complex such as biogeochemical cycle (matter cycle) of carbon cycle, nitrogen cycle, phosphorus cycle that involves biological, geological and chemical factors. (Bergman, 2005).

In a cyclic cause and effect relationship, there is no real starting point or ending point once it gets going. A cause can also be an effect and vice versa. For instance, decomposition process can be explained by causal and effect story, where the fallen leaves (dead matter but organic substances) from green plant fall on the land will be broken down by the decomposers (e.g. microorganisms and worms) into smaller matter and nutrients that would then be able to help green plants to grow new leaves. (President and Fellows of Harvard College, 2002).

From the research perspective, it is possible for one variable X to be a cause of variable Y and also for Y to be a cause of X. For example, success can cause confidence, and confidence can also cause success. Anxiety causes a loss of sleep, losing sleep causes anxiety. (Open Learning Initiative, 2017).

In economics and business theory, there are phenomena can be described by virtuous cycle and vicious cycle. They are defined as a loop of actions or a chains of events that involves with self-reinforcing practices (virtuous) or self-defeating practices (vicious) through a feedback loop. A virtuous cycle has favorable results whereby results allow the loop to be repeated with ever increasing results or gaining strength from their outputs. For example, a company maintains a good relationship with customers would allow its

employee to gain work satisfaction which then further improve the relationships with customers. An innovative product generates adequate capital for a company to fund new R&D project resulting in better creation of innovative products. (Spacey, 2016).

On the other hand, a vicious cycle has detrimental results due to its iteration of producing negative results leading to ever worsening outcome. (Spacey, 2016). A good example of a vicious circle in economics is hyperinflation. The government could increase in the money supply by printing more money to clear some of its debt due to an initial exogenous event such as a sudden large increase in international interest rates or an excessive spending. This increase in the money supply can cause inflation happen in the country and people tend to switch to alternate currencies in an inflationary environment as they believe a severe depreciation in value of the currency later on. Eventually, too much money chasing on limited goods because the local currency loses all of its value. Its solution could be to print still more money as the country might have very low level of saving now to refinance its debt, hence starting an iteration of the vicious cycle. (CS Odessa Corporation, 2017).

1.1.2 ESG Dimension

ESG is often erroneously equated with terms like "Corporate Responsibility" or "Business Sustainability" (The European Federation of Financial Analysts Societies [EFFAS], 2009). The concept of "Business Sustainability" can be defined as "the pursuit of a business growth strategy by allocating financial and illiquid (non-financial) resources of the firm to ESG practices." (Tonello & Singer, 2015). The Table 1.1 below shown the interest themes of each ESG disclosure dimension.

Table 1.1: The Interest Themes of Each ESG Disclosure Dimension

Components / Dimensions	Interest Themes
Environmental	Air and water pollution, Biodiversity, Climate change, Deforestation, Ecosystems services, Energy efficiency, Hazardous materials, Land degradation, Resource depletion, Waste management, Water scarcity
Social	Customer satisfaction, Data Protection and privacy, Diversity and equal opportunities, Employee and attraction and retention, Employee engagement, Government and community relations, Human capital management, Human rights, Labour standards, Labour-management relations, Marketing communications, Product mis-selling, Product safety and liability, Supply Chain Management
Governance	Accounting standards, Anti-competitive behaviour, Audit committee structure, Board composition, Bribery and corruption, Business ethics, Compliance, Executive Remuneration, Lobbying, Political Contributions, Risk Management, Separation of chairman and CEO, Stakeholder dialogue, Succession planning, Whistle-blower schemes

Source: UNEP Finance Initiative, & United Nation Global Compact. (2014).

According to a survey conducted by PricewaterhouseCoopers [PwC] (2015) of the interests among limited partners (LPs, also referring wealthy individuals and institutional investors, such as pension funds and life insurance companies) towards the ESG trend indicates that, 97 percent of the LPs believe responsible investment (or ESG management) will increase its importance over the next two years. Furthermore, 83 percent of the LPs

believe that ESG management is part of the firm's fiduciary duty, where better management of ESG practices will either improve returns or minimize risk (value-adding).

1.1.3 ESG Disclosure

"Corporate Sustainability Reporting" is a "process of communicating to the public about a firm's behaviour or business operations related to the environmental, social performance and corporate governance." (Orr & Kempf, 2015). According to Securities Commission Malaysia [SC] (2011), disclosure and transparency are important elements because they provide decision-making for shareholders, stakeholders and potential investors in relation to capital allocation, corporate transactions and financial performance monitoring. Based on Threadneedle Asset Management Ltd. (2016), the Principles for Responsible Investment (PRI) and the UN Global Compact LEAD has defined "The ESG Value Proposition" and it is illustrated in the Table 1.2 below.

Table 1.2: The ESG Value Proposition

Growth	New Markets & Geographies
	New Customers & Market Share
	Product & Services Innovation
	Long-term Strategy
Return on Capital	Operational Efficiency
	Human Capital Management
	Reputation Pricing Power
Risk Management	Operational & Regulatory Risk
	Reputational Risk
	Supply Chain Risk
	Leadership & Adaptability

Source: Threadneedle Asset Management Ltd. (2016).

The ESG reporting instruments can be categorized in two basis: voluntary and mandatory. The issuing body of reporting instruments can be governments, financial regulators, stock exchanges, industry regulators and others. In many countries, firm's early voluntary efforts in disclosing sustainability performance or corporate responsibility have been gradually in place of mandatory reporting requirements introduced through government legislation. (Bartels, Fogelberg, Hoballah, & van der Lugt, 2016). The voluntary reporting of ESG used to describe the formal corporate reporting that is not regulated, and extra to the published financial reports that are required by accounting standards (Mcphail, 2014).

1.1.4 FTSE4Good ASEAN 5 Index

FTSE International Limited and Frank Russell Company (FTSE Russell), a wholly owned subsidiary of the London Stock Exchange Group, is a global index provider of analytics expertise and data solutions products to institutional and retail investors globally (FTSE Russell, 2017). The FTSE4Good Index Series is a series of benchmark and tradable indexes launched in 2001 by the FTSE Russell, in response to the growing interest of institutional investors that have chosen to integrate ESG factors into their portfolios (Barnes, 2016).

FTSE4Good ASEAN 5 Index is one of the indices belongs to the FTSE4Good Index Series. The FTSE4Good ASEAN 5 Index is an ESG index designed to identify companies with recognised corporate responsibility practices, listed on the Association of Southeast Asian Nations (ASEAN) Exchanges: Bursa Malaysia (MYX), Indonesia Stock Exchange (IDX), The Philippine Exchange (PSE), Singapore Exchange (SGX), and The Stock Exchange of Thailand (SET) (Global Institute for Sustainability Ratings [GISR], 2014). The Index was launched in April 2016 by FTSE Russell in collaboration with the ASEAN Exchanges, for the

reason that ASEAN market has been steadily gaining traction among significant investors across the world (Lord, 2016; Woo, 2016).

FTSE4Good ASEAN 5 Index follows the standards required for FTSE4Good inclusion under FTSE Russell's ESG ratings methodology. The ESG Ratings Data Model has 3 pillars: Environmental (E), Social (S) and Governance (G) factors, which covering 14 themes of sustainability issues, such as biodiversity (E), labour standards (S), tax transparency (G), then each theme is further subdivided into 10 to 35 indicators, both qualitative and quantitative. (FTSE Russell, 2016). These thematic ratings are sum up to give three scores based on each ESG pillar. Collectively the three pillars produce an overall cumulative ESG score for the firm between 0 to 5 points. Companies that score 3.2 points or above are qualified for inclusion in the index. (Lord, 2016).

Besides that, there is a ceiling weight for every country in the FTSE4Good ASEAN 5 Index, if any market has a weight in the index greater than 33.3 percent (one third), the smallest constituent in that country by full market capitalisation will be removed, until all countries have a weight in the index less than or equal to 33.3 percent. Apart from that, the ESG Rating Data Model is based only on publicly available information but not data privately submitted by companies. This guarantees the reliability of ESG disclosure score and improves transparency of firms across the market. (FTSE Russell, 2017). The Table 1.3 below shown the country breakdown information of FTSE4Good ASEAN 5 index, as of September 29, 2017.

Table 1.3: The Country Breakdown Information of the FTSE4Good ASEAN 5 Index, as of September 29, 2017

Country	Ranking (Based on Weight)	Weight (%)	Net Market Capitalisation (USD mil)	Number of Constituents
Thailand	1	32.17	132,991	35

Malaysia	2	23.88	98,707	23
Singapore	3	18.29	75,607	8
Indonesia	4	18.03	74,518	17
Philippines	5	7.63	31,529	9
Totals		100.00	413,352	92

Adapted from: FTSE Russell. (2017).

1.1.4.1 ESG Disclosure Practice in Malaysia

As of October 20, 2017, there are a total of 920 companies listed either on Main Market of Bursa Malaysia or on the ACE Market of Bursa Malaysia. To be specific, it is constituted by 806 large-cap established firms from Main Market and 114 emerging firms from ACE Market. (Bursa Malaysia Berhad, 2017). Companies that are listed on the ACE Market are qualified for inclusion in the FTSE Bursa Malaysia ACE Index, while the Main Market listing companies are eligible as constituents of indices below under the partnership with FTSE Russell since 2006 (FTSE Russell, 2017).

Table 1.4: FTSE Bursa Malaysia Index Series (Main Market)

FTSE Bursa Malaysia Index Series (Main Market)	
FTSE Bursa Malaysia KLCI	FTSE Bursa Malaysia EMAS Shariah Index
FTSE Bursa Malaysia Mid 70 Index	FTSE Bursa Malaysia Hijrah Shariah Index
FTSE Bursa Malaysia Top 100 Index	FTSE Bursa Malaysia Small Cap Shariah Index
FTSE Bursa Malaysia Small Cap Index	FTSE Bursa Malaysia MidS Cap Shariah Index
FTSE Bursa Malaysia EMAS Index	FTSE Bursa Malaysia Fledgling Index

FTSE Bursa Malaysia MidS Cap Index	FTSE Bursa Malaysia Palm Oil Plantation Index

Source: FTSE Russell. (2017).

In fact, MYX introduced Corporate Social Responsibility (CSR) Framework on September 2006 for Public Listed Companies (PLCs) in Main and ACE Market. In the same year in December, the Prime Minister had announced in his 2007 Budget speech, that all PLCs are required to disclose their corporate CSR activities or practices in annual reports. (SC, 2017.). It was until June 2014, the Prime Minister announced in the Invest Malaysia 2014 that, MYX will partner with FTSE Russell to create a Malaysian ESG index in December 2014, which named as FTSE4Good Bursa Malaysia (F4GBM) Index. The F4GBM Index will be included in the FTSE Bursa Malaysia Index Family and it has aligned with other leading global ESG frameworks such as the Global Reporting Initiative (GRI) and the Carbon Disclosure Project. It is introduced to encourage and enhance ESG practices and disclosure, thus facilitating greater international investment inflows and attracting funds for the Malaysian capital market. (Malaysia International Shipping Corporation (MISC) Berhad, 2014).

F4GBM Index was the first ESG-sustainability index launched in Asia and it initially comprised only 24 qualified PLCs out of 200 companies listed on the FTSE Bursa Malaysia EMAS Index in December 2014 (MondoVisione, 2016; SC, 2017). FTSE4GBM Index also follows the standards required for FTSE4Good inclusion under FTSE Russell's ESG ratings methodology that looks into three main themes: Environmental (E), Social (S) and Governance (G) factors. As of September, 2017, it has since increased to 44 constituents, a testimony of the continued growth of ESG practices and disclosure among Malaysian businesses. (FTSE Russell, 2017).

Subsequently, in October 2015, MYX amended Listing Requirements to impose a new obligation mandating the PLCs in Main and ACE Market to disclose a narrative statement of the management of crucial economic,

environmental and social risks and opportunities in their annual reports. The Sustainability Amendments take effect starting from 31 December 2016 to 31 December 2018, based on the market capitalisation size of PLCs. Apart from that, the MYX also issued a Sustainability Reporting Guide and Toolkit to aid PLCs in identifying important sustainability matters that can be embedded in the sustainability statement of their organisations. This mandatory ESG disclosure requirement replaces the previous statement of the voluntary CSR reporting requirement by PLCs. (Sustainable Stock Exchange Initiative [SSE], n.d.).

From the investment perspective, the SC has approved the first domestic ESG fund - Malaysian ESG Opportunity Fund of RM1 billion on July 2015, for investment in ESG leaders that adhering to strong corporate governance standards, and crafted socially responsible business strategy for environmental and social issue (SC, 2015). It is an open-end equity wholesale fund benchmarked against the FTSE4GBM Index (ValueCAP Sdn Berhad, 2015). Besides that, another new open-end wholesale fund - ASEAN 5 ESG Opportunity Fund was launched in December 2016, allows investors taping into ESG investments in Indonesia, Philippines, Singapore and Thailand (Kuek, 2015). Apart from that, BIMB Investment Management Berhad (BIMB Invest) launched its BIMB-Arabesque Malaysia Shariah - ESG Equity Fund in March 2017 (BIMB Investment Management Berhad, 2017). The encouragement towards ESG practices is further supported by Malaysia's Employees Provident Fund (EPF), the largest pension fund in Malaysia, has announced plans to divest its stakes from tobacco businesses to socially responsible investments instead (Goh, 2017).

Malaysian Institute of Corporate Governance (MICG) reveals that, the top 100 PLCs by market capitalisation listed on MYX have shown improvements in the disclosure or transparency of corporate governance, but still fall short of expected standards. The companies are appraised based only on publicly available information between the period of 2015 and April 2017. The assessment covering three components: the anti-corruption

programme (40 percent), organisational transparency (30 percent), and sustainability (30 percent). There are 15 companies scored 50 percent or above in each of the three components, whilst another 11 companies scored full points in at least one of the three components, and the remaining 64 companies reviewed had scored less than 50 percent. Overall, government-linked companies (GLCs) has better transparency level relatively to multinational companies (MNCs) and family-run PLCs. Additionally, there are 13 companies awarded zero point in the reporting category on anti-corruption programmes. (Kaur, 2017).

1.1.4.2 ESG Disclosure Practice in Thailand

The Stock Exchange of Thailand (SET) is the country's national stock exchange, established and officially started trading on April 1975 under the name of "Securities Exchange of Thailand". It was formally renamed to "The Stock Exchange of Thailand" in January 1991. (SET, 2007). According to the World Bank Group (2017), the SET has 656 listed domestic companies with a combined market capitalization of USD432.956 billion, as of December 2016. The main indices of the stock exchange are the SET Index, SET50 Index, SET100 Index and MAI Index.

The Asian financial crisis was reeling in the late 1990s, King Bhumibol of Thailand introduced the idea of "the sufficiency economy", a Buddhist concept for sustainable development, which meaning that Thailand should have enough to meet its needs, without extravagance. The president of the SET states that the sustainability reporting is the first step to achieve sufficiency economy of Thailand. (Hicks, 2017). Therefore, since 1999, Thai PLCs were asked to enhance and build corporate governance into their corporate annual reports, where the practices should embrace social and environmental disclosures. Later, a new principle of good corporate governance for listed firms was launched by SET in 2006 and it suggests that board of directors should set clear policies on environmental and social

issues and also disclose the implementation condition of such policies under a "comply or explain" approach. (Lint, 2009; Staton & Suttipun, 2012).

Subsequently, the Securities and Exchange Commission (SEC) of Thailand jointly with the CSR Club (under the SET), set up new requirements for listed companies to disclose how they apply 15 principles of good corporate governance in their annual registration statement (Form 56-1) and annual reports or in sustainability standalone reports, whereas, disclose on Form 69-1 if any listed companies planning to issue new securities. The regulation for mandatory disclosure became effective on January 1, 2014 to replace the previous "comply or explain" approach. (Meakhaamnouychai, 2015).

Thailand Sustainability Investment (THSI) is a list of stocks with outstanding performance on ESG aspects and sustainable growth, with the purpose to encourage Thailand's sustainable investment and promote quality of listed companies. It was launched at the beginning of 2015, by SET with six alliances, comprising of the SEC of Thailand, the Association of Investment Management Companies (AIMC), Association of Thai Securities Companies (ASCO), the Thai Institute of Directors Association (TIA), the Thai Listed Companies Association (TLCA) and the Khon Thai Foundation. (Chakornpipat, 2015; SET, 2015). As of November, 2016, THSI listed out 51 eligible Thai PLCs that meet the qualifications criteria in annual sustainability assessment. (Thai Trade Center Los Angeles, 2016; Unakul, 2016).

In terms of investment, a growing number of Thailand's asset management firms have introduced ESG mutual funds in the recent years with the objective of investing in the stocks of companies that have contributed to ESG aspects or taken ESG criteria into considerations. They are: the BKIND Fund, Thailand's first ESG mutual fund launched by BBL Asset Management with Khon Thai Foundation and ChangeFusion Institute; Bualuang Siriphol Corporate Governance by BBL Asset Management; the Good Corporate Governance Long Term Equity Fund by UOB Asset Management; and TISCO ESG Investment Fund by Thai Investment and

Securities Company Limited (TISCO). ("TISCO ESG Investment", n.d.; Ariyapruchya, 2015; Unakul, 2016).

According to Thai Institute of Directors Association (2016), Thai PLCs shown improvements in the corporate governance reporting, that encompassing four categories: disclosure and transparency, rights of shareholders, equitable treatment of shareholders, and role of stakeholders. In 2016, the average corporate governance score of Thai PLCs achieved 78 percent in an overall basis, which is 3 percent higher than that of 588 PLCs in 2015. There are nearly 50 percent of the Thai listed companies have granted "Excellent" and "Very Good" recognition levels. Plus, the average corporate governance score for the SET50 firms is 88 percent, 86 percent for the SET100 firms, and 78 percent for the entire sample. This comparative performance analysis further suggests that the SET50 and SET100 companies demonstrate better corporate governance and disclosure than does the full sample in all corporate governance reporting categories.

1.1.4.3 ESG Disclosure Practice in Singapore

As of September, 2017, Singapore Stock Exchange (SGX) comprised of 580 listed firms from SGX Mainboard and 183 firms are listed on SGX Catalist, which is a grand total of 763 listed companies. (SGX, 2017). Companies that are listed on the Mainboard and Catalist are eligible for inclusion in the FTSE ST Index Series, which launched with the partnership of FTSE Russell, SGX and Singapore Press Holdings Ltd. (SPH) since October 2007 (FTSE Russell, 2017). The main indices of the stock exchange are the Strait Times Index - Top 30, FTSE ST Mid Cap, FTSE ST Small Cap (Yeo, 2013). It is noteworthy that SGX does not create any indices for Top 100 PLCs based on market capitalisation, but they are published by Business Time Singapore, a financial daily newspaper owned by SPH (SPH, 2017).

SGX first announced its intention to introduce "comply or explain" sustainability reporting regulations in October 2014 (Teo, 2015). On May 2016, the SGX Sustainability Indices suite is launched by SGX joint force with Sustainalytics. It is made up of four new indices including the flagship SGX Sustainability Leaders Index, SGX Sustainability Leader Enhanced Index, SGX Sustainability Index, SGX Sustainability Enhanced Index. (Sustainalytics, 2016). In particularly, the SGX Sustainability Index provides a unique insight into the breadth of SGX listed companies that meet minimum standards in reporting with respect to ESG as well as stay away from engaging in major controversies. As of September, 2016, there are 71 listed companies considered eligible to meet the SGX Sustainability Index criteria. (SGX, 2017).

In June 2016, SGX introduced mandatory sustainability reporting on a "comply or explain" basis, taking effect starting from December 31, 2017 (Climate Disclosure Standard Board, 2016; KPMG, 2016). All listed firms are required to publish an annual sustainability report on a 'comply or explain' basis, in accordance with the Listing Rules. When the PLCs cannot report on any primary component, the company must state it clearly and explain what it does instead and the reasons why they do not wish to do so. (SGX, 2016). This practice replaces the previous voluntary sustainability reporting regime for PLCs that has been set up since 2011, where only about 160 out of 537 companies listed on SGX Mainboard are found to have these reports voluntarily as of December 2013, a joint study carried out by the Singapore Compact for Corporate Social Responsibility and National University of Singapore Business School found. ("Sustainability Reporting", 2016).

From the investment perspective, there is a lack of relevant information on the country's ESG mutual fund or equity fund investment.

A finding from SGX and KPMG found that most Singapore PLCs disclosing adequately about their corporate governance compliance, while the quality of disclosures between emerging firms and large firms are not much

different. Specifically, firms scored an average 60 percent out of 100, which KPMG considers as "good with room for improvement" because Singapore companies have mainly focused on areas specified in corporate governance guidelines only, but more could be done. The report also demonstrated that large capitalisation firms with a market value of $1 billion or above scored an average 66 percent and small capitalisation firms scored averaged 59 percent. SGX also highlighted that listed firms can do better on the transparency level, particularly on remuneration, risk management, assessing board performance and internal audits, and perhaps listing rule requirement for PLCs to comply or explain under the Code of Corporate Governance will be enforced, if the future improvement progress fall short of expectations. (KPMG, 2016; Leong, 2016).

1.1.4.4 ESG Disclosure Practice in Indonesia

Based on the country breakdown information of the FTSE4Good ASEAN 5 Index on September 2017, Indonesia was ranked at fourth, where 17 listed companies with a total net market capitalisation of USD 74,518 million, accounted for 18.03 percent on the list (FTSE Russell, 2017). As of year-end 2016, the Indonesia Stock Exchange (IDX) has 560 listed companies with a market capitalization of Rp 5,753.6 trillion (IDX, 2016). The main indices of the stock exchange are Jakarta Composite Index (IHSC), IDX30, LQ45 Index, KOMPAS100, Main Board (MBX), Development Board (DBX) and Jakarta Islamic Index (JII). (IDX, 2017).

According to SSE (2017), IDX has not yet imposed ESG reporting as a listing rule for both existing PLCs and new listing firms. There is also absent of ESG-related training and written guidance on ESG reporting offered for companies listed on IDX. In spite of this, Sustainable and Responsible Investment (SRI)-KEHATI was launched on June 8, 2009 by the Indonesian Biodiversity Foundation (KEHATI) in cooperation with IDX. There are 25 selected firms that pass the qualifications criteria of KEHATI SRI Index, as

of 14 September, 2017. (Indonesian Biodiversity Conservation Trust Fund, 2017).

On the investment side, the First State IndoEquity Opportunities Fund - USD is an open-end fund denominated in U.S Dollars, incorporated by PT First State Investment Indonesia, since January 2014. The fund aims to achieve optimal (sustainable) long term growth and capital appreciation by investing in qualified company which has above-average value and/or potential growth, good liquidity and implement excellent corporate governance. (First State Investment, n.d.). Moreover, Pinnacle Investment plans to issue a new Exchange-Traded Fund (ETF) mutual fund product called Pinnacle Indonesia environment, social and governance (ESG) ETF (XPSG) in early 2018 ("Pinnacle Berencana", 2017).

Despite of this, based on Uttam and Yu (2017) report that a trader in Jakarta's local bank believes the costs of adopting ESG practices and disclosure may eventually outweigh the benefits gained for businesses. Moreover, fifty-five percent of Indonesian respondents have revealed that they are not currently placing ESG strategies into consideration and none of these managers intend to engage ESG issues in the following two years. A head of fixed income at Jakarta suggests that regulations support could make ESG investing work in the future. Generally, Indonesia lagged most markets in terms of ESG adoption across the surveyed Asian markets, hence, the awareness about the significance of ESG as an investments indicator probably still weak to drive ESG investments among Indonesian investors.

In terms of the corporate governance disclosure level, poor corporate governance adoption and reporting were identified as a major factor in Indonesia's economic crisis in 1997 (The Organisation for Economic Co-operation and Development [OECD], 2015). Until recently, Indonesia Financial Services Authority (OJK) had announced the "comply or explain" approach of corporate governance, mandating all PLCs to either comply or explain reasons for non-compliance in their annual reports under the new Corporate Governance Guideline for Public Companies (OJK-CG

Guideline) and became effective on 31 December 2016. Previously, the country had adopted a non-legal binding and voluntary-based approach to encourage Indonesian companies to comply with Code of Good Corporate Governance (GCG) Code 2006, resulting in a divergence of corporate governance practices and reporting. (KPMG, 2016).

1.1.4.5 ESG Disclosure Practice in Philippines

According to the World Bank Group (2017), the Philippine Stock Exchange (PSE) has 298 listed companies with a combined market capitalization of USD239.738 billion, as of December 2016. The main index for PSE is the PSE Composite Index (PSEi) composed of the Top 30 listed companies. There are also seven additional sector-based indices, where the PSE All Shares Index (ALL) is the broader index of the exchange, while the remaining six indices are sector indices, they are: Financials (FIN), Industrial (IND), Holding Firms (HDG), Services (SVC), Mining and Oil (M-O) and Property (PRO). (PSE EDGE, 2017).

According to SSE (2017), PSE has not yet imposed ESG reporting as a listing rule for both existing PLCs and new listing firms. There is also absent of ESG-related training, written guidance on ESG reporting, as well as sustainability-related indices offered for companies listed on PSE. Based on a research conducted by Responsible Research (2010), Philippines is considered a widespread lack of reporting on environmental and social issues and mostly immaterial disclosure in general. This is because many Philippine firms see sustainability as the company foundations' activities, instead of an embedded part of business practice due to the deeply entrenched culture of paternalistic corporate philanthropy.

Moreover, RepRisk AG, a Zurich-based provider of business intelligence on ESG risks, released its latest special report on the Philippines in August 2016. The report highlights the three most exposed sectors – personal and household goods, industrial transportation and mining, which are playing a

vital role in the country's economy, are confronting the immediate ESG challenges because these key sectors have been consistently and closely connected to issues related to various environmental risks, poor working conditions and bribery. Furthermore, there have been repeated accusation of labour rights violations in Philippine factories by the International Peace Information Service and other human rights group. RepRisk has also identified the lack of association freedoms and corruption are posing a real risk for investors and many international companies entering the country. ("ESG Challenges Confront The Philippines", 2016).

On the investment side, BDO Unibank has introduced the first ESG-themed Unit Investment Trust Fund (UITF) - BDO ESG Equity Fund in 2005, for investing in local companies that demonstrate good ESG practices ("Global Politics", 2017). Furthermore, Gonzales (2015) reports that some of the country's biggest firms are starting to adopt ESG practices and reporting because fund managers are incorporating extra-financial (non-financial) information into decision-making processes. In addition, the Bangko Sentral Ng Pilipinas (BSP) and International Finance Corporation, a member of the World Bank Group, signed a Memorandum of Understanding (MOU) on May 2017, aiming to increase capacities and raise ESG standards among Philippine banks (Bangko Sentral Ng Pilipinas [BSP], 2017).

As for the corporate governance regulation in Philippines, the Philippine Securities and Exchange Commission (SEC) recently released the first action item for implementation in the Philippine Corporate Governance Blueprint 2015 - a series of corporate governance codes mandating PLCs to follow a "comply or explain" disclosure approach, on November 2016 (Gonzalez-Austria, n.d.). The country is now ranking at fifth place in the FTSE4Good ASEAN 5 Index, where only 9 listed companies with a total net market capitalisation of USD 31,529 million, and accounted for 7.63 percent on the list (FTSE Russell, 2017). In overall, impacts on communities, human rights abuses and the adoption of disclosure in non-financial and sustainability issues are the current challenges in Philippines. ("ESG Challenges Confront The Philippines", 2016; PwC, 2016).

Table 1.5: Summary of ESG Adoption Condition in Malaysia, Thailand, Singapore, Indonesia and Philippines

	MYX	SET	SGX	IDX	PSE
ESG reporting as a listing rule	Yes	Yes	Yes	No	No
Written guidance on ESG reporting	Yes	Yes	Yes	No	No
ESG related training	Yes	Yes	Yes	No	No
Sustainability-related indices or lists	Yes	Yes	Yes	Yes	No
ESG Equity Mutual Fund in the country	Yes	Yes	N/A	Yes	Yes

**Note: N/A indicating lack of information*

Source: Developed for the research

1.1.5 Financial Performance and Measurement

Financial performance can be considered as a measurement to determine how well an organization able to generate earnings by its assets or the monetary term results of a corporation's policies toward its operations. The monetary results indicate return on investment, share value added, return on assets and equity, and so on. Financial performance also determines overall financial health of a company over a range of time. Various different stakeholders have its own interest in closely monitoring and tracking the CFP. ("Financial Performance", n.d.; Pwc, 2007). A number of financial ratios must be taken into account in evaluating and measuring CFP accurately and precisely (Maverick, 2016).

Attractiveness of a company based on its competitiveness, profitability, and financial strength can be determined through ratio figures. In other words,

financial ratios act as a useful measurement to analyse a business's financial position and enable the information receivers to assess and understand deeper the potential of a company to be successful. (Lan, 2012; PwC, 2007; Shaun, n.d).

According to Al-Matari, Al-Swidi and Fadzil (2014), financial performance indicators can be grouped into accounting-base and market-base. Accounting-based indicators determine the profitability of a company and more sensitive to company unsystematic perceptions while market-based measurements indicate the evaluation result of stock market and tend to focus on market-specific characteristics (Al-Matari et al., 2014; Lee, Faff, & Langfield-Smith, 2009).

There are a few important financial ratios used in evaluating and measuring a firm's financial health, which is showed as follow:

Even today, earnings per share (EPS) can be considered the most popular and reliable financial performance indicator (Borad, 2017; de Wet, 2013). It acts as an effective and useful indictor in evaluating company profitability, and it is one of the widely used and crucial measurement (Kaplan Financial Knowledge Bank, n.d.; Shaun, n.d). Growing EPS shows an increasing profit the corporation is earning for shareholders. Therefore, investors normally would look forward to invest the particular company which have steadily inclining EPS. ("Earnings per share", n.d.). In other words, a high or improving EPS signals a better profit, a strong financial strength and hence a reliable company for investment decision (Borad, 2017).

According to Tai (2015) and Kennon (2017), return on equity (ROE) is one of the most popular used profitability indicators to assess the quality of a stock, from an investor's point of view. It is also an important metrics in evaluating effectiveness of a management team, providing an insight to shareholders and investors about how effective the management team manages the equity contributed and investment made by shareholders (Business Development Bank of Canada [BDC], n.d.; Fuhrmann, 2017). A

high or improving ROE indicates that the investment of shareholders has been optimized to operationalize the business (CompuData Inc, 2015). ROE can also help investors to identify whether a company is a profit generator or profit burner (McClure, 2017).

The return on assets (ROA) ratio can also be called as return on investment ratio, which is used to indicate a current investment performance or potential future investment return (Peavler, 2016). ROA can be considered as a most useful tool in measuring and comparing firms in same industry which are using similar fixed assets. The ROA value has given investors and management an information on how effective a corporate in converting the investment money in assets into earnings. In general, a high ROA indicates that a company is generating more earnings on less investment, which shows it is a company with better financial performance. (Phil Town, n.d; "Return on Assets – ROA", n.d; Shaun, n.d.).

In addition, the Tobin's Q ratio is a ratio originated from James Tobin and his collaborator, Brainard. They hypothesized that the market value of a company in stock market should be equal to its replacement cost, in the other words, a fairly-valued firm should have equal book and market value. According to Mislinski (2017), Tobin's Q ratio is useful for long-term investors. This ratio is considered a measure of stock valuation and it is helpful for investors when making investment decision and determining the fair value of a stock. ("Q Ratio – Tobin's Q Ratio", n.d; Turner, 2017). Investors are allowed to identify which are over-priced stock indicated by high Q value and which are fair value investment with a ratio value less than one (Turner, 2017).

The price to book (PTB) ratio is a financial valuation indicator which is commonly used to identify whether there is an undervalued or overvalued stock (Shaun, n.d.). For value investors, PTB ratio is an additional method to find low-priced investment that market has neglected and it is helpful for them to make accurate investment decision as well. Investors would find PTB ratio is useful due to it is easy to be compared to market price.

("Investment Valuation Ratios: Price/Book Value Ratio", n.d; McClure, n.d.). Generally, investors are more willing to pay a premium for company stock that has above one PTB value because there is a healthy future profit expectation for the particular company (Shaun, n.d.).

1.2 Problem Statement

There is not a new trend that investors would consider ESG issues when making investment decision. According to Hayat and Orsagh (2015), there is a rising realization that ESG issues are significantly evolved and closely related to all investors. On investors' perspective, as integrating ESG considerations into analysis of company investment become more prevalent, the ESG disclosure score might become a crucial indicator in providing good investment decision to create better portfolios, reduce unsystematic risk and acquire diversification benefits when markets are more volatile (CFA Institute, 2017). Furthermore, investors could become more aware of the risks and opportunities in the investment market (Laermann, 2016). In a survey conducted by CFA Institute (2015), there are 73 percent participants responded that they would consider either the combination of ESG issues or individual factors when making investment decision. A company with a strong ESG disclosure level would also help the investors to conduct better financial analysis, forecast the company valuation, as well as provide higher investment returns over time. (CFA Institute, 2017).

Although the initiative to disclose ESG information has inclined as a public concern in many countries, ESG is still a relatively new topic in Malaysia (Kweh, Alrazi, Chan, Abdullah, & Lee, 2017). Based on a benchmarking analysis conducted by PwC (2014), the findings shown that the top 30 listed companies in Malaysia have covered the basics reporting covered, however Malaysian businesses are not yet actualized "integrated reporting" (PwC, 2017). Tarmuji et al (2016) stated that ESG disclosure level in Malaysia is still considered at the starting stage. Many companies in Malaysia are still ignoring the importance of disclosing ESG information, which can be a source to remain competitive. Therefore, the result indicated that

Malaysian PLCs may either do not have proper ESG structures in place, incomplete reporting mechanism or they are simply not interested in this. (Tarmuji et al., 2016).

According to a survey conducted by Corporate Knights (2016), SET has shown a dramatic improvement on Bloomberg's ESG disclosure score since 2012 and it is among the top 10 stock exchanges with the highest overall disclosure growth rates. The result has proved that the highest level of ESG disclosure practice adopted by Thailand listed companies compared to other countries in Southeast Asia. On the other hand, according to Teo (2015), the launching of Singapore Sustainability Reporting Guide in 2011 successfully encouraged some listed companies to take sustainability reporting issues seriously. However, Singapore is lacking of relevant information on the country's ESG mutual fund or equity fund investment.

Most of the companies in Indonesia perceive ESG practise and reporting may incur more cost into their operation, which may greater than the benefits gained from exercising sustainability disclosure (Uttam etal., 2017). Indonesia government still does not have the intention to impose ESG reporting as a compulsory listing rule and the listed companies do not have any training and guidance provided (SSE, 2017). Similarly, there is an absent of imposition of ESG reporting as listing rule in Philippines (SSE, 2017). In overall, impacts on communities, ecosystems, human rights abuses, as well as adoption of disclosure in sustainability issues are the tough challenges in Philippines ("ESG Challenges Confront The Philippines", 2016; PwC, 2016).

Furthermore, limited relevant study can cause the problem of lacking awareness and understanding toward ESG disclosure. According to Atan, Razali, Said and Zainun (2016), there is limited studies introduced to investigate the drivers of sustainability reporting practise and also to explore the impact of integrating the ESG elements towards CFP. In other word, there is insufficient evidence to know whether the disclosure of non-financial reports and CFP would affect each other (Siew, Balatbat, & Carmichael, 2016). Additionally, there is also no any study regarding to the cycle relationship between ESG reporting and CFP in Malaysia, Thailand, Singapore, and other neighbouring countries. The empirical studies mostly covered the companies in countries such as Japan (Cai, Le, Oktavius, Nguyen, & Roxas, 2014) as well as

regions such as Europe (Rodriguez-Fernandez, 2016; Vauhkonen, 2017; Wissink, 2012), and North America (Makni, Francoeur, & Bellavance, 2009; Preston & O'bannon, 1997; Surroca, Tribó, & Waddock, 2010). Given that the aim of investors is to maximize their profit, they will not feel motivated to make investment decision if a company is lacking of sustainability information and no evidence that they will receive satisfactory returns for their assumed risk (de Souza Cunha & Samanez, 2013).

Moreover, EPS and PTB are considered as useful and crucial profitability indicators for both existing and potential investors to forecast the value of a company (de Wet, 2013; McClure, n.d.). However, both are not used in prior study regarding to the cyclic relationship between ESG disclosure and CFP. EPS is only used in a few similar studies, such as the impact of social and environmental disclosure toward CFP (Charlo, Moya, & Muñoz, 2015; Nor, Bahari, Adnan, Kamal & Ali, 2016) and the influence of CFP toward social and environmental practise (Damak-Ayadi, 2009). For PTB, it is only used in very limited researches.

In addition, there are a few researches have been done, regarding to the relationship between the disclosure of ESG information and CFP. According to Wissink, (2012), many scholars have explained the link between ESG and CFP. However, these results are inconsistent (Burhan & Rahmanti, 2012). Based on research done by Sahut and Pasquini-Descomps (2013), the findings regarding ESG disclosure on CFP were not consistent across Switzerland, United States (US), and United Kingdom (UK). Some findings were also indicating that the correlation can be positive, negative, or non-significant (Han, Kim, & Yu, 2016; Platonova, Asutay, Dixon, & Mohammad, 2016). From these results, it is difficult to answer the question as to whether there is a relationship between disclosure level of sustainability and CFP.

According to Juravle and Lewis (2008), the lack of understanding on how ESG disclosure affects investors could potentially be a major obstacle in encouraging the ESG disclosure into investment decision-making. Therefore, the study is aimed to investigate whether there is a cyclic relationship between ESG disclosure and CFP of top 100 listed companies in Malaysia, Thailand, and Singapore. This will also be

the first study in these 3 countries. As a result, the study may lead to increasing knowledge and awareness of public toward the issue and further improving the ESG disclosure adoption level. Next, it is also able to fill the geographic gap. However, Indonesia and Philippines have been excluded as there is lacking of data availability. PTB is also excluded due to multicollinearity issue. Besides, the study result will be a new evidence in Thailand, Malaysia, and Singapore. The findings can be concluded as whether supported by results from prior studies.

1.3 Research Objectives

The purposes of this study have been discussed through 2 parts, which are general objective and specific objectives.

1.3.1 General Objective

The main objective of the research is to investigate whether there is a cycle relationship exists between ESG disclosure and company financial performance in top 100 listed companies in Malaysia, Thailand, and Singapore.

1.3.2 Specific Objectives

1. To examine whether cycle relationship exists between ESG disclosure and company financial performance.

2. To examine whether ROE in period 1 has significant impact on ESG disclosure score in period 2.

3. To examine whether ROA in period 1 has significant impact on ESG disclosure score in period 2.

4. To examine whether EPS in period 1 has significant impact on ESG disclosure score in period 2.

5. To examine whether Tobin's Q in period 1 has significant impact on ESG disclosure score in period 2.

6. To examine whether PTB in period 1 has significant impact on ESG disclosure score in period 2.

7. To examine whether ESG disclosure score in period 2 has significant impact on ROE in period 3.

8. To examine whether ESG disclosure score in period 2 has significant impact on ROA in period 3.

9. To examine whether ESG disclosure score in period 2 has significant impact on EPS in period 3.

10. To examine whether ESG disclosure score in period 2 has significant impact on Tobin's Q in period 3.

11. To examine whether ESG disclosure score in period 2 has significant impact on PTB in period 3.

12. To examine whether cycle relationship exists between ESG disclosure and company financial performance, comparing the companies in different sectors.

13. To examine whether cycle relationship exists between ESG disclosure and company financial performance, comparing the companies included and excluded from sustainability index and list.

1.4 Significance of the Study

This comparative study will be the first study to investigate whether there is a cycle relationship between ESG disclosure score and CFP of top 100 listed companies in Malaysia, Thailand, and Singapore. The outcomes of this study would contribute to investors, company management, and policymakers on investment or decision-making that have relation with the ESG disclosure and CFP, especially in Malaysia, Thailand and Singapore.

As there are inconclusive findings from prior studies that only mainly focuses on other countries or regions, the result from this study can act as a new knowledge and guideline for both the current and potential investors in Malaysia, Thailand, and Singapore, or even other close-distance countries as well when making investment decision and identify returns. Throughout the study, investors are able to know what are the financial indicators that would form a cycle relationship with the ESG disclosure score, and whether the ESG disclosure score acts as an alternative investment indicator and additional useful information in evaluating the firm's value, risk and opportunities, especially in term of investment (Bassen & Kovacs, 2008). As a result, ESG disclosure level of a company can be a new investment strategies for investors' capital allocation after they understand and gain the sufficient knowledge regarding the use of ESG reporting in investment from this study.

According to Hayat et al. (2015), there are different demands from public, evolving from financial information to non-financial interest, including sustainability reporting. Hence, there will be a major setback to a company if the management team is lack of intention in ESG reporting, which could be a new communication channel to reduce information asymmetric and significantly impact investors and community's investment decision, thus affecting CFP (Siew et al., 2016). The finding of this study will be beneficial to the management because it may be able to help them to understand how important the sustainability information disclosure toward financial investors and other major stakeholders and how the reporting

action could affect shareholders and stakeholders' willingness to invest, in turn affecting CFP. As a result, this study may encourage company managers to be more willing to invest their resources in reporting ESG issues after understanding the crucial part of ESG reporting.

Besides that, although there is an increasing trend in ESG reporting, but many countries still hesitate to impose relevant policy or take action in encouraging ESG reporting, for instance the lacking of sustainability policy implementation in Indonesia and Philippines. Hence, this study can provide a valuable insights for the policymakers to uncover whether the implementation of ESG disclosure as listing rule or other compulsory regulations is meaningful toward the development of country and successfully met their expectation predicted. Furthermore, it is useful for the national governments or regulators to review their outcome derived from the result of this study. Subsequently, they will be able to determine the next actions to either improve or impose the ESG disclosure policy in their own country, for the listed companies or even the private companies.

1.5 Chapter Summary

The purpose of this study is to examine the existence of cyclic relationship between ESG disclosure and CFP. Research background has been covered in this chapter as a prior insight for readers to understand better on cyclic relationship, ESG dimension and disclosure, FTSE4Good ASEAN 5 Index and CFP. Besides, further details of disclosure practices in each of the 5 countries are discussed in this chapter. The only three out of five countries from FTSE4Good ASEAN 5 Index are included in the study, which are Malaysia, Thailand and Singapore. Other than that, research objectives have been designed to overcome issues that mentioned in problem statement which are lacking awareness, limited prior studies and inconsistent results. This study would likely to be benefit parties such as investors, policymakers and corporate management. The next chapter will cover the relevant prior studies that related to ESG disclosure and CFP.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Chapter 2 comprised of three sections. The first section introduces about the review of the literature that encompasses the independent variable(s) and dependent variable(s) of this study, which are ESG disclosure and CFP. Subsequently, this section also reviews the prior researches that studying the CFP influences ESG disclosure, ESG disclosure affecting the CFP, as well as the relationship cycle of ESG disclosure and CFP. After that, the second section discusses the nine relevant theoretical models related to the study. Lastly, a chapter summary is given at the third section.

2.1 Review of the Literature

The various methods to determine ESG or sustainability performance and disclosure level as well as different financial performance indicators used in prior studies will be reviewed. Furthermore, there are also a number of studies regarding to the impact of a CFP on the disclosure of ESG or other related information, the influence of disclosing ESG or other relevant sustainability information on a CFP, and their cycle relationship will be reviewed in this session.

2.1.1 ESG Disclosure

Trends on ESG reporting practices have greatly expanded throughout the years as companies considered ESG disclosure is critical to present positive organization's image and reputation in meeting the challenge of ESG issues (Tarmuji et al., 2016). According to Adams and Harte (1998), ESG

disclosure shed light on top management's attitudes because what they report and how they omit in detail are actually have been considered carefully and deliberately with a specific acceptable "norm" defined by a large range of stakeholders. Therefore, ESG disclosure rating and score catch a more extensive scope of non-financial data on ESG such as procedures and standards, safety and organizational culture, which stakeholders can further leverage for evaluating the capabilities of a company's management in supporting risk management (Bassen et al., 2008). The implication is that ESG disclosure can provide a holistic understanding on the link between growths, return on capital and risk management to corporate ESG activities.

For some companies that aware the advantages of ESG disclosure level would tend to achieve higher ESG reporting level. For example, ESG reporting could act as a new communication channel and protection to the company, resulting a good reputation. Other than that, information asymmetry could be reduced between company and society through sustainability information reporting. (Mcphail, 2014). As a result, a company with high disclosure action is able to maintain a high level of shareholders' confidence while attracting potential investors. Whereas, losing of market integrity at a huge cost could happen to a company with low sustainability disclosure. (OECD, 2004).

According to an international survey conducted by KPMG (2008), there are a few reasons reported as why every firm should adopt sustainability disclosure practise. Firstly, sustainability disclosure could indicate the willingness of a company in taking part in sustainability activities. Secondly, sustainability performance management could be demonstrated to public. Additionally, meeting shareholder's expectation and promoting stakeholder's achievement in sustainability could also be the reasons for a firm to disclosure. Reporting practises can also help a firm to improve internal process and it can prevent any risk from a reputation of non-disclosing. Lastly, complying with regulation requirement also motivates a

firm to disclose sustainability relevant information. (Zickiene & Juozaitiene, 2013).

There are various measurements to quantify corporate ESG practices. The measurement tools include content analysis via annual report, stand-alone sustainability report, company websites and social media. Moreover, the trend of releasing sustainability information to the public is gradually move toward digitally and in real-time manner. (Orr et al., 2015). There are global financial service agencies who providing integrated ESG score of companies with ESG practice, for example Bloomberg. Next, the various mechanisms used by prior studies to determine ESG or sustainability performance and disclosure practise will be discussed.

Bloomberg ESG disclosure score has become a popular measurement in examining the disclosure practise of ESG in a company. Some of the prior studies were using Bloomberg's ESG disclosure score in investigating the relationship between ESG disclosure level and CFP (Lapinskienė & Tvaronavičienė, 2012; Li, Gong, Zhang, & Koh, 2017; Mcphail, 2014; Sharma & Thukral, 2016; Zuraida, Houqe, & van Zijl, 2015).

Except for composite ESG information reporting, some researchers have also used Bloomberg's ESG disclosure score to calculate each of the ESG elements' performance and reporting practice. For example, Bloomberg has been used in the study of Giannarakis (2013, 2015) to study the relationship between social and environmental disclosure level and CFP. On the other hand, CSR disclosure practices have also been measured by using Bloomberg's ESG disclosure score (Cheung & Mak, 2010; Giannarakis, Konteos, Zafeiriou, & Partalidou, 2016).

Annual report and sustainability stand-alone report were also used in prior studies to examine the relationship between the disclosure level of whole ESG and each of the elements and company's financial performance (Damak-Ayadi, 2009; Dhaliwal, Zhen, Tsang, & Yang, 2014; Kasbun, Teh,

& Ong, 2017; Nor et al., 2016; Rouf, 2011; Umoren, Udo, & George, 2015; Zaman, Arslan, & Siddiqui, 2015).

Lastly, there were also other measurement tools used to determine sustainability reporting level, such as CSR index variety against GRI G3 (Dewi, 2015), content analysis against GRI G3 (Abeysinghe & Basnayake, 2015), and KPMG rating (Cahan, de Villiers, Jeter, Naiker, & van Staden, 2016).

As a result, Bloomberg's ESG disclosure score is used to calculate the ESG reporting level for this study to examine the cycle relationship between company's disclosure and CFP as this is the most commonly used measurement in recent 2 years relevant studies. The summary of ESG disclosure measurement used in prior studies will be shown in Appendix 2.1.

2.1.2 Company Financial Performance

There are various financial performance indicators have been used in determine the variables affect or have been affected by CFP. Different ratios were employed for different researches.

ROA is a profitability measurement of how a company effectively uses its assets to earn incomes (Phil Town, n.d.). According to Peavler (2016), ROA helps to evaluate the CFP and potential return in relation to its total assets. Usually, a better ROA indicates that there is a management team with high productivity and effectiveness in utilizing its resources to maintain and improve profitability. As a result, investors would be attracted and demand more stock, thus improving the company's share price and profitability (Corporate Financial Institute [CFI], n.d.).

Through reviewing the recent few years' sustainability-related empirical studies, ROA is found to be the top 1 accounting-based financial

performance indicator. It was used frequently in various researches regarding to the relationship between sustainability reporting and financial performance (Albers & Günther, 2011; Dewi, 2015; Dhaliwal et al., 2014; Giannarakis et al., 2016; Kasbun et al., 2017; Lapinskiene et al., 2012; Li et al., 2017; Mcphail, 2014; Nor et al., 2016; Rouf, 2011; Sharma et al., 2016; Vauhkonen, 2017; Zaman et al., 2015). Therefore, this study has employed ROA as one of the financial performance variables.

In addition, ROE is an indicator that providing an idea to investors on how effectively an organization or its management team in managing the equity invested to the company. In other words, it can be used as a guideline to determine a management's effectiveness. (Fuhtmann, 2017). According to Kennon (2017), a company with better ROE is tend to be a company that capable of generating cash internally. Generally, better ROE indicates that the company would contribute positively to its long term market value due to its attractiveness in stock market and high-in-demand stocks among investors (Tai, 2015).

Overall, ROE is considered as a popular accounting-based financial variables used in recent prior studies to investigate the relationship between sustainability practice and disclosure level and CFP (Abeysinghe et al., 2015; Charlo et al., 2015; Dewi, 2015; Giannarakis, 2013, 2015; Kasbun et al., 2017; Lawal, May, & Stahl, 2017; Mcphail 2014; Nor et al., 2016; Umoren et al., 2015; Vauhkonen, 2017; Zaman et al., 2015). Hence, ROE has also been adopted as financial performance indicator for this study.

According to de Wet (2013), EPS is still one of the most popular accounting-based financial performance measurements. EPS can act as a guideline for some strategic decision-making, for instance share valuation and merge and acquisition negotiation. Generally, there will be a positive image with high EPS because it indicates that the growth pattern of a firm (Borad, 2017). In other words, high EPS indicates a company is doing financially well and has extra money to either reinvest or distribute as dividend, indicating the company's stock would be a worthwhile investment (Shaun, n.d.).

EPS is only used in limited sustainability reporting relevant studies compare to ROA and ROE. EPS has only been adopted in studies of Charlo et al. (2015), Damak-Ayadi (2009), Nor et al. (2016), and Zuraida et al. (2015). However, it can also be considered as a common accounting-based measurement because it has commonly been used in other recent studies that related to CFP (Anwaar, 2016; Chetty, Naidoo, & Seetharam, 2015; Siddik, Kabiraj, & Joghee, 2017). Thus, EPS is included into the analysis of this study.

In addition, Tobin's Q is one of the market-based measurements to estimate the firm's market value against its book value. Tobin's Q ratio can be used as a tool for stock market valuation. (Mislinski, 2017). Normally, Tobin's Q ratio could help investors to determine the fair value when making investment decision and purchasing stocks. It allows investors to define which company's stock is worth for investing their capital. A high Tobin's Q ratio indicates that the company's stock price is increased due to the rising interest and demand of investors. (Turner, 2017).

Tobin's Q is the most popular market-based financial indicator and commonly used in recent few years' prior researches regarding to the relationship between sustainability disclosure practise and CFP (Buallay, Hamdan, & Zureigat, 2017; Cahan et al., 2016; Li et al., 2017; Mcphail, 2014; Sharma et al., 2016; Vu and Nguyen, 2017; Wang, Chen, Yu, & Hsiao, 2015; Zuraida et al., 2015). Hence, it has been selected to represent one of the market-based indicators for this study.

In addition, PTB is one of the useful indicator for investors to search for worthwhile investment. It acts as a valuable reality checking tool for investors to seek company with growth at a reasonable price. (McClure, n.d.). By comparing the market value to shareholders' equity which the book value, PTB ratio is helpful in evaluating a company in stock market ("Price-To-Book Ratio – P/B Ratio", n.d.). A company with high share price would

lead to high PTB value, showing that there is a good performance company and experiences high stock demand from investors (McClure, n.d.).

Although PTB is a good market-based indicator for investors when making investment decision, there is only used in a few researches (Charlo et al., 2015; Dulababu, 2017). PTB is still chose for this study to act as an additional market-based indicator to examine the relationship between ESG disclosure and CFP. However, it has been excluded from the analysis due to multicollinearity issues.

There are also a few variables that have been used in relevant researches but not adopted in this study, such as return on sale (ROS) (Giannarakis, 2013; 2015), return on capital (ROC) (Kasbun et al., 2017; Mcphail, 2014), profit margin (PM) (Nor et al., 2016), profit before tax (PBT) (Kasbun et al., 2017), and growth in total assets (GTA) (Kasbun et al., 2017).

The summary of financial performance indicators used in prior studies will be presented in Appendix 2.2.

2.1.3 Company Financial Performance Influences ESG Disclosure

There are a few of researches have been done in order to investigate the relationship between CFP and disclosure of sustainability or ESG information. In this case, disclosure will be independent variable while CFP will be dependent variable. However, there are limited studies regarding to the impact of CFP on ESG or related information disclosure level. The overall summary of each prior researches will be shown in Appendix 2.3.

Research of Lapinskiene et al. (2012) was based on the sample of 667 companies from 15 European countries over 2006 until 2010. According to Lapinskiene et al. (2012), ROA will significantly positive affect the

willingness of company to report ESG related information. This finding has supported by Dhaliwal et al. (2014) and Rouf (2011), which reported that ROA has significant and positive impact on the CSR and corporate governance reporting level respectively. The result suggested that a profitable company would willing to disclose social responsibility and corporate governance information. In study of Albers et al. (2011), the firms of STOXX Europe 600 for the year 2008 were used to investigate the factors that would affect the willingness of disclosing a social report. In the result, they also found that ROA has a positive significant effect on the willingness in preparing a GRI report.

Additionally, Giannarakis (2015) investigated the determinants of social and environmental disclosure. A sample of 100 companies from Fortune 500 list for the year 2011 have been chosen. As a result, both the social and environmental disclosure level can be significantly positive influenced by ROE. However, this result was opposite to the study of Umoren et al. (2015), which has studied the factors that influence ESG disclosure practice by using 40 listed companies from Nigerian Stock Exchange in year 2013 and 2014 and found that ROE has insignificant effect on ESG reporting.

Besides, the study of Damak-Ayadi (2009) aimed to examine the drivers of social and environmental reporting level. The data was collected from annual report of France 40 listed companies from year 2002 until year 2005. From the result, there was an insignificant correlation found between EPS and social and environmental reporting level in France.

Throughout the review of literature, some of the past researches that using too large sample size in examining the influences of CFP on ESG disclosure may pose a problem. For example, there are 1093 firms from 31 countries used by Dhaliwal at al. (2014). According to Roscoe (1975) a sample size more than 500 tends to be inappropriate for most research because it can lead to Type II errors.

Based on the summary table of results from prior study of CFP influences ESG disclosure shown in Appendix 2.4, ROA and ROE are the most popular and widely used financial performance indicators over the past 10 years. Furthermore, there is none financial performance indicators such as EPS, ROA and ROE were found to be significantly and negatively affects the ESG disclosure.

2.1.4 ESG Disclosure Influences Company Financial Performance

There are a growing demand of sustainability or ESG reporting by public. Hence, there are also limited number of studies have been done in order to investigate the relationship between disclosure of sustainability or ESG information and CFP. In this case, disclosure will be dependent variable while CFP will be independent variable. The overall summary for each study will be depicted in Appendix 2.5.

Li et al. (2017) has studied the effect of ESG disclosure on an organization value. They reported that ROA would be significantly positive influenced by ESG disclosure score. This finding has been supported by Giannarakis et al. (2016). This result is also same as the findings of study conducted by Platonova et al., (2016), which found the return on average assets (ROAA) would be significantly positive influenced by disclosure level of CSR. Furthermore, Zaman et al. (2015) reported that there was positively significant relationship between corporate governance disclosure level and ROA.

On the other hand, in the study of Sharma et al. (2016), a total of 410 listed companies in Bombay Stock Exchange (BSE), the India oldest stock exchange were used to investigate the impact of ESG disclosure level on an organization's performance. As a result, ESG disclosure score has been found to be insignificant relationship with ROA. In other words, high

disclosure level does not influence accounting-based return. This result has been supported by Cheung et al. (2010) and Dewi (2015) that reported there were an insignificant relationship between CSR disclosure and ROA. Nor et al. (2016) also stated that environmental disclosure has insignificant effect on ROA.

There were also a few studies investigated the influence of sustainability reporting toward ROE value.

Based on the study of Lawal et al. (2017), CSR performance (CSP) which indicated by Bloomberg's ESG disclosure score was positively correlated to ROE and the finding was supported by Platonova et al. (2016) and Dewi (2015). Giannarakis (2013) has also found significant and positive effect of social and environmental disclosure con ROE by analyzing a sample of 100 companies from Fortune 500 list and Zaman et al. (2015) also reported that there was positively significant relationship between corporate governance disclosure level of 30 banks in Pakistan and ROE. However, these result was opposite to the finding of Abeysinghe et al. (2015), which stated that CSR disclosure would significantly negative impact the ROE value in Sri Lanka domestic commercial banks.

Charlo et al. (2015), however, reported that there is insignificant relationship between sustainability development and ROE. Similarly, Nor et al. (2016) shown that environmental disclosure has insignificant effect on ROE and Cheung et al. (2010) reported that there were an insignificant connection between CSR disclosure and ROE.

There were only two studies examined the impact of sustainability disclosure on EPS and the findings mentioned that there were insignificant relationship between both variable. In other words, EPS would not be influenced by ESG disclosure. (Charlo et al., 2015; Nor et al., 2016).

Li et al. (2017) has studied the effect of ESG disclosure on an organization value. A total of 367 listed companies in FTSE over period of 10 years, from

2004 until 2013 were employed. They reported that both Tobin's Q would be significantly positive influenced by ESG disclosure score. Moreover, there were 555 firms from 21 countries in year 2008 were chosen for the study of Cahan et al. (2016). According to the result, CSR disclosure practice has significant and positive effect on Tobin's Q. However, Sharma et al. (2016) has found a different result from the both researches, which ESG disclosure score has significantly negative relationship with Tobin's Q. In other words, high disclosure level would lead to a low market-based return.

Lastly, Charlo et al. (2015) stated that there is insignificant relationship between sustainability disclosure and PTB by investigating a total of 87 firms from Spanish data base. The 87 firms included 32 firms listed in FTSE4Good IBEX and 55 firms included in the IBEX Index Family but excluded from FTSE4Good IBEX.

By reviewing past studies, the small sample size used in examining the influences of ESG disclosure on CFP could pose another problem. For example, there are only 24 fully fledged Islamic banks from Gulf Cooperation Council (GCC) countries used by Platonova et al. (2016), and Abeysinghe et al. (2015) used 6 high performance commercial banks in Sri Lanka. According to central limit theorem, a sample size of less than 30 for each subsamples (e.g. countries) are not sufficient when the normal population is not normally distributed (LaMorte, 2016).

Based on the summary table of results from prior study of ESG disclosure influences CFP presented in Appendix 2.6, it has identified an inconclusive and mixed results across U.S., Pakistan, India, Malaysia and Indonesia, over the past 7 years, as the ccorrelation of ESG disclosure affecting CFP can be positive, negative and or non-significant.

2.1.5 Cycle Relationship between ESG Disclosure and Company Financial Performance

Cycle relationship indicates that both the variables would influence each other in different directions. According to Boaventura, da Silva, Bandeira-de-Mello (2012), a profitable company will invest in reporting sustainability information, which allows them to earn better return. There are 5 studies shown regarding to the cycle relationship. However, only 1 study related to ESG disclosure and others were mainly focusing on cycle relationship between CSP and CFP. The overall summary for this cyclic relationship literature review will be presented in Appendix 2.7.

Mcphail (2014) studied 896 companies with 4480 observation over period 2008-2012 from five markets, which were U.S., U.K., Japan, Germany, and France to investigate the correlation between ESG disclosure score and CFP. In the study, he reported that ROA and ROE would positively significant influence the ESG disclosure level while Tobin's Q has negatively significant effect on ESG reporting practice. Also, ESG disclosure level has significantly positive effect on ROA and ROE whereas significantly negative impact on Tobin's Q. As a result, a positive cycle relationship formed between ESG disclosure and ROA and ROE while a negative cycle relationship formed between disclosure level and Tobin's Q.

In addition, Vauhkonen (2017) assessed the cycle relationship between CSP and European companies' financial performance over the period of 2009-2015. 345 sample companies have been employed for this research. From the result, CSR and ROA found to be a significantly negative cycle relationship. This indicated that a good financial performance company would invest less in CSR, and if they do well in CSR, they will end up to a bad financial performance. On the other hand, there was an insignificant result in both direction of relationship between CSR and ROE.

The aim of a study conducted by Wissink (2012) was to investigate the relationship between CSP and CFP and thus, whether cycle relationship exist between both variables. A total of 758 companies were selected for the research. The impact of ROA and ROE in first period on CSP in second period will be examine. Then, the influence of second period CSP on ROA and ROE in third period will be investigated. As a result, ROA in period 1 would significantly positive affect the CSP and in turn, the CSP would also significantly positive influence ROA in period 3. A virtuous cycle relationship was proved. However, there was an insignificant relationship between CSP and ROE in both direction.

Makni et al., (2009) has also studied the causal relationship between CSP and CFP. A total of 179 Canadian PLCs for the year 2004-2005 were employed for the analysis. From the study, ROA and ROE have insignificant effect on CSP. On the other hand, CSP has significantly negative impact on both ROA and ROE. Overall, there was no cycle relationship between CSP and ROA and ROE.

Lastly, in the study of Waddock & Graves (1997), the cycle relationship between CSP and CFP has been examined by analysing a total of 469 companies. Based on the findings, a better ROA and ROE would positively lead to a better CSP. On the other hand, the improved CSP would also positively affect ROA but insignificant relationship with ROE. Overall, a good ROA would lead to better CSP, and then the better CSP would further improve a company's ROA, forming a positive cycle. However, there was no cycle relationship between CSP and ROE.

Throughout the review of literature, some of the past researches that using too large sample size in examining the cyclic relationship of ESG disclosure and CFP may pose a problem. For example, Mcphail (2014) adopts a total of 896 firms from U.K., Germany, France, Japan and U.S. According to Roscoe (1975) a sample size more than 500 tends to be inappropriate for most research because it can lead to Type II errors.

Based on the summary table of results from prior study on examining the cyclic relationship of ESG disclosure and CFP illustrated in Appendix 2.8, it can be clearly seen that all the ROE in these respective studies are found to be no obvious cyclic relationship exists between ESG disclosure and ROE over the past ten years. Whereas, ROA is the financial performance indicators that can form a cycle relationship with ESG disclosure, either significantly positive or significantly negative (Mcphail, 2014; Vauhkonen, 2017; Waddock et al., 1997; Wissink, 2012). There is only one research among the five was found to be insignificant relationship between ROA and ESG disclosure (Makni et al., 2009).

2.1.6 Control Variable: Industry

Industry is chosen as controlling variable in this study. Several studies have found that there is relation between industry and CFP as well as CSP of firms (Brammer & Millington, 2006; Godfrey & Hatch, 2007; Mahoney & Roberts, 2007; Yu-Shu, Chyi-Lin, & Altan-Uya, 2015). The interests and demands of stakeholders in different industries is likely to be different as each industry has different internal and external environment structure, resulting in unique challenges in term of social, economic and environmental in different industries (Wissink, 2012; Godfrey, et al.,2007).

ESG disclosure level is unlikely to be the same across the industries due to the various attentions, costs and benefits associated with diverse industry characteristics (Lin, Chang, & Dang, 2015). For instance, corporate with highly sensitive environment issue would tend to attract attention of environmental concern groups. In other word, society would has different perspective to different companies such as companies that operates in gas industry compared to a services industry as the later industry would less likely to harm the environment. Therefore, companies in heavy-polluting industries are more likely to do better in environment disclosure, whereas

companies in industries that less sensitive to environment would likely to have lower disclosure level. (Clarkson, Li, Richardson, & Vasvari 2008).

Boaventura et al. (2012) stated that industry is one of the most used control variable in studies related to the relationship between CFP and sustainability. According to prior researches, industry has to be controlled or moderated as it will affect both CFP and sustainability practise and reporting (Bachoo, Tan, & Wilson, 2013; de Villiers & van Staden, 2011; Li, 2016; Garcia, Mendes-da-Silva, & Orsato, 2017; Velte, 2017). In this study, industry has also been employed as control variable.

2.1.7 Control Variable: Sustainability Index and List

Sustainability index and list is referring a list that will include firms which demonstrates strong ESG or sustainability practices. Sustainability index and list can be one of the strategic movement to attract investors' attention and thus encouraging company to perform well in sustainability practise, resulting in better CFP. (Orr et al., 2015)

Dow Jones Sustainability index (DJSI) is one of the example of sustainability index that commonly used in prior researches. DJSI is a long launched global sustainability index that tracks the leading sustainability companies worldwide in terms of sustainability criteria. Firms will only eligible to being listed in the index if they are able to meet and achieve the assessment criteria. (RobecoSAM, n.d.).

Several researches have adopted DJSI included or excluded as a measurement of CSP (Artiach, Lee, Nelson, & Walker, 2010; Lee et al., 2009; Lourenco, Branco, Curto, & Eugénio, 2012; van Stekelenburg, Georgakopoulos, Sotiropoulou, Vasileiou, & Vlachos, 2015; Wissink, 2012); firms that included in the index were considered to have a good social

responsibility performance, whereas firms that excluded from index considered to have a bad result in sustainability performance.

In this study, sustainability index and list in Malaysia, Thailand, and Singapore will be used as another control variable because it could have certain level of influence on the CFP and ESG disclosure score as well.

2.2 Review of Relevant Theoretical Models

There are numerous of theories have been used to explain the concept and purpose of this study. The theories has included market efficient theory to explain the time frame used in the study, then the cyclic causality theory to explain the type of cycle relationship, next the slack resources theory, resource-based view theory, good management theory, instrumental stakeholder theory, agency theory, and legitimacy theory to explain the positive relationship between ESG disclosure and CFP, while trade-off thinking and managerial opportunism assumption under agency theory to explain the negative relationship. The summary of each theory will be exhibited in Appendix 2.9.

2.2.1 Efficient-market Hypothesis

The efficient-market hypothesis (EMH) describes the markets are efficient because they are composed of numerous rational investors who respond rapidly and objectively to new information. It specifically states that, securities are fairly priced, fully reflect all information available about the firms and react swiftly to new information, at any point of time. The efficiency of market can be divided into three types: strong form, semi-strong form and weak form of efficiency. (Fama, 1970; Gitman & Zutter, 2015).

In particular, we will discuss only semi-strong form of efficient markets where all new information about particular securities are supplied publicly to the

securities market, the prices of securities will reflect it and adjust quickly. This is because investors will revise their previous beliefs by engaging in selling and buying securities which resulting in price changes. (Fama, 1970; Scott, 2009). It means that market prices are closely connected to the disclosure of publicly available information (Macey, 2004).

EMH implies that the securities prices will reflect accurately and promptly on whether a publicly traded company is poorly or well-managed (Fischel, 1978). Securities market is assumed to be so efficient because any changes such as stock prices are now based upon publicly available information that entering instantaneously to the marketplace. Market forces can now catch and hold information so quickly that the arbitrage possibilities from the new information are minimal. (Latimer & Maume, 2015).

In other words, any result of new ESG actions or practices that have been taken by a publicly traded company could be reflected on securities prices in a short time when EMH holds. Therefore, changes of a CFP due to improved or reduced ESG disclosure level could be reflected quickly to the market and to those that concern the information, such as investors.

In this study, each period is based on two years information. Period 1 indicates CFP in 2011-2012; Period 2 indicates ESG disclosure score in 2013-2014; Period 3 indicates CFP in 2015-2016. According to emh, investors could react quickly to any changes that reflected within a short time in the securities market. Hence, two years for each period will be appropriate in the study. Besides that, other theories related to these study are all connected to EMH because the act of disseminating or spreading of sustainability news in short time length to the various stakeholders groups that accordance to the view of instrumental stakeholder theory, agency theory, legitimacy theory and so on, can be performed only when the EMH is hold.

2.2.2 The Cyclic Causality Thinking

The concept of virtuous cycle of CSP and CFP was first introduced by Waddock et al. (1997). In their study, they suggest a positive synergistic relation between CSP and CFP and the causation may run in bidirectional, specifically, better prior CFP may lead to improved CSP, based on Slack Resources theory; and better CSP may lead to future improved CFP, accordance to the Good Management theory.

Similarly, profitable companies would increase their ESG disclosure and the disclosure score can be used as an additional source of information for investors in order to assess the level of social responsibility, which in turn, affects positively the CFP. The researchers propose that if the two theories combined and virtuous cycle hold, then socially responsible activities can go beyond simple "good deeds": it is an emergent strategy of doing business. This theory could take the argument between "doing good by doing well" and "doing well by doing good" to the next level.

It is not to be denied that there is possible a vicious cycle with negative synergistic exists in reality, based on an assumption proposed by Preston et al. (1997). Makni et al. (2009) explains that, as the name implies, it is the opposite of virtuous cycle, where prior better socially responsible performance may weaken firm's profitability, which in turn limits the future socially responsible investments. However, the literature of such nexus between CSP and CFP has not yet been clearly stated in a theory.

2.2.3 Slack Resources Theory

Waddock et al. (1997) propose that better CFP potentially results in the availability of slack resources (e.g. financial and other), which could provide the opportunity for firms to invest in socially responsible activities. In other

words, profitability has to happen first before any company can allocate fund to engage in ESG performance and reporting. This is because despite the fact that firms may wish to conform the normative rules of good corporate citizenship at all times, yet their actual behaviours and actions may rely upon the resources available. Hence, firms that are better CFP have more resources to spend for socially responsible activities than firms that are less profitable.

Furthermore, McGuire, Sundgren and Schneeweis (1988) suggests high CFP and low risk firms may be better able to afford or commit in a socially responsible manner because of their stable profitability model. In other words, firms with extra available resources believe in "doing good by doing well," and that those resource allocations may bring about improvement of CSP in overall (Waddock et al., 1997).

Therefore, when firm with slack do engage in discretionary socially responsible behaviours that satisfy stakeholder expectation, these ESG performance and disclosure may effect on the firm's subsequent reputation over an extended periods of time. Whereas, those firms without slack resources are at an economic disadvantage and thus have fewer resources available to invest in social responsibility related activities. (Hammond & Slocum Jr., 1996).

In general, better CFP could be a predictor of better ESG performance and disclosure (Ortas, Álvarez, & Garayar, 2014). The concept of ESG disclosure allows the investors access to additional relevant information (e.g. company's ESG performance), hence they can better comprehend the risks and opportunities (Bassen et al., 2008). As valuation theory proposes, the expected profitability of the company, the cost of capital and the potential growth rate, are the main concerns that influencing the price that investors are willing to pay for the shares of a company (Lee & Ng, 2009). Thus, profitable firms turn out to be more willing to disclose ESG information, as firms with better disclosure practice have better stock prices due to the revealing of extra-financial information helps investors to reduce uncertainty and improve the prediction of future returns, thereby better forecast future cash flows. (Gelb and Zarowin 2002).

2.2.4 Resource-based View Theory

The resource-based view (RBV) theory focuses on how firm leverages resources and capabilities with its own internal strengths and weaknesses instead of external opportunities and threats (SWOT analysis). If a company possesses heterogeneous and unique tangible and intangible resources and capabilities from competitors within its industry, the firm is said to have sustained competitive advantage, as long as these resources and capabilities are valuable, rare, hard-to-imitate and organizing properly (VRIO framework). Therefore, RBV theory are used to understand a company's earnings power. (Barney, 1991; Wernerfelt, 1984).

McWilliams and Siegel (2001) demonstrates an example by employing CSR as a part of a differentiation strategy at the product based on the assumption of RBV theory. The model assumes that there are two companies producing and selling identical products, but one of them provides an additional "social" attribute or feature to its product. The product with social characteristic is now considered valuable and rare with somewhat hard-to-imitate to consumer and other stakeholders who value the social attributes. The rarity of the social attribute products can lead to first mover advantages such as customer loyalty and this make duplicators at disadvantage.

Van Der Lugt (2015) suggest that there is always a possibility that some values in a firm's activities are not yet have a remarkable increase in financial outcome via the income statement and balance sheet. For instance, reporting strong ESG performance with a focus on material issues resulting the long-lasting values like employee satisfaction or brand value, which may spend earnings and equity in the short term, however, it may lead to sustained competitive advantage over a long time. It is advised that management should always identify company's "stored value", adjust and renew these resources and capabilities to avoid time, competition, and environment changes erode their competitive advantages.

Besides, firm exhibits good ESG practice and sustainability reporting is likely to have superior or effective management in business process, resources usage and etc, which in turn can reduce corporate risk, gain reputation and lower down the cost of capital, thereby boosting investor confidence and enhancing corporate value (Zuraida et al., 2015). As a result, firms that successfully recognize these benefits derived from ESG practice are more willing to engage in ESG reporting, which making them being better able to compete, gain competitive advantage and improve CFP. (Guenster, Bauer, Derwall, & Koedijk, 2011).

2.2.5 Good Management Theory

According to Waddock et al. (1997), good management theory suggests that a good management team focuses on external interest or expectations from its different stakeholders, and they are capable of managing the resources of the firm in such a way that its different stakeholder's demands are satisfied, as well as maintaining good rapport with them. All these make the company performs well in social dimension (Berman, Wicks, Kotha, & Jones, 1999). Spolsky (2008) adds that pragmatic managers can use good management theory for management decision-making about the future as well as in making sense of the current.

Furthermore, Margolis, Elfenbein and Walsh (2007) propose that good management theory provides the appearance or impression of doing well, either truly or perceived by key stakeholders groups that a company is doing well, will make people more likely to demand for the company's jobs, stock, and products. Hence, company who actualizing good management practices and is perceived by its stakeholders as having a good reputation, through a market mechanism, can enhance relationship with stakeholders and consequently will be more easily achieve superior CFP. (Waddock et al, 1997).

Good management theorists suggest a close relation between good management practice, and CSR related practices, simply because attention to CSR area improves relationships and reduces the cost of conflict between management and stakeholder groups, as well as the regulators, which resulting in better overall firm performance (Waddock et al, 1997; Whelan & Fink, 2016). Besides that, sustainability reporting may actually reduce monitoring costs for investor since it is informative about the management quality (Akpinar, Berrone, Jiang, Gómez-Mejía, & Walls, 2008).

In other words, ESG disclosure gives transparency on how the company is managed, thus giving the company management a good image while building better mutual understanding between investors and management (Azzone & Noci, 1998; Zuraida et al., 2015). Investors, especially those who are aware of that company's management that demonstrates socially responsibility could generate better financial result, tends to pay a premium for the securities (Richardson & Welker, 2001).

2.2.6 Instrumental Stakeholder Theory

Baumfield (2016) proposes that supporting stakeholder groups can be both "strategic" and "philanthropic", because firms believe the interplay with the stakeholders, can affect the CFP or who is affected by the firm's behaviour or business operations related. The author argues that stakeholder theory actually supports shareholder wealth maximization, by leveraging an instrumental approach, because shareholder's and stakeholder's interests are symbiotic, therefore, managing a successful relationship with stakeholders should be deemed as an essential part of the good management necessary for firm to be success.

For instance, sustainability reporting becomes one of the stakeholders' interest nowadays and that is how a company to be seen as a responsible corporate

citizen through businesses and products (Zickiene et al., 2013). A research conducted on interest among LPs towards ESG by PwC (2015) found that 83 percent of the LPs in their survey, believe that ESG management is part of the firm's fiduciary duty, which should facilitate returns or reduce risk for both the companies' owners and investors as well. This means that ESG-related information are needed by institutional investors, based on stakeholder theory. Beltratti (2005) concluded that by ensuring the protection of the stakeholders, firms are more likely to have long-term survival.

In addition, Deegan (2002) explains, managers have an incentive to disclose their sustainability performance in satisfying stakeholders' expectation and gaining support from them. Capener, Bullen, Kordecki (2017) state the influential stakeholders which deemed to be powerful such as financial stakeholders and government regulators, the more effort from management will Fbe exerted in providing a balance between the interests of its diverse stakeholders and shareholders. Rezaee (2017) also suggest firms to consider prioritizing multiple stakeholders' interests that would generate in long-term financial sustainability because socially responsible investment may take up considerable resource allocation at the initial stage, which perceived as opposite interest of shareholder.

With the improved availability of ESG information disclosure, the relationships between company and key stakeholders can be strengthened while increasing its intangible value through favorable employment behaviour, investment, consumption, and so on, consequently contributes to market returns and profitability. In other words, customers or community tends to demand more jobs, stocks and products or services, if they believe that a firm is a good citizen based on their ESG disclosure. (Hillman & Keim, 2001; Li et al., 2017).

Besides that, investors may reduce their uncertainty regarding the company's future environmental and social performance, and the cash flows associated with these, thereby reflecting in a higher stock price and a lower cost of equity capital (Bachoo et al., 2013; Diamond & Verrecchia, 1991). Overall,

companies with effective reporting strategies are more likely to attract important stakeholders to invest in them (Han et al., 2016).

2.2.7 Agency Theory

Agency theory explains the principal and agent relationship by using the metaphor of "contract", for example, shareholders and management, client and professional, and even society and environment-sensitive firms (Shavell, 1979). The agent, is the decision maker and therefore affecting his own welfare for that of the other individual called principal (Spremann, 1987). Unfortunately, agency theory is concerned with resolving two major agency problems: the conflicting desires, interests and goal between the principal and agent; and the second is the problem of risk sharing due to different risk preferences between the two parties. Thus, writing a "principal-agent contract" incurs high agency costs for monitoring, bonding, plus the residual loss because of the benefits returned is minimal than the cost of full enforcement of contracts (Fama & Jensen, 1983). Otherwise, agent may diverge from his duties to the principal, which is widely known as "managerial opportunism" (Spremann, 1987).

From the perspective of investors, disclosure offers overview or summarized information about the potential risks and opportunities of the firm in the future. A better-informed investor that with adequate public disclosure information from firms, will have lower information risk and greater certainty that will not cause the market to undervalue the securities prices or demand inappropriate returns from firms. (de Klerk & de Villiers, 2012; Healy & Palepu, 2001). Overall, agency theory expects a positive association between ESG disclosures to CFP when the ESG information is relevant to investors (Rezaee, 2017).

As Wissink (2012) explains, firms that contract with their stakeholders are actually forming a monitoring mechanism through reporting. Management that voluntarily disclose extra-financial information regarding the ESG performance can mitigate the perceived information asymmetry, which in turn

can maintain efficiency through sustainable relationships between investors and management, and hence, increase firm's overall competitiveness by avoiding agency costs (Waddock,et al., 1997). From the company perspective, disclosure is also a means of communication between the relevant shareholders and company, which reduces the principal-agent problem concerned in agency theory (Jensen & Meckling, 1976).

However, in the context of managerial opportunism hypothesis, the non-financial ESG performance and reporting are sometimes deemed as the allocation of company resources that pursuit of private managerial objectives that are not in the best interest of shareholders, even though it may create value for other stakeholders. Moral hazards occur because the agent (manager) acting on behalf of the principal (shareholders) typically knows more about its actions and intentions, as well as the true representation of financial reports, than the principal does (Waddock,et al., 1997).

Preston et al. (1997) suggest a negative relationship from CFP to CSP under managerial opportunism hypothesis, which is, when firms performing well financially, managers might pursue short-term earning targets and are likely to extract from socially responsible investment and its relevant reporting, because it will not increase their short-term private gains and would jeopardise executive compensation. However, when corporate managers are faced with poor financial performance, they may attempt to justify or disguise it by engaging in excessive socially responsible investments, and therefore the ESG disclosure of the firm increased to offset their disappointing results (Preston et al., 1997; Winssink, 2012). In general, managers may pursue their own private goals to the detriment of both shareholders and stakeholders (Weidenbaum & Vogt, 1987).

Moreover, one of the private objectives of managers' opportunistic behaviour is to gain a better personal reputation, and they are not always necessarily monetary for managers (Barnea & Rubin, 2010). Managers might show opportunistic attitudes in pursuing non-profit goals and disseminating those more eagerly to secure their positions, polish reputations and gain public

prestige, plus, they are not spending on their own cash, but at the expense of shareholders (Tarmuji et al., 2016). Therefore, an improved CFP may not necessary prompt better sustainability reporting because of the opportunism behavior of managers. In this case, the issues of asymmetrical information will still exist and there might be an increasing agency cost incur.

2.2.8 Legitimacy Theory

Legitimacy theory posits that the firm's survival will be threatened if society deems that the firms has breached the "social contract", society may penalize the firms by terminating the firm's "license to operate". This implied that, non-compliance with environment requirements, social norms, values, and beliefs will threaten organizational legitimacy and financial sustainability. For example, sanctions such as reducing financial capital, reducing demand for the products of the business, revoking the supply of material or labour, and imposing taxes or fines to the particular firm. (Deegan, 2002). All these consequences of a firm being perceived illegitimacy may impact on the expected level and riskiness of the firm's future cash flows, and therefore the current value of equity (Terreberry, 1968). As a result, firms will attempt to operate in a socially acceptable manner and will modify their business operation to conform society's expectations (Ong, Tho, Goh, Thai and Teh, 2016).

According to Tamimi and Sebastianelli (2017), legitimacy theory adopts the view that firms will engage in public disclosures to alleviate societal pressures for legitimizing their business behaviour and operations. Since legitimacy theory is a matter of perceptions, voluntary disclosure can be implemented as the remedial strategic actions, if managers perceive that the current firm's behaviours, values or output, does not within the bound of "social contract" anymore (Deegan, 2002). Thus, when certain information are disseminated, it is used to close a particular legitimacy gap resulting from a company's failure

to conform to the expectations of society, at least to maintain, defend or even extend the legitimacy (Ong et al., 2016).

Capener et al. (2017) give an example, the CEO of the British Petroleum BP Deepwater Horizon oil spill, actually behaved in accordance with legitimacy theory in trying to justify to the public for what the company should be held accountable for. Hence, legitimacy theory suggests that non-financial ESG performance and reporting is desirable for all stakeholders groups, such as customers, local community, environmental groups and regulators, and thus as a means of satisfying society's demands and gaining social acceptance (Guthrie and Parker, 1989; Tilling, 2004).

A firm would have incentives to incorporate sustainability reporting in their annual reports because it can signal that they have sound sustainability practices, which in turn, can facilitate them to gain legitimacy image and to enhance their corporate reputation (Brammer et al., 2006; Othman, Darus, & Arshad, 2011). These firms are perceived to have good corporate values and intangible values that could be positively interpreted in various perspectives, for example, attracting customers, generating investment interests, creating more positive media coverage, and receiving good reviews from financial analysts which could potentially enhance the liquidity of securities (Dhaliwal et al., 2012; Laufer & Coombs, 2006). Hence, a firm would voluntarily reveal their ESG sustainability performance if management perceives that those activities were expected by societies in which it operate (Burhan et al., 2012).

2.2.9 Trade-off Thinking

According to the trade-off theory, there is a negative relationship between CSP and CFP (Waddock et al., 1997). Proponents on this front believe that firms have to make a choice between CSP and CFP. The notion of this thinking is that, firms who performing well or actively investing in socially responsible

practice are at a disadvantage in terms of financial costs, whereas those who stay away from such investment do not face. (Wissink, 2012).

The theory is based on the neoclassical economists' position in which socially responsible activities will reduce profits and shareholder wealth through their numerous costs while having few economic benefits. In other words, the potential economic benefits generated from socially responsible activities are expected to be minimal than the numerous costs it incurred, and it do not align with the principle of shareholder wealth maximization (Waddock et al., 1997). In short, this theory suggests that there is a negative relationship between CSP and CFP.

2.3 Chapter Summary

In this chapter, a range of literatures have been reviewed based on the relevant journal article. Throughout the reviewing process, different variables were adopted in different studies. Bloomberg ESG disclosure score is found to be the most widely used ESG disclosure indicators followed by annual reports, GRI and KPMG rating. Other than that, there are few common financial performance indicators used in recent prior studies such as ROA, ROE, EPS and Tobin's Q. PTB also included in this study even though it is not widely used but it is known as one of the good market based indicators for investors. Hence, ESG disclosure score, ROA, ROE, EPS, and Tobin's Q have been selected due to widely used in prior studies while PTB have also been chosen as additional market-based measurement. Other than that, the results of the relationship of ESG disclosure and CFP are found to be inconsistent in previous relevant studies. Besides, those nine proposed relevant theories are also discussed and these theories has been supported in other prior relevant studies. The next chapter will cover the research methodology carried out in this study.

CHAPTER 3 METHODOLOGY

3.0 Introduction

Chapter 3 discusses the research methodology used in this study. This chapter comprised of five section, it mainly consists of research and sampling design, measurement of variables, data analysis and hypothesis development. The research development and data handling will be further explained under research and sampling design, while those variables that decided to include in this study will be discussed under measurement of variables. Lastly, a chapter summary is given at the fifth section. Under data analysis section, method of analysing data employed in this study will be further discussed.

3.1 Research and Sampling Design

Research design is been said that the backbone of the entire research procedure. It is also a blueprint for the process of gathering, measuring and analyzing data as required by the research questions. (Sekaran & Bougie, 2013).

Exploratory design fits well for this study because no earlier research or information about the cycle relationship between ESG disclosure and CFP in Malaysia, Thailand, Singapore, Indonesia and Philippines are known from the past literature and research. On this front, exploratory study is necessary because some facts about the trend of ESG adoption around the world and the investor's attitudes towards ESG are already known, but more information is needed for cycle relationship tentative hypotheses or theories. It helps us to establish an understanding of the problem or phenomenon. Furthermore, an exploratory research often relies on secondary data such as a review of the literature, and findings are typically not

generalizable to the entire population as the sample sizes may be smaller in nature. (Sekaran et al, 2013; University of Southern California, 2017).

The population referring to the entire set of units that the researcher interested to investigate and understand, it could be the collections of individuals, objects, issues, or other things of interest. The target population must be confined to subject elements, geographical boundaries and time. (Sekaran et al., 2013). The population of this study comprises of the Public Listed Companies listed in MYX, SET, SGX, IDX and PSE from the FTSE4Good ASEAN 5 Index. Countries in this index has been selected as target population because these are the countries with higher ESG disclosure score among the 10 countries in Southeast Asia and this is also the first study and reference among these countries. However, the companies listed on IDX and PSE were excluded due to limited data availability that resulted from lacking initiative in adopting ESG disclosure.

Then, among the hundreds of companies in each country, this study has narrowed down to top 100 PLCs of Market Capitalization listed on MYX, SET and SGX, as of August, 2017. These companies are the constituents of the FTSE Bursa Malaysia 100 Index (Malaysia), SET 100 Index (Thailand) and the Top 100 PLCs of Market Capitalization in Singapore, based on the rankings information provided by their respective government official websites, as there is no specific indices available. Please refer to Appendix 3.1, Appendix 3.2, and Appendix 3.3 for the top 100 PLCs based on market capitalization in MYX, SET and SGX accordingly.

There are a few reasons behind the selection of top 100 listed companies. Top 100 listed companies are arranged according to market capitalization, which indicates that they are all large companies that would more actively involved in activities and have large impact on society due to their visibility (Hackston and Milne, 1996). Meanwhile, they are also believed to have more information which allows them to engage actively into practice that related to environmental, social and corporate governance responsibility (Aerts, Cormier, & Gordon, 2006). Other than that, they are able to disclose more quality information to public (Buniamin, 2010).

However, this study excludes 160 companies with missing or incomplete ESG disclosure score and CFP data. Hence, the final sample of the study is narrow down to 140 companies, which comprised of 52 Malaysian PLCs, 38 Thai listed companies and 50 Singapore firms listed on stock exchange. Summarization of the sample size is presented in Table 3.1.

Table 3.1: Summary of Sample Size

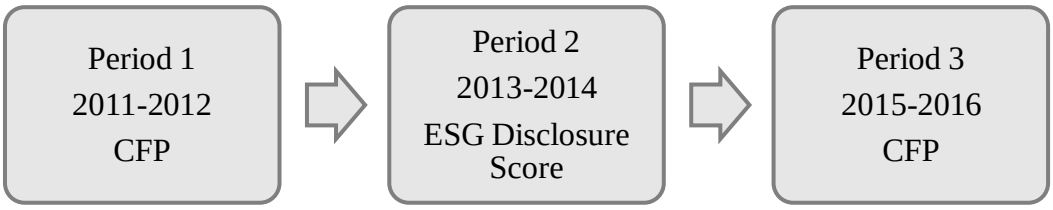
	Malaysia	Thailand	Singapore	Total
Original Sample Size	100	100	100	300
(-) Firms with data less than six years	10	18	10	38
(-) Missing ESG disclosure score	31	41	28	100
(-) Incomplete data on company financial performance	7	3	12	22
Final Sample Size	**52**	**38**	**50**	**140**

Source: Developed for the research

In spite of this, our sample will generate an economically meaningful and significant outcome. This is because these companies chosen are among the largest PLCs that represent an overwhelming portion of the local stock exchanges, which collectively covering most of the market capitalization in the stock exchanges of their respective countries. Although this sample is clearly biased towards the largest companies, however it is not viewed as a problem because these subject samples adopted are comes from different economies and across different industries. Additionally, Roscoe (1975) proposes that the sample size with more than 30 and less than 500 is appropriate for most research, where a minimum sample size of 30 for each subsamples (e.g. countries) must be achieved; and Type II errors can be avoid by not exceeding 500 sample size.

The time horizon design for this study is cross-sectional, a type of observational study design. It can be used when studying one or more variables either for an entire population or a subset, at a given time point or over a short period. The constituents for cross-sectional study are selected based on the initial inclusion criteria set for the study, for assessing the exposure and the outcomes purpose. (Levin, 2006; Setia, 2016). However, this study adopting time-series data because the time frame will be designed with three different time periods and each with two years lagged, from year 2011 to year 2016. More specifically, 2011-2012 are Period 1; 2013-2014 belongs to Period 2; while Period 3 from 2015 to 2016. The time period will be presented in Figure 3.1.

Figure 3.1: Time Periods for the Variables Studied



Source: Developed for the research

Sampling technique is often categorized into two types: probability sampling technique and non-probability sampling technique. Non-probability sampling design is conducted and purposive sampling would be appropriate for this study. This is because the sampling required for this study are confined to specific types of firms that can provide the required information (e.g. ESG disclosure score). Indicatively, the Top 100 PLCs of Market Capitalization listed on the local stock exchanges are the specific types of respondents that can provide the desired information, with the expectation that they would have more complete and consistent information on the ESG reporting (Ong, Teh, & Ang, 2014).

The data collection methods are the ways in which data can be gathered through various sources of data for answering the research questions (Sekaran et al., 2013).

It is an indispensable part in a research design because it affects the outcome and validity of a research. Thus, the secondary sources of data would be appropriate for this study instead of primary data sources. The reason is because the secondary sources of data, especially government agency or international agency (e.g. Bloomberg), have superior expertise in setting up data collection methodologies and evaluation processes. Therefore, using secondary data set is likely to be a more rigorous set of data that can achieve far more accurate results and findings.

Secondary sources of data including journal articles, Bloomberg database, government official websites, textbooks, and etc., are used in this study. These secondary data refer to information obtained from other sources and then used for conducting the current study. The data obtained are reliable, readily available, inexpensive and time-saving in comparison to primary data. The purpose of this study is to examine whether the cycle relationship exists between the ESG disclosure and the CFP in Malaysia, Thailand and Singapore, the members of ASEAN. The independent variable and dependent variables are determined after the discussion on the summaries of the journal articles reviewed, as well as on the basis of their relevancy to the current study, the limitations of past researches, and the data availability. Annually data will be adopted in this study.

The data used in this study are twofold: (1) data related to firm's ESG disclosure score, and (2) data related to the CFP: Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS), Tobin's Q, and Price to Book (PTB) ratio. ESG disclosure score was measured as the average (mean value) of 2013-2014 (period 2), whereas CFP was measured as the average of 2011-2012 (period 1) and 2015-2016 (period 3).

All data in this study are quantitative data in term of secondary data, which gathered and compiled by Bloomberg database subscribed by UTAR. Bloomberg is the most widely used provider for real-time financial information and data ("The Bloomberg Terminal At A Glance", n.d.). Bloomberg data can be considered comprehensive and standardized as all the information is collected using a consistent method across national boundaries (Zuraida et al., 2015). Moreover, the 5 financial performance

indicators have been selected because they can be considered the most widely used and reliable in reflecting the CFP.

However, as multicollinearity was found in PTB ratio, therefore the variable was excluded. Tobin's Q has also been removed in sustainability index and list test of Malaysia and Singapore models whereas ROA has been removed in sustainability index and list test of Thailand model, both due to multicollinearity problem. Additionally, industry and sustainability index and list will be used as control variable.

Furthermore, SPSS (Statistical Package for the Social Sciences) is adopted to compute empirical result because of its statistical capabilities. For this research, SPSS provides the functions of Multiple Regression Analysis (F-Test and T-Test Statistics), the Descriptive Analysis, and Partial Correlation that have been adopted in this study. Apart from that, SPSS also consists functions for diagnostic checking, which are Breusch-Pagan Test as well as Tolerance (TOL) and Variance Inflating Factor (VIF) to detect heteroscedasticity and multicollinearity problem respectively.

3.2 Measurement of Variables

All the variables, including ESG disclosure level, ROE, ROA, EPS, Tobin's Q, and PTB ratio, have different method to calculate. In this part, the measurement of variables will be discussed.

3.2.1 ESG Disclosure

In this study, ESG disclosure level is determined by Bloomberg's ESG disclosure score. Point will be the unit for ESG disclosure score. The score ranges from 0.1 to 100 for those that disclose every data, based on publicly available data. N/A will be given for firms that are not covered by ESG

group or who do not disclose anything. Each data point is weighted in terms of importance, and the score is also tailored to different industry sectors.

Bloomberg's ESG disclosure score has been collected from 3 sources of information. Firstly, the public ESG information is gathered through a company's annual report, sustainability stand-alone report, and official website which are based on the voluntary disclosure. Secondly, Bloomberg has also collected information from some reliable public sources, for example the carbon disclosure project (CDP). Next, Bloomberg would also send out questionnaires to the companies that have been rated to obtain additional ESG data. (Zuraida et al., 2015).

3.2.2 Return on Assets (ROA)

ROA ratio is an indicator of profitability level of a firm relative to its total assets and to show the efficiency of its management in using its assets to generate earnings, in percentage (%). In other word, a high ROA firm indicates the effectiveness of its management in generating income with firm's assets. Thus, investors can discover the effectiveness of a firm through its ROA ratio and make an accurate investment decision. (Tayeh, Al-Jarrah, & Tarhini, 2015).

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

3.2.3 Return on Equity (ROE)

ROE ratio is a measurement of the profitability of a company by revealing how much a firm is earning with shareholder's capital invested, in percentage (%). In other words, a company with high ROE indicates that the company has maximized the shareholders' return based on their money invested in earlier time. Therefore, a high ROE would lead to investors' confidence and increase their willingness to invest money into the company. (Alexander & Nobes, 2002).

$$ROE = \frac{Net\ Income}{Shareholder's\ Equity}$$

3.2.4 Earnings per Share (EPS)

EPS is the portion of a firm's profit allocated to each shareholder, in currency. EPS is also a measurement that shows the profitability of a company on shareholder basis. A high EPS company is better because it means that the company is earning money and it has more profit to distribute to its shareholder. Hence, investors tend to seek for a company with steadily growing EPS to plan their investment decision. (Chashmi & Fadaee, 2016).

$$EPS = \frac{Net\ Income}{Outstanding\ Common\ Shares}$$

3.2.5 Tobin's Q Ratio

Tobin's Q ratio is a ratio of measuring the market value of a firm against the replacement cost of the firm's assets. It is based in the hypothesis that in the long run the firm's market value should roughly equal the replacement cost of the company's assets. If market value of a firm is higher than replacement cost, there is an overvalued stock. In contrast, low market value than replacement cost indicates that stock is undervalued. (Tobin & Brainard, 1968). Tobin's Q ratio provides a valuable checking tool for investors before investing their capital (Turner, 2017).

$$Tobin's\ Q = \frac{Total\ Market Value of\ Firm}{Total\ Assets Value of\ Firm}$$

3.2.6 Price to Book (PTB) Ratio

PTB ratio is an indicator of stock's market price to the book value per share. It is a reliable tool for investors to compare the market price and book value of a stock. A high PTB ratio indicates that there is a growing share price and increasing return for investors. (McClure, n.d.).

$$P/B\ ratio = \frac{Market\ Price\ Per\ Share}{Book\ Value\ Per\ Share}$$

3.2.7 Control Variable: Industry

Majority of prior studies found that industry is closely linked with CFP and sustainability issues (Brammer, et al., 2006; Godfrey, et al., 2007; Mahoney

et al., 2007; Yu-Shu, et al., 2015). Thus, the different types of industry of sample companies has used as control variable, using Bloomberg industry classification standard. This is because the industry type of companies would be consistently categorized by adopting same method. To control the industry effect, all the sample firms were classified into 10 categories with values: 0:Consumer Discretionary, 1:Consumer Staples, 2:Energy, 3:Financials, 4:Health Care, 5:Industrials, 6:Materials, 7:Real Estate, 8:Telecommunication services, 9:Utilities.

3.2.8 Control Variable: Sustainability Index and List

Sustainability Index and list of Malaysia, Thailand, and Singapore have been employed as control variable for the study. F4GBM Index, which is an index in Malaysia emphasizing on ESG issues will be adopted. On the other hand, due to the absent of sustainability index in Thailand, Thailand Sustainability Investment, a sustainability list that is officially implemented by Thailand government will be used. Additionally, SGX Sustainability Index will also be included as control variable for Singapore model. In this study, sample firms will be categorized into two groups, which firms included in sustainability index and list are coded as 1, whereas firms excluded are coded as 0 in data analysis.

3.3 Data Analysis

Data analysis can be meant as the process of measuring the data by running different types of tests in order to ensure the whole model and individual variables are significant. Thus, there are several tests will be conducted to examine the cycle relationship between ESG disclosure score and CFP to achieve the objective of study. There are a few methods employed to analyze the data. Multicollinearity test and heteroscedasticity test for diagnostic checking as well as multiple linear regression analysis have been discussed in this session.

3.3.1 Diagnostic Checking: Multicollinearity Test

Multicollinearity is a condition which at least two or more independent variables are highly correlated or inter-association in a regression model (Vatcheva, Lee, McCormick, & Rahbar, 2016). Even though multicollinearity is not a violation of regression analysis assumption, but there are several issues arise when multicollinearity exists. Firstly, result may not be interpreted precisely due to unstable result of p-values for defining the significance of predictors that caused by biased standard errors (Tu, Clerehugh, Gilthorpe, 2004). Secondly, the regression model will still consider BLUE (Best Linear Unbiased Estimator), although multicollinearity exists. In other word, overall fit of predictors in the model does not affected by multicollinearity issue but it may end up to non-meaningful result (Williams, 2015). If multicollinearity of predictor variables ignored, it would likely lead to unrealistic result because overlapping information shared among predictors will deter identification of key independent effect of particular predictor variables on the outcome variable (Vatcheva et al., 2016).

Before this problem can be solved, we must first be able to detect this issue. However, there has no clear cut method to evaluate multicollinearity of a regression model. According to Jeeshim and KUCC (2002), there are few approaches to detect multicollinearity. TOL and VIF are both the widely used methods to measure the degree of multicollinearity exists. TOL and VIF are two closely interrelated statistics for diagnosing collinearity in regression model, (O'brien, 2007).

The result of TOL are ranging from 1 to 0, whereby result close to 0 indicates multicollinearity is exists, whereas result close to 1 indicates only little multicollinearity issue (Miles, 2014). For VIF, a rule of thumb often adopted to identify severity of the multicollinearity which is if values of VIF

is more than 10, it indicates a high multicollinearity, whereas VIF close to 1 suggests a low multicollinearity (Heckman, 2015).

In order to overcome multicollinearity issue, one of the solutions is to remove one of the predictors which highly correlated to others predictors in the regression model. This solution helps to improve the overall estimation of the model and all remaining predictors become more meaningful as redundancy of the information has removed (Tu, et al., 2004).

3.3.2 Diagnostic Checking: Heteroscedasticity Test

Heteroscedasticity happens when the error term are not equal across the data, whereas homoscedasticity is the variance of the error term is constant across the data. However, linear regression model is generally assume homoscedasticity for the error term, in other word variance is assumed to be constant across all level of the independent variables (Williams, Grajales, Kurkiewicz, 2013). In other word, heteroscedasticity of error considered as a violation of homoscedasticity assumption in the regression model. Estimation of linear regression model without constant variance across predictors is still considered as unbiased and consistent but will not be efficient (Weisberg, 2005). In the end, the overall power of the test will decrease as result can no longer be justified (Williams et al., 2013).

According to Williams (2015), there are some reasons that might cause heteroscedasticity, for instance large variance of group size, data outlier or model misspecification. Besides, Williams (2015) also stated some consequences of heteroscedasticity such as violated regression model are no longer BLUE (Best Linear Unbiased Estimator) and biased standard errors which will lead to bias in confidence intervals and statistics test.

There are various of methods can be used to diagnose the heteroscedasticity, for instance, White's test, Breusch-Pagan test, Glesjer test, Goldfeld test,

Park test and so on. In this study, Breusch-Pagan test will be used to test heterogeneous of data. Hypothesis will be formed for heteroscedasticity as below:

H_0 = The model is Homoscedasticity.

H_1 = The model is Heteroscedasticity.

Significance of the hypothesis will be determined by the result, p-value computed with Breusch-Pagan test. H_0 will be rejected if p-value is less than significance level, which is 0.05, otherwise do not reject H_0. In other word, the model is heteroscedasticity if H_0 is rejected from the test. If heteroscedasticity detected in this study, weighted least square regression will be conducted to solve this issue.

3.3.3 Inferential Analysis: Multiple Linear Regression

Multiple linear regression is a technique used to estimate the statistical relationship among variables ("Multiple Linear Regression-MLR", n.d.). In other word, main focus of multiple linear regression is to test a regression model with multiple independent variables and one dependent variable (Uyanık, & Güler, 2013). The combined level of effect of each independent variable on the dependent variable will be explained statistically once the test is conducted (Pandis, 2016).

According to Uyanık et al. (2013), there are some assumptions of multiple linear regression such as normality, linearity, no outlier and missing value in the analysis. However, outlier data has been included in this study due to 2 reasons. Firstly, in the research of Bakker and Wicherts (2014), it suggested that the strength of test and reporting errors are not associated to outliers. Furthermore, not all outlier data should be removed as it is possible to get a legitimate outlier information from the population that sampled

legitimately (Osborne & Overbay, 2004). Hence, outlier data in our study are not removed and included as a whole dataset.

Typically, t-test in multiple linear regression model is applied to examine the relationship between dependent and independent variables. The null hypothesis of t-test represents that both the variables have insignificant relationship. Meanwhile, the alternative hypothesis represents that independent variable is statistically significant to dependent variable. If the t-value is more than $p = 0.05$, then null hypothesis will be rejected. Or else, null hypotheses will not be rejected in this study.

3.4 Hypotheses Development

H_1: Cycle relationship exists between ESG disclosure and company financial performance.

H_2: Company financial performance in period 1 has significant impact on ESG disclosure in period 2.

H_3: ESG disclosure in period 2 has significant impact on company financial performance in period 3.

H_4: Cycle relationship exists between ESG disclosure and company financial performance, comparing the companies in different industries.

H_5: Cycle relationship exists between ESG disclosure and company financial performance, comparing the companies included in and excluded from sustainability index and list.

3.5 Chapter Summary

The research design is classified as exploratory design as no earlier research has been done in Malaysia, Singapore and Thailand. Secondary data are collected from Bloomberg with 52, 38 and 50 sample size after removing missing data for Malaysia, Thailand and Singapore respectively. Besides, non-probability sample technique is adopted in order to acquire specific information and this study is designed as cross sectional because data will be analyzed across three different time periods. Other than that, total of eight variables are explained, which are ESG disclosure score, ROE, ROA, EPS, Tobin's Q, PTB ratio, industry and sustainability index and list. Furthermore, SPSS is adopted to compute statistic result of relevant analysis employed in this study such as descriptive analysis, partial correlation, multiple linear regression, multicollinearity test and heteroscedasticity test. Five hypotheses have been developed according to research purposes in order to justify research objectives. The next chapter will cover the statistical result carried out by using SPSS.

CHAPTER 4: DATA ANALYSIS AND DISCUSSIONS

4.0 Introduction

Chapter 4 discusses the findings of the research. The discussion of data analysis is divided into five sections. The first section presents the result of descriptive analysis. Next, the result of partial correlation is provided in the second section. In the third section, the diagnostic checking that includes the multicollinearity test and heteroscedasticity tests are employed in this study. Then, followed by the result and discussion of inferential analyses at the fourth section and lastly, the chapter summary.

4.1 Descriptive Analysis

The result of descriptive analysis for Malaysia, Thailand, and Singapore data is shown in Appendix 4.1.

From the result we can see that Thailand (32.406) have the highest mean of ESG disclosure score follow by Singapore (22.981) and Malaysia (22.978). This also indicates that, Thailand is the best in overall ESG disclosure score among 3 countries. Besides, the mean of ESG disclosure score for Malaysia and Singapore only have 0.003 score different.

Apart from that, the maximum value of ROE1 and ROE2 presents a very big gap in all three countries. For ROE1, Singapore has the highest maximum value which is 995.45 whilst Malaysia has the highest maximum value for ROE2, which is 300.084. The high maximum value of ROE1 in Singapore and ROE2 in Malaysia are caused by common reason, which there is a company in the respective countries has extreme ROE value, and both the companies in Malaysia and Singapore are belonged to telecommunication services industry.

Regarding to the standard deviation, both highest maximum value of ROE1 and ROE2 contributes to highest standard deviation value in Singapore (133.069) and Malaysia (43.466) respectively.

According to Kuo (2016) and Chong (2013), telecommunication service companies would normally achieve high value of ROE due to high financial leverage.

4.2 Partial Correlation

The result of partial correlation analysis will be shown in Appendix 4.2.

In Malaysia, result indicates that there is a positive significant relationship between ROE1, EPS1, TOBIN1, TOBIN2 and PTB1 and ESG disclosure score at 95 percent confidence level, while positive significant relationship between ESG disclosure score and ROE2, EPS2 and PTB2 at 99 percent confidence level, and positive significant relationship exist between ESG disclosure score and ROA2 at 90 percent confidence level. TOBIN1 has shown the strongest correlation whereas ROA2 shows the weakest correlation with ESG disclosure score among all variables. There is only one variable which is ROA1 does not have significant relationship with ESG disclosure score.

In Singapore, EPS1 and EPS2 show negative significant correlation with ESG disclosure score at 90 percent confidence level and 95 percent confidence level accordingly. On the other hand, PTB1 shows positive significant correlation with ESG disclosure score. EPS2 shows a strongest correlation with ESG disclosure score in Singapore whereas PTB1 shows the weakest.

Similar but opposite, EPS1 and EPS2 show positive significant correlation with ESG disclosure score in Thailand at 99 and 90 percent confidence level respectively. Meanwhile, TOBIN2 also present significant correlation with ESG disclosure score

however it is negatively correlated. For Thailand ESG disclosure score, EPS1 shows the strongest correlation whereas EPS2 shows weakest correlation.

According to the partial correlation analysis outcome, only EPS1 and EPS2 consistently show significant correlation with ESG disclosure score in all three countries at different confidence level, whereas ROA1 consistently show insignificant result in all three countries.

4.3 Diagnostic Checking

Diagnostic checking tests will be conducted to determine whether the problem of multicollinearity and heteroscedasticity will exist in the regression model.

4.3.1 Multicollinearity Test

Results of before and after adjustment of multicollinearity test in Malaysia, Thailand, and Singapore have been shown in Appendix 4.3 and Appendix 4.4.

According to the rule of thumb, variables with correlation larger than 0.8 or 0.9 might occur multicollinearity issue (Midi, Sarkar, & Rana, 2010). From the result of partial correlation, there is strong correlation between a few variables which correlation more than 0.8 and 0.9. Therefore, relevant tests were conducted to examine the existence of multicollinearity issue.

According to the rule of thumb of TOL and VIF, multicollinearity issue exits when there is a value of TOL less than 0.1 a value of VIF more than 10. From the result of multicollinearity test via SPSS, regression model 1 in Singapore presents a collinearity issue between ROE1 and PTB1, as TOL value of ROE1 (0.001) and PTB1 (0.001) are less than 0.1 and both VIF value of ROE1 (1015.881) and PTB1 (1032.856) is higher than 10.

In order to solve the multicollinearity problem, the highest degrees of collinearity predictor, which is PTB is removed from the whole analysis to get more accurate data (Voss, Nylén, Floderus, & Diderichsen, 2004). After the adjustment, value of TOL and VIF have changed and the degree of multicollinearity in the model become acceptable, which with all TOL value greater than 0.1 and all VIF value lower than 10 after removing PTB.

4.3.2 Heteroscedasticity Test

Breusch-Pagan test is adopted to examine the existence of heteroscedasticity in all the regression models of 3 countries. As the result, the homoscedasticity assumption of multiple linear regression model can be fulfilled. The hypotheses of heteroscedasticity test has shown as below:

H_0 = The model is Homoscedasticity.

H_1 = The model is Heteroscedasticity.

Table 4.1 shows the result of Breusch-Pagan test.

Table 4.1 Summary from the Result of Breusch-Pagan Test

	Malaysia	**Singapore**	**Thailand**
		Breusch-Pagan Test	
Model:	P-value	P-value	P-value
1	0.635	0.585	0.702
2	**0.00****	**0.00****	0.008
3	**0.017****	0.243	0.001
4	0.186	0.074	**0.00****
5	**0.007****	0.49	**0.14****

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Developed for the research

The decision rule of heteroscedasticity test indicates that null hypothesis will be rejected if p-value lower than 0.05, otherwise do not reject null hypothesis. In Malaysia, p-value of regression model 2, 3 and 5 are lower than 0.05, meaning that null hypothesis will be rejected and heteroscedasticity exist in those models. At the same time, heteroscedasticity issue also appears in model 2 for Singapore with 0.00 p-value and model 4 and 5 for Thailand with 0.00 and 0.14 p-value accordingly.

Models that show heteroscedasticity result has violated the assumption of multiple linear regression which could make the outcome to be invalid. To solve this issue, weighted least square (WLS) regression is used in the study. WLS is a simple regression model with different weights for different cases to resolve the problem caused by inconstant size of residual.

4.4 Inferential Analyses

H_2: Company financial performance in period 1 has significant impact on ESG disclosure in period 2.

Hypothesis 2 states that corporate financial performance in period 1 has significant impact on ESG disclosure score in period 2. In this study, ROE1, ROA1, EPS1, and TOBIN1 are used as CFP, the independent variables and ESG disclosure score is used as the dependent variable. PTB ratio is removed due to multicollinearity problem found. There are two control variables included in the analysis, which are industry and sustainability index and list.

Model 1 is formed according to the variables described above:

Model 1:

$$ESG = \beta_0 + \beta_1 ROE1 + \beta_2 ROA1 + \beta_3 EPS1 + \beta_4 TOBIN1 + \beta_5 Industry + \beta_6 SustainabilityList$$

The summary of multiple linear regression model 1's findings is shown in Table 4.2.

Table 4.2 Summary from Result of Multiple Regression Model 1

	Malaysia			**Singapore**			**Thailand**		
Model 1:	B	Std. Error	P-value	B	Std. Error	P-value	B	Std. Error	P-value
(Constant)	5.956	3.484	0.094	20.511	5.399	0.00	27.792	5.359	0.00
ROE1	-0.011	0.128	0.930	0.027	0.014	0.062	-0.593	0.301	0.058
ROA1	-0.599	0.313	0.062	-0.557	0.538	0.306	1.39	0.849	0.112
EPS1	8.497	3.295	**0.013****	-2.756	1.343	**0.046****	0.859	0.295	**0.007****
TOBIN1	4.646	1.899	**0.018****	0.636	2.721	0.816	-0.94	1.862	0.617
IND	1.079	0.509	0.039	0.297	0.695	0.671	-1.696	0.871	0.061
Sus List	8.122	2.561	0.003	6.656	4.47	0.144	18.576	4.654	0.00
F Test	**0.00****			0.117			**0.001****		
R^2	0.494			0.203			0.48		
Adjusted R^2	0.426			0.092			0.38		

Source: Developed for the research.

In Malaysia, EPS1 (B=8.497, p=0.013) and TOBIN1 (B=4.646, p=0.018) are positively significant influence ESG disclosure score, indicating that null hypothesis is rejected. This result suggests that there are sufficient evidences to show the positive impact of ROE and Tobin's Q on ESG disclosure score.

In addition, EPS1 shown a significant relationship with ESG disclosure score in Singapore (B=-2.756, p=0.046) and Thailand (B=0.859, p=0.007). Thus, null

hypothesis is rejected in both models and this indicates that companies' EPS and Tobin's Q are significantly influence the disclosure level of ESG in Singapore and Thailand. However, there is a negative relationship between EPS and ESG disclosure score in Singapore.

The finding of significant relationship between EPS and ESG disclosure is different from study of Damak-Ayadi (2009), which reported an insignificant relationship between EPS and social and environmental reporting level in France.

The significant impact of EPS and Tobin's Q on ESG disclosure in Malaysia may due to a few reasons. Firstly, Malaysia government established a CSR Framework on September 2006 (SC, 2017.). This has provided the company an insight that Malaysia government is concerning about the sustainability issue. Additionally, company are also ready to compete for SRI fund that introduced by government (Tuah, 2015). EPS has also significantly influenced ESG disclosure level in Thailand. It may due to the effort of Thailand government in implementing sustainability-related policy and taking action in this areas. According to a survey conducted by Corporate Knights (2016), Thailand has shown a dramatic improvement on Bloomberg ESG disclosure score and it proved that Thailand listed companies has adopted the high level of ESG disclosure practice.

In conclusion, company with good financial performance would willing to disclose more ESG and sustainability information to public. This finding has also been supported by slack resources theory, which firms with slack resources are willing to allocate their resources in sustainability practise and reporting, resulting in improved ESG disclosure level.

However, in Singapore, the demand of ESG reporting is considered low. Sustainalytics, the world's leading sustainability disclosure providers decided to withdraw business from Singapore after experiencing limited business chance. (Hicks, 2017). Hence, negative relationship between EPS and ESG disclosure is found from the analysis. This result is also consistent with managerial opportunism hypothesis, which a financially well company's manager might focus on continue pursuing short-term earning target and reluctant to invest resources in sustainability

reporting. As a result, a profitable company may not lead to good ESG disclosure level.

H_3: ESG disclosure in period 2 has significant impact on company financial performance in period 3.

Hypothesis 3 states that ESG disclosure score in period 2 has significant impact on corporate financial performance in period 3. Industry and sustainability index and list are included in the regression model as control variables.

There are 4 regression models formed to investigate the relationship between ESG disclosure as dependent variable and ROA2, ROE2, EPS2, and TOBIN2 as independent variable. The 4 models formed are shown as follow:

Model 2:

$$ROE2 = \beta_0 + \beta_1 ESG + \beta_2 Industry + \beta_3 SustainabilityList$$

Model 3:

$$ROA2 = \beta_0 + \beta_1 ESG + \beta_2 Industry + \beta_3 SustainabilityList$$

Model 4:

$$EPS2 = \beta_0 + \beta_1 ESG + \beta_2 Industry + \beta_3 SustainabilityList$$

Model 5:

$$TOBIN2 = \beta_0 + \beta_1 ESG + \beta_2 Industry + \beta_3 SustainabilityList$$

The summary of all models' results is shown in Table 4.3, Table 4.4, Table 4.5, and Table 4.6.

Table 4.3 Summary from Result of Multiple Regression Model 2

	Malaysia			**Singapore**			**Thailand**		
Dependent Variable	B	Std. Error	P-value	B	Std. Error	P-value	B	Std. Error	P-value
ROE2									
(Constant)	38.3	8.781	0	12.744	4.706	0.009	25.632	4.887	0
ESG	-0.336	0.598	0.577	0.067	0.392	0.864	-0.422	0.085	**0.00****
IND	-3.884	1.322	0.005	2.17	1.02	0.039	-0.292	0.912	0.75
Sus List	-4.248	6.302	0.504	-12.038	4.088	0.005	10.139	3.488	0.006
F Test	**0.013****			**0.018****			**0.00****		
R^2	0.199			0.196			0.502		
Adjusted R^2	0.149			0.143			0.458		

Source: Developed for the research

Based on the outcome for model 2, ESG disclosure score shows no significant impact on ROE2, both in Malaysia (B=-0.336, p=0.577) and Singapore (B=0.067, p=0.864). In other word, do not reject null hypothesis. Whereas in Thailand, the result indicates that ESG disclosure score is significantly negative related to ROE2 (B=-0.422, p=0.00), which reject null hypothesis.

Table 4.4 Summary from Result of Multiple Regression Model 3

	Malaysia			**Singapore**			**Thailand**		
Dependent Variable	B	Std. Error	P-value	B	Std. Error	P-value	B	Std. Error	P-value
ROA2									
(Constant)	6.872	2.348	0.005	5.041	1.873	0.01	5.518	1.781	0.004
ESG	0.047	0.12	0.695	-0.027	0.058	0.637	-0.118	0.026	**0.00****
IND	-0.471	0.342	0.175	0.342	0.265	0.204	0.312	0.297	0.3
Sus List	0.935	1.977	0.638	-1.01	1.856	0.589	5.598	1.086	0
F Test	0.526			0.615			**0.00****		
R^2	0.045			0.038			0.692		
Adjusted R^2	-0.015			-0.025			0.458		

Source: Developed for the research

For model 3, Malaysia (B=0.047, p=0.695) and Singapore (B=-0.027, p=0.637) show an insignificant relationship between ESG disclosure score and ROA2, thus do not reject null hypothesis. In Thailand, null hypothesis is rejected as result shows ESG disclosure score (B=-0.118, p=0.00) has significantly negative impact on ROA2.

There is insufficient evidence to state that ESG disclosure has significant effect on ROE2 and ROA2 in Malaysia and Singapore. The insignificant impact of ESG disclosure score on ROE2 and ROA2 in Malaysia and Singapore have supported by study of Charlo et al. (2015), Cheung et al. (2010), Dewi (2015), Nor et al. (2016), and Sharma et al. (2016). Whereas, there is sufficient evidence to show that ESG disclosure score has significantly negative impact on ROE2 in Thailand.

Based on the findings, ESG disclosure score is showing a significant negative impact on ROE2 and ROA2 in Thailand. Actually, Thailand government has put a lot of effort in encouraging companies to disclose ESG information to public, but, the companies' awareness may remain a dissatisfy level. This may due to the absent of sustainability index in Thailand. According to SET (2015), Thailand is currently in the process of constructing an ESG index. As a result, it may lead to a perspective that ESG disclosure is not important and companies may think that it is unnecessary to disclosure as it does not provide any direct benefits but only add cost to their operation (Siregar & Bachtiar, 2010).

Table 4.5 Summary from Result of Multiple Regression Model 4

	Malaysia			Singapore			Thailand		
Dependent Variable	B	Std. Error	P-value	B	Std. Error	P-value	B	Std. Error	P-value
EPS2									
(Constant)	0.442	0.138	0.002	0.781	0.358	0.034	2.172	2.802	0.444
ESG	0.013	0.006	**0.029****	-0.025	0.011	**0.029****	0.015	0.102	0.885
IND	-0.052	0.022	0.022	0.043	0.051	0.4	-0.008	0.367	0.982
Sus List	-0.101	0.13	0.44	0.294	0.354	0.412	4.195	2.242	0.07
F Test	**0.026****			0.123			0.158		
R^2	0.174			0.117			0.14		
Adjusted R^2	0.123			0.059			0.064		

Source: Developed for the research

According to the result of model 4, ESG disclosure score of Malaysia (B=0.013, p=0.029) and Singapore (B=-0.025, p=0.029) has significant influence on EPS2. Hence, null hypothesis is rejected. The different is ESG disclosure in Malaysia is positively related whereas in Singapore it is negatively related to EPS2. On the other hand, Thailand ESG disclosure score has insignificant relationship with EPS2 (B=0.015, p=0.885), which means that it does not have enough evidence to show there is a significant relationship between ESG disclosure and EPS2, supported by Charlo et al. (2015).

For Malaysia, there is significant positive effect of ESG disclosure score toward EPS2. According to Siregar et al. (2010), high ESG disclosure level can contribute to improvement of companies' non-disclosing reputation and strengthen the relationship between shareholders and stakeholders, thus gaining support from them in various ways and lead to inclining CFP. Malaysia government has also launched a Sustainability Guide and Toolkit to encourage Malaysian companies in considering sustainability activities and reporting (ACCA, 2016).

This outcome is consistent to resource-based view theory, good management theory, stakeholder theory, agency theory, and legitimacy theory, indicating that a company

with good ESG disclosure level can gain competitive advantage, improve effectiveness and efficiency, build closer relationship with stakeholders and shareholders by reducing information asymmetry, and obtain legitimate image from public.

According to Hicks (2017), Singapore companies are allowed to disclose their sustainability information based on voluntary basis since 2011. In this case, Singapore government is unlikely to play a significant role in promoting investors and companies to view and adopt ESG disclosure as a tool in addressing sustainability risks and opportunities. In addition, Sharma et al. (2016) stated that voluntary sustainability reporting could bring competitive disadvantage because cost incurred may outweigh the profit and benefit earned. As a result, a good ESG disclosure may not lead to a good CFP. This is supported by trade-off thinking, which companies would make decision in either investing in ESG disclosure practice or focusing on maintaining CFP, resulting a negative relationship.

Table 4.6 Summary from Result of Multiple Regression Model 5

	Malaysia			**Singapore**			**Thailand**		
Dependent Variable	B	Std. Error	P-value	B	Std. Error	P-value	B	Std. Error	P-value
TOBIN2									
(Constant)	2.15	0.478	0	1.449	0.362	0	2.003	0.361	0
ESG	0.008	0.025	0.742	0	0.011	0.986	-0.018	0.009	0.06
IND	-0.174	0.069	0.014	-0.027	0.051	0.597	0.002	0.049	0.972
Sus List	0.632	0.393	0.115	0.091	0.358	0.801	0.377	0.309	0.231
F Test	**0.024****			0.962			0.268		
R^2	0.177			0.06			0.108		
Adjusted R^2	0.126			-0.059			0.029		

Source: Developed for the research

For model 5, Malaysia (B=0.008, p=0.742), Singapore (B=0.00, p=0.986) and Thailand (B=-0.018, p=0.060) fail to reject null hypothesis. In other word, ESG disclosure score has no significant relationship with TOBIN2 in all of 3 countries. The insignificant result may due to the characteristic of Tobin's Q ration, which is

a market-based financial indicator. According to Mislinski (2017), Tobin's Q is more appropriate in evaluating long-term CFP but not a useful measurement in estimating short-term investment. Hence, it may be less reliable in determining CFP in the ESG context for this study. The study time frame which is 2 years for each period is still considered short to justify the long term effect of ESG disclosure on CFP.

H_1: Cycle relationship exists between ESG disclosure and company financial performance.

Hypothesis 1 stated that cyclic relationship will exist between ESG disclosure and financial performance. It is the hypothesis that combine hypothesis 2 and 3 by combining the results from regression model 1 and model 2 to 5.

Overall, in Malaysia, there is a positive cyclic relationship formed between ESG disclosure score and EPS. The null hypothesis is rejected. There is sufficient evidence showing that ESG disclosure and EPS will influence each other positively in both direction. The results suggest a virtuous cycle of ESG disclosure score in Malaysia: a companies with better CFP will invest their resources to improve the ESG disclosure practice, in turn, better ESG disclosure performance leads to a better CFP.

On the other hand, Singapore can also be concluded that there is a cycle relationship between ESG disclosure score and EPS, but in negative direction. The null hypothesis is rejected. There is sufficient evidence showing that ESG disclosure and EPS will influence each other negatively in both direction. The result suggests that company with good financial performance would not invest more in disclosing ESG information, and even a good ESG disclosure could not help the company to reap benefits and improve further their CFP.

On the other hand, there is no any cyclic relationship formed between ESG disclosure and CFP in Thailand. The null hypothesis is not rejected. This may due to the insufficient data available in Bloomberg for Thailand. The initial top 100

Thailand listed companies sample size has been narrowed down to only 38 companies with complete information needed.

H_4: Cycle relationship exists between ESG disclosure and company financial performance, comparing the companies in different industries.

Hypothesis 4 states that cyclic relationship presents between ESG disclosure and CFP when categorizing the companies into different industries. The summary for frequency of companies that categorized in each industry is shown in Table 4.7.

Table 4.7 Summary for Frequency of Companies in Each Industry

Country	**Malaysia**		**Singapore**		**Thailand**	
Industry	Frequency	Percent	Frequency	Percent	Frequency	Percent
Consumer Discretionary	5	9.6	6	12	3	7.9
Consumer Staples	8	15.4	7	14	3	7.9
Energy	3	5.8	-	-	5	13.2
Financials	9	17.3	5	10	8	21.1
Health Care	3	5.8	1	2	1	2.6
Industrials	9	17.3	13	26	4	10.5
Materials	2	3.8	-	-	4	10.5
Real Estate	5	9.6	15	30	3	7.9
Telecommunication Services	4	7.7	3	6	4	10.5
Utilities	4	7.7	-	-	3	7.9
Total	52	100	50	100	38	100

Source: Developed for the research

Based on the table, there are very limited sample size for companies in each industry. Hence, further analysis on each industry is hard to be conducted. The hypothesis 4 is removed from multiple regression study.

In Malaysia (17.3%) and Thailand (21.1%), the industry with highest number of companies in this study is financial. However, in Singapore, real estate is the industry with most companies, which is different from Malaysia and Thailand. Moreover, none of the Singapore sample firms is from energy, materials, and utility industry.

H_5: Cycle relationship exists between ESG disclosure and company financial performance, comparing the companies included in and excluded from sustainability index and list.

Hypothesis 5 states that cyclic relationship exists between ESG disclosure and CFP based on companies' sustainability index and list inclusion and exclusion. The summary of all analysis will be shown in Table 4.8, Table 4.9, and Table 4.10.

Table 4.8 Summary for Companies Included and Excluded (Sustainability Index and List)

	List Included	**List Excluded**
Malaysia	Mean	Mean
ESG	27.916	18.04
Percentage	50	50
Singapore		
ESG	24.214	17.364
Percentage	82	18
Thailand		
ESG	39.712	23.381
Percentage	55.3	44.7

Source: Developed for research

Based on the outcome, in Malaysia, there are 50 percent of the sample companies are included in F4GBMIndex and the remaining 50 percent companies are excluded. The mean of ESG disclosure score in companies that are included (27.916) are greater than those that are excluded (18.04). In Singapore, a total of 82 percentage of sample companies are included in SGX Sustainability Index and only 18 percent of sample companies are excluded. Similarly, ESG mean of companies included (24.214) is higher than those that excluded (17.364). Same result applied to Thailand as ESG mean of sample companies excluded from Thailand Sustainability Investment List (23.381) is lower than ESG mean of companies that included (39.712). Therefore, there is undeniable that companies included in sustainability index and list will have better ESG disclosure score compare to those that are excluded regardless the country.

Table 4.9 Summary for Multiple Regression Analysis Model 1 (Sustainability Index and List)

	Malaysia		**Singapore**		**Thailand**	
Sus List	P-value (Included)	P-value (Excluded)	P-value (Included)	P-value (Excluded)	P-value (Included)	P-value (Excluded)
ROE1	0.044	0.485	0.085	0.848	0.129	0.889
ROA1	0.101	0.947	0.374	0.5	-	-
EPS1	0.836	0.112	0.086	0.355	0.636	**0.002****
TOBIN1	-	-	-	-	0.411	0.68

Source: Developed for the research

Table 4.10 Summary for Multiple Regression Analysis Model 2-5 (Sustainability Index and List)

	Malaysia		Singapore		Thailand	
Sus List	P-value (Included)	P-value (Excluded)	P-value (Included)	P-value (Excluded)	P-value (Included)	P-value (Excluded)
ROE2						
ESG	0.74	**0.009****	0.259	0.084	0.219	0.723
ROA2						
ESG	0.641	0.068	0.899	0.349	-	-
EPS2						
ESG	0.617	**0.003****	0.059	0.259	0.781	0.103
TOBIN2						
ESG	-	-	-	-	0.116	0.27

Source: Developed for the research

In this analysis, Tobin's Q in Malaysia and Singapore while ROA in Thailand are removed from regression model due to multicollinearity issue occur. Based on the findings, EPS1 in Thailand's companies that are excluded from sustainability list (p=0.002) show significant positive relationship, indicating that it has significant impact on ESG disclosure score. Moreover, ESG disclosure score (p=0.009, p=0.003) presents a significant relationship toward ROE2 and EPS2 respectively in Malaysian companies that also excluded from the index. In Singapore, there is no any significant result found. This may due to the lacking of awareness and market adoption of responsible investment tools in Singapore. However, there is no any cyclic relationship exists either in sustainability list and index inclusion or exclusion in all the three countries. Hence, null hypothesis is not rejected in Malaysia, Thailand, and Singapore.

This analysis is lacking of validity because it has limited sample size after categorizing the companies into sustainability index and list inclusion and exclusion, arising issues regarding to violation of normality assumption in regression analysis.

As a result, the outcomes from this regression analysis cannot identify whether sustainability index inclusion or exclusion could affect the relationship between ESG disclosure and CFP.

4.5 Chapter Summary

The result of descriptive shown that Thailand have the highest mean in ESG disclosure score compared to Malaysia and Singapore which indicated that Thailand have better overall ESG disclosure than the others two countries. In multicollinearity test, PTB has been removed from the regression model as it is found to be highly correlated to ROE with TOL lower than 0.1 and VIF higher than 10 in Singapore data. Furthermore, the result of Breusch-Pagan test shown some models occur heteroscedasticity issue which null hypothesis is rejected. Hence, weighted least square is used to solve the heteroscedasticity issue by allocating weight in each case to resolve inconsistent size of residual. From the multiple linear regression analysis, EPS illustrated a positive cycle relationship in Malaysia and negative cycle relationship in Singapore, whereas Thailand does not have any cycle relationship. In the following chapter, discussion of the study implications, limitations and recommendations will be covered.

CHAPTER 5: CONCLUSION AND IMPLICATIONS

5.0 Introduction

Chapter 5 provides the overall conclusion from the first chapter to the fourth chapter. Therefore, the implications derived based on the findings from this study will be given, followed by the research limitation and recommendation for future researchers.

5.1 Conclusion

The purpose of this study is to examine the existence of cycle relationship between ESG disclosure and CFP. In this study, sample size of 52, 38 and 50 PLCs in Malaysia, Thailand and Singapore respectively are included in this study. Besides, Bloomberg ESG disclosure score is adopted in measuring ESG disclosure, while ROE, ROA, EPS, Tobin's Q and PTB are used as measurement of CFP. In this study, two year lag assumption is used in data analysis and the study is conducted in three period, to test how period 1 (2011-2012) CFP influences period 2 (2013-2014) ESG disclosure and how period 2 ESG disclosure's impact on period 3 (2015-2016) CFP.

In this study, the results of inferential tests suggest that EPS in period 1 is positively related to ESG disclosure in period 2 when industry and sustainability index and list are controlled in Malaysia context. The finding could be justified with CSR framework that introduced by Malaysian government since 2006 which has provided the insight of sustainability issue to corporate and indirectly improved the awareness of ESG disclosure in Malaysia business environment. Other than that, these findings also supported by slack resource theory: firms performed well in term of financial performance would more willing to allocate their resources in sustainability practice and reporting, resulting in improved ESG disclosure level.

On the other hand, ESG disclosure in period 2 is also found to be positively correlated to EPS in period 3 when industry and sustainability index and list are controlled in Malaysia context. This finding is supported by resource-based view theory, good management theory, stakeholder theory, agency theory, and legitimacy theory in a sense that good disclosure level can gain competitive advantage, improve effectiveness and efficiency, build closer relationship with stakeholders and shareholders, and obtain legitimate image from public. Hence, taken together, the result suggests a positive cycle relationship exists between ESG disclosure and CFP in Malaysia context.

In Singapore context, negative relationship is found in both relationship between EPS in period 1 and ESG disclosure in period 2, and also ESG disclosure in period 2 and EPS in period 3. The finding of relationship in period 1 and 2 is supported by managerial opportunism hypothesis, which a financially well company's manager might focus on pursuing short-term benefits and reluctant to invest resources in sustainability reporting. While for the finding of relationship in period 2 and 3 could be explained by trade-off thinking: good ESG disclosure may not lead to a good financial performance because cost incurred in disclosing ESG information may outweigh the benefit earned. Therefore, taken together, the result shows negative cycle relationship between ESG disclosure and CFP in Singapore context and the main reason behind is the lacking of awareness and less serious attitude to view ESG disclosure as a valuable investment tool.

In Thailand context, it does not show any cycle relationship between ESG disclosure and CFP as the consistent linkage of significant relationship does not exists across three periods. Limited sample size could be the reason of this outcome as most of the sample companies in Thailand are excluded due to missing and incomplete data.

5.2 Implication

These findings have provided insights and implications to investors, corporate managers, and policymakers on how ESG reporting related to a CFP.

The findings of this study show that high ESG score would lead to better EPS in Malaysia analysis. The result is able to promote the value of ESG reporting on investors and then encourage them to focus and invest in the companies with good ESG disclosure score, which indicates the company is actively involved in sustainability activities and would have increasing CFP in future. By reviewing ESG information reported by a company through annual report, Bloomberg's ESG disclosure score, and other methods, investors are able to gain insights into a company's sustainability development along its strength, competitive advantage, and stock valuation when doing investment decision. Therefore, investors should include sustainability considerations in their investment strategic and decision, next closely focus on companies' ESG disclosure level to detect companies that have potential to achieve high profit and help them to gain better investment return.

The positive cycle relationship formed between Malaysian sample companies' ESG disclosure score and their EPS could change corporate management's perception that disclosing ESG and sustainability information would incur more cost than gaining benefits. Corporate management or managers could use the results of study to understand the financial implications of making sustainability reporting to the public. As the market is currently expecting and demanding more sustainability information from companies, management teams should involve themselves in sustainability relevant activities and reporting. Specifically, Bloomberg's ESG disclosure score can become one of the tools for managers to present their sustainability commitment to investors and public. In conclusion, companies should increase their willingness in investing their financial resources to actively engage in ESG reporting, which in turn further improving their CFP.

Recently, many countries still hesitate to take action in ESG disclosure practice, such as Indonesia and Philippines. By referring to the outcomes, there is a positive cycle exits in Malaysia whereas a negative cycle formed between EPS and ESG disclosure in Singapore. Through the result, regulators can gain insights on the negative side of lacking awareness and adoption toward ESG by comparing the findings in Malaysia, which better adoption, and Singapore, which lack of awareness. Thus, policymakers should implement numerous regulations related to ESG, educate management people via giving detailed guideline, and motivate firms to disclose sustainability information by providing reward. Specially, they could consider to provide tax relief as a reward to firms with good ESG reporting and this can compensate firms that feel too costly in disclosing ESG information. As a result, regulators could enjoy the benefits of greater transparency generated from improving company's ESG reporting level, which in turn reducing risks of corruption and strengthening monitoring mechanisms.

5.3 Limitation and Recommendation

In this study, there are some limitations in which future researchers could focus on. Firstly, the limited sample size after categorizing sample companies into 10 industries caused the multiple regression analysis cannot be carried out. The hypothesis 4, which indicates that cycle relationship exists between between ESG disclosure and CFP by comparing the companies in different industries is removed from the analysis. Secondly, there is only composite ESG disclosure investigated to examine whether it has significant relationship with CFP and able to form a cyclic relationship. In this case, the existence of cyclic relationship between effects of disclosing individual ESG elements on CFP, which Environmental (E), Social (S), and Governance (G) is not identified.

Therefore, future researches are suggested to conduct research regarding to cycle relationship between ESG disclosure and CFP by including all listed companies. This would solve the issue that limited sample size occur after grouping sample

companies into different industries. In addition, future researches can investigate the impact of individual ESG elements on CFP in order to find out whether the cycle relationship exists when different elements are used in analysis and gain more meaningful insight from that.

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APPENDICES

Appendix 2.1: Summary of ESG Disclosure Measurement Used in Prior Studies

Author(s)	Year	Bloomberg ESG disclosure score	Report	GRI G3	KPMG rating
Damak-Ayadi	2009		√		
Cheung & Mak	2010	√			
Rouf	2011		√		
Lapinskienė & Tvaronavičienė	2012	√			
Giannarakis	2013	√			
Dhaliwal, Zhen, Tsang, & Yang	2014		√		
Mcphail	2014	√			
Abeysinghe & Basnayake	2015			√	
Dewi	2015			√	
Giannarakis	2015	√			
Umoren, Udo, & George	2015		√		
Zaman, Arslan, & Siddiqui	2015		√		
Zuraida, Houqe, & van Zijl	2015	√			

Cahan, de Villiers, Jeter, Naiker, & van Staden	2016				√
Giannarakis, Konteos, Zafeiriou, & Partalidou	2016	√			
Nor, Bahari, Adnan, Kamal, & Ali	2016		√		
Sharma & Thukral	2016	√			
Kasbun, Teh, & Ong	2017		√		
Li, Gong, Zhang & Koh	2017	√			

Source: Developed for the research

Appendix 2.2: Summary of Financial Performance Indicators Used in Prior Studies

Authors(s)	ROE	ROA	ROS	ROC	EPS	TOBIN Q	PTB	PM	PBT	GTA
Nor, Bahari, Adnan, Kamal & Ali (2016)	√	√			√			√		
Mcphail (2014)	√	√		√		√				
Dewi (2015)	√	√								
Kasbun, Teh, & Ong (2017)	√	√		√					√	√
Vauhkonen (2017)	√	√								
Zaman, Arslan, & Siddiqui (2015)	√	√								
Charlo, Moya, and Munoz (2015)	√				√		√			
Abeysinghe & Basnayake (2015)	√									
Giannarakis (2013)	√		√							
Giannarakis (2015)	√		√							
Lawal, May, & Stahl (2017)	√									
Umoren, Udo, & George (2015)	√									
Li, Gong, Zhang, & Koh (2017)		√				√				
Sharma & Thukral (2016)		√				√				
Albers & Günther (2011)		√								

Authors(s)	ROE	ROA	ROS	ROC	EPS	TOBIN Q	PTB	PM	PBT	GTA
Dhaliwal, Zhen, Tsang, & Yang (2014)		√								
Giannarakis, Konteos, Zafeiriou, & Partalidou (2016)		√								
Lapinskienė, & Tvaronavičienė (2012)		√								
Rouf (2011)		√								
Zuraida, Houqe, & Van Zijl (2015)					√	√				
Anwaar (2016)					√					
Chetty, Naidoo, & Seetharam (2015)					√					
Siddik, Kabiraj, & Joghee (2017)					√					
Buallay, Hamdan, & Zureigat (2017)						√				
Cahan, De Villiers, Jeter, Naiker, & Van Staden (2015)						√				
Vu & Nguyen (2017)						√				
Wang, Chen, Yu, & Hsiao (2015)						√				
Damak-Ayadi (2009)					√					
Dulababu (2017)				√			√			

Source: Developed for the research

Appendix 2.3: Summary of Prior Literature Examining the Relationship between ESG Disclosure and CFP (CFP Influences ESG Disclosure)

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (Relationship)
Damak-Ayadi (2009)	To propose and empirically tests a model on determinants of social and environmental disclosure before and after the application of the new law	40 listed firms in the CAC40 index in France from 2000-2005	• Social & Environmental • Content analysis by quantifying the volume of the communications (number of sentences) in annual report	Earnings per share	Insignificant
Albers & Günther (2011)	To examine the determinants of disclosing a social report	Companies of STOXX Europe 600 Index	• GRI (1 or 0 scoring)	Return on assets	Significantly positive
Rouf (2011)	To test the relationship between FP and level of CGD	94 listed companies in 2007	• CGD • Annual report • 40 disclosure items	Return on assets	Significantly positive
Lapinskienė, & Tvaronavičienė (2012)	To analyse the willingness of firms to provide ESG related information	667 firms from fifteen European countries in 2006-2010	• ESG • Bloomberg ESG disclosure score (0-100 scoring)	Return on asset	Significantly positive

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (Relationship)
Dhaliwal, Li, Tsang, & Yang (2014)	To examine the benefits effects of transparency with CSRD on the cost of equity capital in an international setting	1093 firms from 1995-2007 in 31 countries	• CSR • Annual report disclosure (1 or 0 scoring)	Return on asset	Significantly positive
Giannarakis (2015)	To explore and analyse the influence of corporate characteristics on the extent of social and environmental disclosures.	100 US firms listed in the 2011 Fortune 500 list	• Social & Environmental • Bloomberg ESG disclosure score (0-100 scoring)	Return on equity	Significantly positive
Umoren, Udo, & George (2015)	To investigate the ESG practices in Nigerian quoted companies and discuss the need for integrated reporting (IR)	40 firms listed on the Nigerian Stock Exchange from 2013-2014	• ESG • Content analysis based on a checklist of 30 questions (1 or 0 scoring) developed by prior studies	Return on equity	Insignificant

Source: Developed for the research

Appendix 2.4: Summary of Results from Prior Study (CFP Influences ESG Disclosure)

Author(s)	Significant and Positive relationship	Significant and Negative relationship	Insignificant relationship
Lapinskiene & Tvaronaviciene (2012)	ROA		
Dhaliwal, Zhen, Tsang & Yang (2014)	ROA		
Rouf (2011)	ROA		
Albers & Günther (2011)	ROA		
Giannarakis (2015)	ROE		
Umoren, Udo & George (2015)			ROE
Damak-Ayadi (2009)			EPS

Source: Developed for the research

Appendix 2.5: Summary of Prior Literature Examining the Relationship between ESG Disclosure and CFP (ESG Disclosure Influences CFP)

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm	Findings (Relationship)
Cheung & Mak (2010)	To extend prior empirical studies on the CSRD and CFP by providing empirical evidence from the international commercial banking industry	57 publicly traded commercial banks extracted from Global Finance's Best Banks Rankings during 2006-2009	• CSR • Bloomberg ESG disclosure score (0-100 scoring)	• Return on asset • Return on equity	Insignificant
Giannarakis (2013)	To identify and expand potentially statistically significant drivers affecting the extent of CSRD	Firms listed in the 2011 Fortune 500 list	• CSR • 55 normal firms benchmark against 32 firms listed on Spanish FTSE4Good IBEX sustainability index	• Return on equity • Price to Book ratio • Earnings per share	• Insignificant • Insignificant • Insignificant
Charlo, Moya, & Muñoz (2015)	To determine whether adopting good social practices has an effect on CFP as well as its impact on the ease of obtaining investment funds	87 listed firms in Spanish in the year 2008	• CSR • Bloomberg ESG disclosure score (0-100 scoring)	Return on equity	Significantly positive
Abeysinghe & Basnayake (2015)	To examine the relationship between CSRD and CFP in domestic commercial banks in Sri Lanka	Six high performance domestic commercial banks for the period 2009-2013	• CSR • Content analysis against GRI index G3 guidelines • 20 disclosure items	Return on equity	Significantly negative

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (Relationship)
Cahan, de Villiers, Jeter, Naiker, & van Staden (2015)	To examine how the strength of nation-level institutions affects the extent of CSRD	676 listed firms from 21 countries in 2008	• CSR • KPMG ratings • 87 disclosure items	Tobin's Q	Significantly positive
Dewi (2015)	To analyse the role of CSRD in the annual report on firm's financial performance and Earnings Response Coefficient value.	48 companies listed in IDX for year 2013-2014	•CSR •Content analysis which measures CSR index variety (CSRI) against GRI index G3 guidelines • 79 items	• Return on assets • Return on equity	• Insignificant • Significantly positive
Zaman, Arslan, & Siddiqui (2015)	To examine the relationship between transparency and disclosure and firm performance in Pakistan banking sector.	30 banks in Paksitan for year 2007-2011	• Governance • Annual report • 21 disclosure items (1 or 0 scoring)	• Return on assets • Return on equity	• Significantly positive • Significantly positive
Giannarakis, Konteos, Zafeiriou, & Partalidou (2016)	To extend prior empirical studies by incorporating the extent of CSRD in relation to the CFP	104 US firms listed in the Standard & Poor's 500 Index for the period 2009-2013	• ESG •Bloomberg ESG disclosure score (0-100 scoring)	Return on assets	Significantly positive

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (Relationship)
Nor, Bahari, Adnan, Kamal, & Ali (2016)	To investigate the existences of the environmental disclosure and financial performance among top 100 company of market capitalization in Malaysia for the year 2011.	Top 100 company of market capitalization in Malaysia for the year 2011	• Environmental • Annual report • 20 disclosure items	• Return on equity • Return on assets • Earnings per share • Profit margin	• Insignificant • Insignificant • Insignificant • Significantly positive
Platonova, Asutay, Dixon, & Mohammad (2016)	To examine the relationship between CSR and CFP for Islamic banks in the Gulf Cooperation Council (GCC) for 2000–2014	24 fully fledged Islamic banks from five GCC countries (Bahrain, Saudi Arabia, Qatar, Kuwait and the UAE	• CSR • Content analysis against AAIOFI standards	• Return on average assets • Return on average equity	Significantly positive
Sharma & Thukral (2016)	To assess the impact of ESG disclosure on firm performance measured in accounting terms using ROA and market terms using Tobin's Q ratio.	410 firms from BSE-500 listed firms over the year 2014-2015.	• ESG • Bloomberg ESG disclosure score (0-100 scoring)	• Return on asset • Tobin's Q	• Insignificant • Significantly negative

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (Relationship)
Lawal, May, & Stahl (2017)	To examine the effects of CSRD on CFP, with a particular focus on employee and community aspects	405 high-tech manufacturing companies for the years 2011-2014	• ESG • Bloomberg ESG disclosure score (0-100 scoring)	Return on equity	Significantly positive
Li, Gong, Zhang, & Koh (2017)	To investigate whether superior ESG disclosure affects firm value	367 firms from FTSE350 between 2004-2013	• ESG • Bloomberg ESG disclosure score (0-100 scoring)	• Return on asset • Tobin's Q	Significantly positive

Source: Developed for the research

Appendix 2.6: Summary of Results from Prior Study (ESG Disclosure Influences CFP)

Author(s)	Significant and Positive Relationship	Significant and Negative Relationship	Insignificant Relationship
Cheung & Mak (2010)			ROA ROE
Giannarakis (2013)	ROE		
Zaman, Arslan, & Siddiqui (2015)	ROA ROE		
Dewi (2015)	ROE		ROA
Abeysinghe & Basnayake (2015)		ROE	
Charlo, Moya, & Muñoz (2015)			ROE EPS PTB
Cahan, de Villiers, Jeter, Naiker & van Staden (2016)	Tobin's Q		
Giannarakis, Konteos, Zafeiriou, & Partalidou (2016)	ROA		
Sharma & Thukral (2016)		Tobin's Q	ROA

Nor, Bahari, Adnan, Kamal, & ALi (2016)			ROA ROE EPS
Platonova, Asutay, Dixon, & Mohammad (2016)	ROAA ROAE		
Li, Gong, Zhang, & Koh (2017)	ROA Tobin's Q		
Lawal, May, & Stahl (2017)	ROE		

Source: Developed for the research

Appendix 2.7: Summary of Prior Literature Examining the Cycle Relationship between ESG Disclosure and CFP

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (CFP to ESG)	Findings (ESG to CFP)
Waddock & Graves (1997)	To explore whether or not strategic linkages exist between CSP behaviors and CFP	469 firms listed in the S&P500 index during the period 1989-1991	• CSR • Content analysis against KLD's rating scheme • 8 items (-2 to +2 scale)	• Return on asset	• Significantly positive	• Significantly positive
				• Return on equity	• Significantly positive	• Insignificant
Makni, Francoeur, & Bellavance (2009)	To assess the causal relationship between CSP and CFP	79 publicly held Canadian firm for the year 2004-2005	• CSR • Content analysis against KLD's rating scheme	• Return on asset	• Insignificant	• Significantly negative
				• Return on equity	• Insignificant	• Significantly negative

Author(s)	Objective	Sample	Measurement of ESG Disclosure	Measurement of Firm Performance	Findings (CFP to ESG)	Findings (ESG to CFP)
Wissink (2012)	To study the relation between CSP and CFP and investigate whether there is a virtuous cycle of CSP exist.	758 companies in DJSI for the year 2002 - 2010	• CSR • Dow Jones Sustainability Index	• Return on asset	• Significantly positive	• Significantly positive
				• Return on equity	• Insignificant	• Insignificant
Mcphail (2014)	To understand the relationship between non-financial factors such as corporate governance and ESG disclosure, and CFP	896 firms from five markets (the UK, Germany, France, Japan and the US) for the year 2008-2012	• ESG • Bloomberg ESG disclosure score (0-100 scoring)	• Return on asset	• Significantly positive	• Significantly positive
				• Return on equity	• Significantly positive	• Significantly positive
				• Tobin's Q	• Significantly negative	• Significantly negative
Vauhkonen (2017)	To examine the possible relationship between CSR and CFP	345 companies from to 500 public companies in Europe in 2015	• CSR • CSRHub (0-100 scoring)	• Return on equity	• Insignificant	• Insignificant
				• Return on assets	• Significantly negative	• Significantly negative

Source: Developed for the research

Appendix 2.8: Summary of Results from Prior Study (the Relationship Cycle of ESG Disclosure and CFP)

Author(s)	Measurement of Financial Performance	Findings (CFP to ESG disclosure)	Findings (ESG disclosure to CFP)	Cycle Relationship
Waddock & Graves (1997)	ROA	Significant Positive	Significant Positive	Yes
	ROE	Significant Positive	Insignificant	No
Makni, Francoeur, & Bellavance (2009)	ROA	Insignificant	Significant Negative	No
	ROE	Insignificant	Significant Negative	No
Wissink (2012)	ROA	Significant Positive	Significant Positive	Yes
	ROE	Insignificant	Insignificant	No
Mcphail (2014)	ROA	Significant Positive	Significant Positive	Yes
	ROE	Significant Positive	Significant Positive	Yes
	Tobin's Q	Significant Negative	Significant Negative	Yes
Vauhkonen (2017)	ROA	Significant Negative	Significant Negative	Yes
	ROE	Insignificant	Insignificant	No

Source: Developed for the research

Appendix 2.9: Summary of Relevant Theoretical Models

Theory	Short Description	Relationship
Market Efficient	Markets are efficient because they are composed of numerous rational investors who respond rapidly and objectively to new information.	-
The Cyclic Causality	A virtuous cycle of positive synergy between ESG disclosure and CFP. A combination of Slack Resources Theory and Good Management Theory.	Positive synergy
	A vicious cycle of negative synergy between ESG disclosure and CFP.	Negative synergy
Slack Resources	Availability of slack resources could be an incentive for firm to invest and report socially responsible activities.	CFP → ESG Positive
Resource-based View	The reputation from ESG disclosure is a firm's resource to achieve above-average financial performance persistently.	ESG → CFP Positive
Good Management	ESG disclosure is a means of best practices, and firm should anticipate the benefits derived.	ESG → CFP Positive
Instrumental Stakeholder	ESG reporting is an effective tool in strengthening stakeholder relations.	ESG → CFP Positive
Agency	ESG disclosure acts as a monitoring mechanism between stakeholders and management that can reduce information asymmetry and stakeholders' uncertainty.	ESG → CFP Positive

	Managerial opportunism assumption: managers that pursue short-term private gain will not engage in ESG disclosure, however, managers that try to disguise poor CFP might invest heavily in ESG disclosure.	CFP → ESG Negative
Legitimacy	ESG disclosure is desirable for all stakeholders groups and act as a means of satisfying society's demands.	ESG → CFP Positive
Trade-off Thinking	A negative relationship between ESG disclosure and CFP, where firms have to choose to safeguard only one.	Negative

Source: Developed for the research

Appendix 3.1: Top 100 Listed Companies in FTSE Bursa Malaysia 100 Index

Company	Ticker	Company	Ticker
AEON Credit Service M Bhd	ACSM MK Equity	Lafarge Malaysia Bhd	LMC MK Equity
Aeon Co M Bhd	AEON MK Equity	LPI Capital Bhd	LPI MK Equity
Alliance Financial Group Bhd	AFG MK Equity	Lingkaran Trans Kota Holdings Bhd	LTK MK Equity
AFFIN Holdings Bhd	AHB MK Equity	Malaysia Airports Holdings Bhd	MAHB MK Equity
AirAsia Bhd	AIRA MK Equity	Maxis Bhd	MAXIS MK Equity
AMMB Holdings Bhd	AMM MK Equity	Malayan Banking Bhd	MAY MK Equity
Astro Malaysia Holdings Bhd	ASTRO MK Equity	Malaysia Building Society Bhd	MBS MK Equity
Axiata Group Bhd	AXIATA MK Equity	MISC Bhd	MISC MK Equity
Bumi Armada Bhd	BAB MK Equity	Mulpha International Bhd	MIT MK Equity
Batu Kawan Bhd	BAK MK Equity	Malakoff Corp Bhd	MLK MK Equity
British American Tobacco Malaysia Bhd	ROTH MK Equity	MMC Corp Bhd	MMC MK Equity
BIMB Holdings Bhd	BIMB MK Equity	Mah Sing Group Bhd	MSGB MK Equity
Boustead Holdings Bhd	BOUS MK Equity	MSM Malaysia Holdings Bhd	MSM MK Equity
Bintulu Port Holdings Bhd	BPH MK Equity	My EG Services Bhd	MYEG MK Equity

Company	Ticker	Company	Ticker
Berjaya Sports Toto Bhd	BST MK Equity	Nestle Malaysia Bhd	NESZ MK Equity
Bursa Malaysia Bhd	BURSA MK Equity	Oriental Holdings BHD	ORH MK Equity
Carlsberg Brewery Malaysia Bhd	CAB MK Equity	Padini Holdings Bhd	PAD MK Equity
CIMB Group Holdings Bhd	CIMB MK Equity	Public Bank Bhd	PBK MK Equity
Capitaland Malaysia Mall Trust	CMMT MK Equity	Petronas Chemicals Group Bhd	PCHEM MK Equity
Cahya Mata Sarawak Bhd	CMS MK Equity	PPB Group Bhd	PEP MK Equity
DiGi.Com Bhd	DIGI MK Equity	Petronas Dagangan Bhd	PETD MK Equity
Dialog Group BHD	DLG MK Equity	Pos Malaysia BHD	POSM MK Equity
Dutch Lady Milk Industries BHD	DLM MK Equity	Pavilion Real Estate Investment Trust	PREIT MK Equity
DRB-Hicom Bhd	DRB MK Equity	Press Metal Bhd	PRESS MK Equity
Eco World Development Group Bhd	ECW MK Equity	Petronas Gas Bhd	PTG MK Equity
Felda Global Ventures Holdings Bhd	FGV MK Equity	QL Resources Bhd	QLG MK Equity
Fraser & Neave Holdings Bhd	FNH MK Equity	RHB Bank Bhd	RHBBANK MK Equity
Gamuda Bhd	GAM MK Equity	Sapura Energy Bhd	SAPE MK Equity
GD Express Carrier Bhd	GDX MK Equity	Sunway Construction Group Bhd	SCGB MK Equity

Company	Ticker	Company	Ticker
Genting Malaysia Bhd	GENM MK Equity	Scientex BHD	SCI MK Equity
Genting Plantations Bhd	GENP MK Equity	Serba Dinamik Holdings Bhd	SDH MK Equity
Genting Bhd	GENT MK Equity	Sime Darby Bhd	SIME MK Equity
Gas Malaysia Bhd	GMB MK Equity	SP Setia Bhd Group	SPSB MK Equity
HAP Seng Consolidated Bhd	HAP MK Equity	Sunway Real Estate Investment Trust	SREIT MK Equity
Hartalega Holdings Bhd	HART MK Equity	Syarikat Takaful Malaysia Bhd	STMB MK Equity
Heineken Malaysia Bhd	HEIM MK Equity	Sunway Bhd	SWB MK Equity
Hong Leong Bank Bhd	HLBK MK Equity	Telekom Malaysia Bhd	T MK Equity
Hong Leong Financial Group Bhd	HLFG MK Equity	TIME dotCom Bhd	TDC MK Equity
Hong Leong Industries Bhd	HLI MK Equity	Tenaga Nasional Bhd	TNB MK Equity
IGB Corp Bhd	IGB MK Equity	Top Glove Corp Bhd	TOPG MK Equity
IGB Real Estate Investment Trust	IGBREIT MK Equity	Lotte Chemical Titan Holding Bhd	TTNP MK Equity
IHH Healthcare Bhd	IHH MK Equity	UEM Sunrise Bhd	UEMS MK Equity
IJM Corp Bhd	IJM MK Equity	UMW Holdings Bhd	UMWH MK Equity
Inari Amertron Bhd	INRI MK Equity	Unisem M Bhd	UNI MK Equity

Company	Ticker	Company	Ticker
IOI Corp Bhd	IOI MK Equity	UOA Development Bhd	UOAD MK Equity
IOI Properties Group Bhd	IOIPG MK Equity	United Plantations BHD	UPL MK Equity
KLCCP Stapled Group	KLCCSS MK Equity	Westports Holdings Bhd	WPRTS MK Equity
Kuala Lumpur Kepong Bhd	KLK MK Equity	Yinson Holdings BHD	YNS MK Equity
KPJ Healthcare Bhd	KPJ MK Equity	YTL Corp Bhd	YTL MK Equity
Kossan Rubber Industries	KRI MK Equity	YTL Power International Bhd	YTLP MK Equity

Source: Developed for the research

Appendix 3.2: Top 100 Listed Companies in SET 100 Index

Company	Ticker	Company	Ticker
Asia Aviation PCL	AAV TB Equity	Krung Thai Bank PCL	KTB TB Equity
Advanced Info Service PCL	ADVANC TB Equity	Krungthai Card PCL	KTC TB Equity
Amata Corp PCL	AMATA TB Equity	Land & Houses PCL	LH TB Equity
Ananda Development PCL	ANAN TB Equity	LH Financial Group PCL	LHBANK TB Equity
Airports of Thailand PCL	AOT TB Equity	LPN Development PCL	LPN TB Equity
AP Thailand PCL	AP TB Equity	Major Cineplex Group PCL	MAJOR TB Equity
Bangkok Airways PCL	BA TB Equity	Malee Group PCL	MALEE TB Equity
Banpu PCL	BANPU TB Equity	Mega Lifesciences PCL	MEGA TB Equity
Bangkok Bank PCL	BBL TB Equity	Minor International PCL	MINT TB Equity
Bangkok Chain Hospital PCL	BCH TB Equity	Mono Technology PCL	MONO TB Equity
Bangchak Corp PCL	BCP TB Equity	Muangthai Leasing PCL	MTLS TB Equity
BCPG PCL	BCPG TB Equity	Plan B Media Pcl	PLANB TB Equity
Bangkok Dusit Medical Services PCL	BDMS TB Equity	Pruksa Holding PCL	PSH TB Equity
Beauty Community PCL	BEAUTY TB Equity	PTG Energy PCL	PTG TB Equity

Company	Ticker	Company	Ticker
BEC World PCL	BEC TB Equity	Polyplex Thailand PCL	PTL TB Equity
Bangkok Expressway & Metro PCL	BEM TB Equity	PTT PCL	PTT TB Equity
Bumrungrad Hospital PCL	BH TB Equity	PTT Exploration & Production PCL	PTTEP TB Equity
Big Camera Corp PCL	BIG TB Equity	PTT Global Chemical PCL	PTTGC TB Equity
Berli Jucker PCL	BJC TB Equity	Quality Houses PCL	QH TB Equity
Bangkok Life Assurance PCL	BLA TB Equity	Ratchaburi Electricity Generating Holding PCL	RATCH TB Equity
Bangkok Land PCL	BLAND TB Equity	Robinson PCL	ROBINS TB Equity
Banpu Power PCL	BPP TB Equity	Singha Estate PCL	S TB Equity
BTS Group Holdings PCL	BTS TB Equity	Srisawad Corp PCL	SAWAD TB Equity
Carabao Group PCL	CBG TB Equity	Siam Commercial Bank PCL/The	SCB TB Equity
Central Plaza Hotel PCL	CENTEL TB Equity	Siam Cement PCL/The	SCC TB Equity
Chularat Hospital PCL	CHG TB Equity	Siam City Cement PCL	SCCC TB Equity
CH Karnchang PCL	CK TB Equity	Sansiri PCL	SIRI TB Equity
CK Power PCL	CKP TB Equity	Supalai PCL	SPALI TB Equity
Com7 PCL	COM7 TB Equity	Star Petroleum Refining PCL	SPRC TB Equity

Company	Ticker	Company	Ticker
CP ALL PCL	CPALL TB Equity	Sino-Thai Engineering & Construction PCL	STEC TB Equity
Charoen Pokphand Foods PCL	CPF TB Equity	STP & I PCL	STPI TB Equity
Central Pattana PCL	CPN TB Equity	Superblock PCL	SUPER TB Equity
Delta Electronics Thailand PCL	DELTA TB Equity	Tipco Asphalt PCL	TASCO TB Equity
Total Access Communication PCL	DTAC TB Equity	Thanachart Capital PCL	TCAP TB Equity
Energy Absolute PCL	EA TB Equity	Thai Airways International PCL	THAI TB Equity
Electricity Generating PCL	EGCO TB Equity	Ratchthani Leasing PCL	THANI TB Equity
Eastern Polymer Group PCL	EPG TB Equity	Thaicom PCL	THCOM TB Equity
GFPT PCL	GFPT TB Equity	Tisco Financial Group PCL	TISCO TB Equity
Siam Global House PCL	GLOBAL TB Equity	Taokaenoi Food & Marketing PCL	TKN TB Equity
Glow Energy PCL	GLOW TB Equity	TMB Bank PCL	TMB TB Equity
Global Power Synergy PCL	GPSC TB Equity	Thai Oil PCL	TOP TB Equity
Gunkul Engineering PCL	GUNKUL TB Equity	TPI Polene PCL	TPIPL TB Equity
Home Product Center PCL	HMPRO TB Equity	True Corp PCL	TRUE TB Equity
Intouch Holdings PCL	INTUCH TB Equity	Thoresen Thai Agencies PCL	TTA TB Equity

Company	Ticker	Company	Ticker
IRPC PCL	IRPC TB Equity	Thai Union Group PCL	TU TB Equity
Italian-Thai Development PCL	ITD TB Equity	Thai Vegetable Oil PCL	TVO TB Equity
Indorama Ventures PCL	IVL TB Equity	Unique Engineering & Construction PCL	UNIQ TB Equity
Kasikornbank PCL	KBANK TB Equity	VGI Global Media PCL	VGI TB Equity
KCE Electronics PCL	KCE TB Equity	WHA Corp PCL	WHA TB Equity
Kiatnakin Bank PCL	KKP TB Equity	Workpoint Entertainment PCL	WORK TB Equity

Source: Developed for the research

Appendix 3.3: Top 100 Listed Companies in Singapore

Company	Ticker	Company	Ticker
ARA Asset Management Ltd	ARA SP Equity	M1 Ltd/Singapore	M1 SP Equity
Ascendas Real Estate Investment Trust	AREIT SP Equity	Mapletree Greater China Commercial Trust	MAGIC SP Equity
Ascott Residence Trust	ART SP Equity	Mandarin Oriental International Ltd	MAND SP Equity
AusNet Services	AUN SP Equity	Mapletree Commercial Trust	MCT SP Equity
Bumitama Agri Ltd	BAL SP Equity	Mapletree Industrial Trust	MINT SP Equity
Bukit Sembawang Estates Ltd	BS SP Equity	Mapletree Logistics Trust	MLT SP Equity
China Aviation Oil Singapore Corp Ltd	CAO SP Equity	Noble Group Ltd	NOBL SP Equity
CapitaLand Ltd	CAPL SP Equity	Oversea-Chinese Banking Corp Ltd	OCBC SP Equity
CapitaLand Commercial Trust	CCT SP Equity	Oxley Holdings Ltd	OHL SP Equity
ComfortDelGro Corp Ltd	CD SP Equity	Olam International Ltd	OLAM SP Equity
CDL Hospitality Trusts	CDREIT SP Equity	OUE Ltd	OUE SP Equity
CITIC Envirotech Ltd	CEL SP Equity	OUE Hospitality Trust	OUEHT SP Equity
China Everbright Water Ltd	CEWL SP Equity	Pacific Century Regional Developments Ltd	PAC SP Equity

Company	Ticker	Company	Ticker
City Developments Ltd	CIT SP Equity	Perennial Real Estate Holdings Ltd	PREH SP Equity
CapitaLand Retail China Trust	CRCT SP Equity	Parkway Life Real Estate Investment Trust	PREIT SP Equity
CapitaLand Mall Trust	CT SP Equity	Prudential PLC	PRU SP Equity
CWT Ltd	CWT SP Equity	Raffles Medical Group Ltd	RFMD SP Equity
DBS Group Holdings Ltd	DBS SP Equity	SATS Ltd	SATS SP Equity
Delfi Ltd	DELFI SP Equity	Sembcorp Industries Ltd	SCI SP Equity
Dairy Farm International Holdings Ltd	DFI SP Equity	Shangri-La Asia Ltd	SGA SP Equity
Frasers Centrepoint Ltd	FCL SP Equity	Starhill Global REIT	SGREIT SP Equity
Frasers Centrepoint Trust	FCT SP Equity	Singapore Exchange Ltd	SGX SP Equity
Far East Hospitality Trust	FEHT SP Equity	Singapore Airlines Ltd	SIA SP Equity
Frasers Hospitality Trust	FHT SP Equity	SIA Engineering Co Ltd	SIE SP Equity
Frasers Logistics & Industrial Trust	FLT SP Equity	SIIC Environment Holdings Ltd	SIIC SP Equity
Fraser and Neave Ltd	FNN SP Equity	Silverlake Axis Ltd	SILV SP Equity
First Resources Ltd	FR SP Equity	Sinarmas Land Ltd	SML SP Equity

Company	Ticker	Company	Ticker
Fortune Real Estate Investment Trust	FRT SP Equity	Sembcorp Marine Ltd	SMM SP Equity
Great Eastern Holdings Ltd	GE SP Equity	Singapore Press Holdings Ltd	SPH SP Equity
Genting Hong Kong Ltd	GENHK SP Equity	SPH REIT	SPHREIT SP Equity
Genting Singapore PLC	GENS SP Equity	Singapore Post Ltd	SPOST SP Equity
Golden Agri-Resources Ltd	GGR SP Equity	Sheng Siong Group Ltd	SSG SP Equity
Global Logistic Properties Ltd	GLP SP Equity	Singapore Telecommunications Ltd	ST SP Equity
GuocoLand Ltd	GUOL SP Equity	Sta Lucia Land Inc	STA SP Equity
Yuexiu Property Co Ltd	GZI SP Equity	Singapore Technologies Engineering Ltd	STE SP Equity
Hongkong Land Holdings Ltd	HKL SP Equity	StarHub Ltd	STH SP Equity
Ho Bee Land Ltd	HOBEE SP Equity	Suntec Real Estate Investment Trust	SUN SP Equity
Haw Par Corp Ltd	HPAR SP Equity	Super Group Ltd	SUPER SP Equity
Hutchison Port Holdings Trust	HPHT SP Equity	Thai Beverage PCL	THBEV SP Equity
Hotel Properties Ltd	HPL SP Equity	Top Glove Corp Bhd	TOPG SP Equity
IHH Healthcare Bhd	IHH SP Equity	United Engineers Ltd	UEM SP Equity

Company	Ticker	Company	Ticker
Japfa Ltd	JAP SP Equity	United Industrial Corp Ltd	UIC SP Equity
Jardine Cycle & Carriage Ltd	JCNC SP Equity	United Overseas Bank Ltd	UOB SP Equity
Jardine Matheson Holdings Ltd	JM SP Equity	UOL Group Ltd	UOL SP Equity
Jardine Strategic Holdings Ltd	JS SP Equity	Venture Corp Ltd	VMS SP Equity
Keppel DC REIT	KDCREIT SP Equity	Wilmar International Ltd	WIL SP Equity
Keppel Corp Ltd	KEP SP Equity	Wing Tai Holdings Ltd	WINGT SP Equity
Keppel Infrastructure Trust	KIT SP Equity	Wheelock Properties Singapore Ltd	WP SP Equity
Keppel REIT	KREIT SP Equity	Yanlord Land Group Ltd	YLLG SP Equity
Lonza Group AG	LONZ SP Equity	Yangzijiang Shipbuilding Holdings Ltd	YZJSGD SP Equity

Source: Developed for the research

Appendix 4.1: Summary of Descriptive Analysis

	Malaysia				Singapore				Thailand			
Variable	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD
ESG	11.157	57.645	22.978	11.075	6.818	47.521	22.981	11.581	9.711	62.810	32.406	16.902
ROE1	5.895	117.561	20.403	19.44	4.117	**955.450**	36.243	**133.069**	-30.207	69.950	18.633	16.704
ROA1	1.046	31.541	8.422	7.505	1.035	19.145	7.629	4.584	-3.266	30.664	7.193	7.019
EPS1	0.037	1.99	0.476	0.393	0.033	7.055	0.728	1.219	-0.910	36.932	5.497	7.656
TOBIN1	0.808	9.047	2.103	1.675	0.604	4.599	1.541	0.945	0.781	12.487	2.085	2.044
PTB1	0.613	89.382	4.7568	12.389	0.529	185.121	5.912	25.966	0.698	13.033	3.383	2.934
ROE2	-17.002	**300.084**	19.961	**43.466**	-22.689	199.861	13.892	28.390	-17.619	74.878	16.133	15.450
ROA2	-5.62	35.282	6.594	8.515	-4.472	19.059	5.087	4.482	-2.141	28.758	5.760	5.773
EPS2	-0.179	2.038	0.472	0.423	-0.996	4.355	0.641	0.893	-2.990	42.285	5.548	8.490
TOBIN2	0.833	8.815	1.998	1.793	0.600	4.752	1.408	0.852	0.907	3.844	1.649	0.807
PTB2	0.402	76.579	4.450	11.036	0.403	29.526	2.292	4.2489	0.804	9.806	2.728	2.315

Source: Developed for the research

Appendix 4.2: Summary of Partial Correlation Result

			Malaysia	Singapore	Thailand
Control Variables			ESG	ESG	ESG
IND & Sus List	ROE1	Correlation	0.37	0.24	-0.11
		Sig.	**0.008*** **	0.104	0.522
	ROA1	Correlation	0.22	0	0.01
		Sig.	0.13	0.98	0.96
	EPS1	Correlation	0.4	-0.25	0.44
		Sig.	**0.004*** **	**0.092***	**0.007*** **
	TOBIN1	Correlation	0.42	0.09	-0.09
		Sig.	**0.002*** **	0.539	0.605
	PTB1	Correlation	0.357	0.242	-0.195
		Sig.	**0.011** **	**0.098***	0.254
	ROE2	Correlation	0.343	0.171	-0.193
		Sig.	**0.015** **	0.245	0.26
	ROA2	Correlation	0.26	-0.07	-0.16
		Sig.	**0.071***	0.637	0.344
	EPS2	Correlation	0.31	-0.32	0.28
		Sig.	**0.03** **	**0.03** **	**0.1***
	TOBIN2	Correlation	0.4	0	-0.32
		Sig.	**0.004*** **	0.986	**0.06***
	PTB2	Correlation	0.411	0.201	-0.274
		Sig.	**0.003*** **	0.170	0.106

*Correlation is significant at the 0.10 level (2-tailed).

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

***. Correlation is significant at the 0.01 level (2-tailed).

Source: Developed for the research

Appendix 4.3 Result of Multicollinearity Test (Before Adjustment)

	Malaysia		**Singapore**		**Thailand**	
	Collinearity Statistics					
	TOL	VIF	TOL	VIF	TOL	VIF
(Constant)						
ROE1	0.116	8.603	0.001	**1015.881**	0.188	5.329
ROA1	0.161	6.206	0.219	4.569	0.132	7.596
EPS1	0.734	1.362	0.827	1.209	0.857	1.167
TOBIN1	0.101	9.859	0.16	6.264	0.19	5.261
PTB1	0.146	6.831	0.001	**1032.856**	0.203	4.919
IND	0.651	1.536	0.714	1.401	0.802	1.247
Sus List	0.816	1.225	0.824	1.213	0.841	1.189

Source: Developed for the research

Appendix 4.4: Result of Multicollinearity Test (After Adjustment)

	Malaysia		**Singapore**		**Thailand**	
	Collinearity Statistics					
	TOL	VIF	TOL	VIF	TOL	VIF
(Constant)						
ROE1	0.224	4.462	0.708	1.413	0.189	5.296
ROA1	0.25	3.994	0.409	2.447	0.135	7.42
EPS1	0.821	1.217	0.928	1.077	0.941	1.063
TOBIN1	0.136	7.329	0.376	2.66	0.331	3.025
IND	0.683	1.465	0.717	1.395	0.821	1.219
Sus List	0.825	1.212	0.826	1.211	0.871	1.148

Source: Developed for the research