

MKM227 Postgraduate Dissertation

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MAY, 2014

14 631 words

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ABSTRACT

The firms and financial institutions claim that ESG factors can have long-term significances on a firm's financial performance, either for healthier or for poorer. This paper focused on two areas of studied, firstly, about the relationship between the firm's performance and Environmental, Social, Governance (ESG) disclosure using Bloomberg Terminal as a main sources. Secondly, this paper also will explain further whether ownership of the company will influence ESG disclosure or not. The study found that ESg as positive significant relationship with the firm performance, which are return on equity (ROE), return on asset (ROA) and pretax margin (PTMR) but negative significant relationship between price to book ratio (PB). The finding was consistent with the previous research. However, the second area of study was found that the ownership not significant on ESG disclosure. This is contrary to previous studies. The quantitative research was regressed using Eviews after the panel data of the five countries which are UK, France, Germany, China ad Malaysia was obtained from Year 2009 to 2012.

Keywords:

Environmental,social,governance (ESG), ownership, firm performance, return on equity (ROE), return on asset (ROA), pretax margin, price to book ratio, financial institutions

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Table of Contents

ABSTRACTS	9
ACKNOWLEDGEMENTS	10
TABLE OF CONTENTS	11 – 12
LIST OF FIGURES	13
LIST OF TABLES	13
CHAPTER 1 : INTRODUCTION	14 – 21
CHAPTER 2 : LITERATURE REVIEW.....	22 – 39
2.1 ENVIRONMENTAL AND COMPANY PERFORMANCE	22 – 25
2.2 SOCIAL AND COMPANY PERFORMANCE	25 – 31
2.3 GOVERNANCE AND COMPANY PERFORMANCE	31 – 35
2.4 SUMMARY OF LITERATURE REVIEW	35 – 39
CHAPTER 3 : RESEARCH METHODOLOGY.....	40 – 49
3.1 SPECIFICATION OF MODEL	40 – 42
3.2 STATEMENT OF HYPOTHESIS	42 – 45
3.3 VALIDITY RELIABILITY	45 – 46
3.4 TECHNIQUE OF DATA ANALYSIS	46 – 49
3.4.1 MULTIPLE LINEAR REGRESSION MODEL	46 – 48
3.4.2 COEFFICIENT OF DETERMINATION (R^2)	48
3.4.3 INDIVIDUAL HYPOTHESIS TEST (T-TEST)	49
3.4.4 OVERALL OR JOINT HYPOTHESIS TEST (F-TEST)	49
CHAPTER 4 : FINDINGS AN AALYSIS.....	50 – 75
4.1 DATA COLLECTION AND SAMPLE PERIOD	50 – 52
4.2 VARIABLE DEFINITION	52 – 54
4.3 DESCRIPTIVE STATISTICS	54 – 56
4.3.1 MODEL 1 : COMPANY PERFORMANCE AND ESG	54 – 55
4.3.2 MODEL 2 : ESG AND OWNERSHIP OF THE COMPANY	56
4.4 REGRESSION ANALYSIS	56 – 70
4.4.1 LIKELIHOOD TEST	57 – 58
4.4.1.1 FIRST EQUATION	57

ESG in Focus

4.4.1.2 SECOND EQUATION	57
4.4.1.3 THIRD EQUATION	58
4.4.1.4 FOURTH EQUATION	58
4.4.2 HAUSMAN TEST	59 – 60
4.4.2.1 FIRST EQUATION	59
4.4.2.2 SECOND EQUATION	59
4.4.2.3 THIRD EQUATION	60
4.4.3 INDIVIDUAL TESTING (T-TEST)	60 – 68
4.4.3.1 FIRST MODEL	61 – 68
4.4.3.2. SECOND MODEL	68
4.4.4 OVERALL OR JOINT TESTING (F-TEST)	69
4.4.5 COEFFICIENT OF DETERMINATION (R^2)	70
4.5 SUMMARY	71 – 75
CHAPTER 5 : CONCLUSIONS AND RECOMMENDATION	76 – 78
5.1 CONCLUSIONS	76 – 77
5.2 RECOMMENDATION.....	78
BIBLIOGRAPHY	79 – 82
APPENDICES.....	83 – 95

LIST OF FIGURES

Figure 3.1 (a)	First Model: Company Performance and ESG	41
Figure 3.1 (b)	Second Model: ESH and Ownership of Company	42

LIST OF TABLES

Table 4.3.1	Descriptive Statistics for First Model	54
Table 4.3.2	Descriptive Statistics for Second Model	56
Table 4.4.1.1	Likelihood Test for First Equation	57
Table 4.4.1.2	Likelihood Test for Second Equation	57
Table 4.4.1.3	Likelihood Test for Third Equation	58
Table 4.4.1.4	Likelihood Test for Fourth Equation	58
Table 4.4.2.1	Hausman Test for First Equation	59
Table 4.4.2.2	Hausman Test for Second Equation	59
Table 4.4.2.3	Hausman Test for Third Equation	60
Table 4.4.3.1 (a)	Regression Result for First Model	61
Table 4.4.3.1 (b)	Regression Result for First Model	62
Table 4.4.3.1 (c)	Regression Result for First Model	64
Table 4.4.3.1 (d)	Regression Result for First Model	65
Table 4.4.3.2	Regression Result for Second Model	68
Table 4.4.4 (a)	F-Test and R^2 Result for First Model	70
Table 4.4.4 (b)	F-Test and R^2 Result for Second Model	70

CHAPTER 1

INTRODUCTION

Environmental, Social, Governance (ESG) themes are becoming well known and increasingly material to the value of companies; however, there is still no “clear” definition of what is encompassed by “Socially Responsible Investment” (SRI), meaning wide scope for interpretation on the part of investors (Ouaknine, Whooley and Crozat, 2013). The approach may seem “simple”, “attractive” or “blurred”. To become actionable, it needs to be clearly defined in terms of criteria and objectives as one methodology might not fit all investors’ needs. Ouaknine, Whooley and Crozat (2013) added that ESG integration refers to the concept that all types of investors should examine, à minima, a limited number of companies’ environmental, social and governance practices that have a material impact on their financial performance.

Roy and Gitman (2012) also refer ESG integration to the idea that all types of investors should examine companies’ sustainability practices and performance because they can have a material impact on the financial performance of companies. Their report findings revealed the following ESG investment trends. Firstly, despite the relentless short-termism pervasive in the current economy, there is a growing interest from mainstream investors in long-term investment opportunities and ESG integration. Secondly, asset owners, including pension funds, insurance companies, and sovereign wealth funds, which have long-term liabilities and a fiduciary duty to their members, are leading the way by integrating ESG criteria across their entire portfolio. Thirdly, these investors are increasingly looking at the ESG performance of the companies they invest in as a way to improve the financial performance of their investment portfolio (Roy and Gitman, 2012).

In Bassen and Kova'cs (2008) research, they stated that, ESG consist of many important nonfinancial data can give big influence to the company's value up to 66 percent. In addition, Moore and Wen (2008) claim that "good business ethics" can lead to long-term value creation

Bloomberg (2012) revealed that in today's complex, highly regulated financial environment, valuing potential investments demands thorough, uncompromising analysis. To fully understand future prospects, the work must extend beyond such financial measures as P/E, book value, EPS and dividend yield Today, discerning professional investors also examine a broad cross section of environmental, social and governance measures (ESG), such as resource efficiency, emissions management, community relations, workforce development and board/committee structures.

Environmental, Social and Governance (ESG) has proven that can offer or give advantage to the investors in decision making for long-term investment performance (ESG Managers Portfolio, n.d.). Besides, ESG has turned out to be solved for investment approaches that hold ESG or sustainability elements as a resource in helping to determine the firms with superior business models. Environmental, social and governance records, commonly referred to as ESG, are intangible, extra-financial measures of valuation, risk, derivative from a company's operational decisions, HR policies and practices, and corporate governance structures (Bloomberg, 2012).

Investors and corporate executives are increasingly embracing the concept that ESG information resource efficiency, good community relations, training and developing the workforce, and board/committee structures, for example may directly impact companies' reputation, value and performance.

Governments, regulatory bodies and exchanges are encouraging more ESG data disclosure and, crucially, the standardization and verification of ESG data disclosure (Bloomberg, 2012).

Peiris and Evans (2010) in their study also mentioned that one certain set of extra-financials has been experiencing soaring scrutiny within the last years, namely aspects allied to environmental, social and governance (ESG) issues. Although the terminology is employed in various contexts – risk valuation, socially responsible investment, corporate responsibility, etc. – up to present there is no clear general understanding of this concept (Peiris and Evans, 2010). Scholar added that the term appears in the United Nations Principles of Responsible Investment and is also used by major business consulting firms. Yet business and academic literature lag behind a definite attempt. The concept of ESG issues refers to extra-financial, material information about the challenges and performance of a company in these matters (Peiris and Evans, 2010).

It is evident that the evaluation of ESG matters enables a thorough understanding of the risks and opportunities a company faces, allowing enhanced security selection and risk management (Peiris and Evans, 2010). Furthermore, ESG performance may serve “as a proxy for management quality, in so far as it reflects the company’s ability to respond to long term trends and maintain competitive advantage” (Ling, Forest, Lynch and Fox, 2007). Additionally, ESG analysis leads to enriched understanding of how future trends might affect a certain business or the entire economic landscape for that matter. Finance professionals, for instance, anticipate that ESG issues and climate change in particular will “gradually but powerfully change the economic landscape” in which companies operate and “cause periodic sharp movements in asset prices” (Llewellyn, 2007). Thus, while of fundamental relevance within socially responsible investment (SRI) strategies, ESG measures actually bare significant importance for mainstream business

valuation and investment decision-making, particularly in the perspective of long-term performance and risk evaluation (Derwall, 2007) in (Peiris and Evans, 2010).

Attention on ESG arose in the 1970s through the efforts of a small body of investors who were interested in the environmental and social practices of the companies they invested in (Richardson, 2009). More recently, one might debate that the focus on ESG has been heightened by the efforts of the two institutions (Galbreath, 2013). First, in 2006, the United Nations launched the Principles for Responsible Investment (PRI) (UN PRI, 2006). The PRI are becoming de facto standards for taking ESG issues into account when determining the character of mainstream investment practices (Galbreath, 2013). Galbreath (2013) stated that in fact, the PRI emphasizes on institutional investors and at the time of researcher writing, had over 900 signatories from around the world, representing US\$30 trillion in investment dollars under management (UN PRI 2011). Second, evolving from collaboration between the United Nations Environmental Program (UNEP) and the Coalition for Environmentally Responsible Economies (CERES), the Global Reporting Initial (GRI) was established in 2001 (Galbreath, 2013). Initially focused on a framework for environmental performance reporting, the third generation (G3) of the GRI Principles, published in 2006, has expanded to issues beyond the environment. The GRI Principles now cover six classes: environmental; human rights; labour practices and decent work; society; product responsibility; and economic. While governance issues are not a category of separate focus, they are covered, particularly under the economic category (Galbreath, 2013). Recent analysis suggests that the GRI Principles are used by over 1300 companies, governments, social sector, and other organizations (Boerner, 2011) in Galbreath (2013). In the year 2013, the fourth generation of the GRI Principles is expected to be published (Galbreath, 2013).

ESG in Focus

ESG is generally interrelated to ethical or socially responsible investment (Richardson, 2009), ESG has become key indicators of management competence, risk management, and non-financial performance (Boerner, 2011). Richardson (2009) added that the investment community, particularly sees ESG as important, as ESG issues are increasingly seen as financially “material” to an investment portfolio ESG then, broadly, covers a variety of issues related to the environment (e.g., climate change, energy and water use, carbon emissions), social responsibility (e.g., fair trade principles, human rights, product safety, gender equality, health and safety), and corporate governance (e.g., board independence, corruption and bribery, reporting and disclosure, shareholder protection) (Richardson, 2009).

ESG is a market undergoing major transformation (Ouaknine, Whooley and Crozat, 2013). Beyond the fast-paced growth of SRI funds, ESG integration directly applies to 20% of all AUMs, measured by the “Global Sustainable Investment Alliance” (GSIA). Integrating ESG aspects is increasingly a part of asset managers’ fiduciary responsibility. Furthermore, the materiality of ESG issues has increased, and their integration into financial analysis has become an important performance driver. Thus, material ESG drivers should be identified in conjunction with macroeconomic and financial drivers (Ouaknine, Whooley and Crozat, 2013).

Walden Asset Management (2010) stated that given the associated spectrum of financial outcomes, corporate executives and investors who measure, manage and disclose their policies and performance on ESG factors may have the greatest insight on this key dimension of overall company performance. Corporations have an opportunity to improve their financial performance by maintaining their licenses to operate, mitigating risks, realizing efficiencies, positioning themselves competitively, and identifying supplementary sources of revenues (Walden Asset Management, 2010). For executives and investors

an appreciation of material ESG aspects over a long-term horizon is integral to a sustainable business model.

Researchers have over the past 40 years examined various pathways through which ESG issues can impact company performance in multiple contexts, in emerging and developed markets, over different time periods, and as a function of both regulation and voluntary initiatives (Koehler and Hespenheide, 2013). They added that, the strongest evidence that ESG performance impacts financial performance is found in short-term event studies, which put the spotlight on the link between ESG information and investor interest and decisions. An extensive range of ESG events has been studied, including the negative impact on stock returns of corporate criminal activity, to violations of labour and environmental laws and product recalls (Koehler and Hespenheide, 2013).

In addition, Koehler and Hespenheide (2013) also stated that environmental, social, and governance (ESG) issues can impact company financial performance tied directly to its operations or products, or indirectly through stakeholder actions along the entire value chain, for example: (1) Direct operations risk: Accidents/spills/equipment failure; Environmental (pollution, e.g., carbon emissions, water pollution, penalties, and fines); and Social (employee strikes, wage concerns, health and safety), (2) Supply chain risk: Social (e.g.: child labor); Ingredients/natural resource use, such as palm oil, old growth forest, or water; and Weather catastrophes, and (3) Product risk: Ingredients (toxic chemicals, genetically modified organisms); Product performance, recalls, boycotts; Governance; and Board composition and independence. Additionally, in Deloitte Review, Koehler and Hespenheide (2013) stated that according to Dan Hanson, managing director at BlackRock, ESG is a proxy for risk that is not priced in, and companies that better manage these risks can deliver returns with greater certainty.

Despite the fact that financial markets worldwide have undergone substantial stress and change, a growing number of mainstream investors see ESG integration as a way to improve their long-term financial performance and to respond to the increasing client demand for sustainable investments (Roy and Gitman, 2012). This trend offers business opportunities to attract long-term investors, while at the same time, reducing their shareholder turnover, aligning their investment strategy with the real needs of their business, and laying down the foundation for a sustainable future (Roy and Gitman, 2012).

Research Question

- 1) The company performance declared in the annual report, are they subjective by ESG, while the other factors remain the same?
- 2) There has many factors contribute to ESG score, did the ownership of the institution one of the contributor?

Research Objective

- 1) To critically evaluate whether the ESG performance plays the important role in the profitability of the institution or not.
- 2) To investigate the relationship between the ownership of the institution and the ESG score

Scope of Study

The study focuses on ESG performance in certain developed and developing countries which are United Kingdom, France, Germany as developed countries, while from developing countries is China and Malaysia. This research confined to listed companies their indexes at least for 10 years

because the period of this study is from the year 2009 until year 2012 and the total is 306 of the companies.

Justification of Study

Since the findings are inconsistent based on the previous studies, I would like to examine the relationship between firm performance and environmental, social, governance (ESG) using Bloomberg Terminal. Usually, the previous was used KLD, Asset4 and other sources to gather all data. The evaluation of ESG score might be different due to different sources. Furthermore, in my study, the data covered developed and developing countries. This might affect the result in findings later.

CHAPTER 2

LITERATURE REVIEWS

The literature review was divided into three segments , since this is the new topic for environmental, social, governance (ESG) research. Basically, the previous studies were based on individual components of ESG with the firm performance.

2.1 Environmental with company performance

The environmental score consists of environmental aspects, whereby the conventional ones being emission reductions and low consumption of resources as well as product innovations aiming at improving the environmental protection (Dorfleitner, Utz and Wimmer, 2013). Finance professionals, for instance, as stated in Llewellyn (2007) anticipate that ESG issues and climate change in particular will steadily, but powerfully change the economic landscape in which companies operate and “cause periodic sharp movements in asset prices”.

Schiereck and Konigs (2008) mentioned that climate change as one of the greatest prominent environmental issues facing companies has a particular relevance for financial markets. In future, the firms might have operated under different environments (Bassen, 2007). For instance, carbon-intensive industries, such as oil, gas and the utilities sector will be highly impacted, with further climate change regulations affecting all sectors, as well as those outside these specific industries.

Smith (2011) in his study mentioned that, with the Principles of Responsible Investing (PRI), investors see addressed the issues of climate and water as central business challenges as well as sustainability questions. Companies which are unprepared to address such issues may expose long-term shareholder value and negatively affect their portfolios.

The concern of ESG issues is gradually being recognized as part of an institutional investor's fiduciary responsibility (Smith, 2011). Freshfield Bruckhaus Deringer, the world's fourth largest law firm, released a report examining the legality of considering ESG issues in the investment process in 2005 and at that point stated that integration was permissible and arguably required in all jurisdictions. These are further supported by the U.N. Environmental Program Finance Initiative and argued that it is the responsibility of investment consultants and asset managers to discuss ESG considerations with their clients when they first enter into a relationship to avoid future legal repercussions should an ESG issue have a negative impact on the fund (Smith, 2011).

Galbreath (2012) in his research stated that according to Scott (2001), the institutional environment comprises three types of institutions: (1) regulative, (2) normative, and (3) cognitive. Regulative influences comprise formal rules and incentives constructed by the state and other agents of the collective good. Normative influences comprise of the informal rules related to values and explicit moral commitments. While, cognitive influences encompass abstract rules allied with the structure of cognitive distinctions and taken for granted understandings. It is said that the three institutional pillars are interconnected and internally constant (Scott, 2001). A focus beyond corporate governance can be found, for instance, in the Australian Corporations Act of 2001. Section 299 (1)(f) which requires companies who are "subject to any particular and significant environmental

regulation” to report on performance in relation to such regulation (Galbreath, 2012).

Investigation on the influence of environmental aspects of firm value by Semenova and Hassel (2008) displayed that there is generally a positive relationship between the two factors. It was then argued that eco-friendly firms have the advantages of preparedness and performance, and that even though these companies might have higher costs, they could still be more profitable due to the willingness of customers to pay higher prices. Additionally, the superior reputation could lead to a higher market value. Guenster, Bauer, Derwall, and Koedijk (2011) in Dorfleitner et al. (2013) contribute the evidence relating to the fact that the market seems to completely acknowledge the financial benefits of eco-efficiency only with a delay.

Dorfleitner et al. (2013) stated that in the environmental dimension, it is argued that firms with a high Corporate Social Performance (CSP) are prepared in a better way if regulatory changes (e.g. With respect to pollution rights) are implemented. Additionally, customers possibly will pay higher prices and the company may profit from a better reputation. A high CSP in the environment dimension mainly works by addressing customers and society as stakeholders (Dorfleitner et al., 2013). Furthermore, in the social dimension such a mechanism can be in place (e.g. With respect to child labour), but the Corporate Financial Performance (CFP) can also be influenced positively through treating the employees as stakeholders well, who in turn will perform better in their jobs.

Peiris and Evans (2010) mentioned that in Galema, Platinga, and Scholtens (2008) studies show that ESG rating (for diversity, environmental standards, and product) has a significant negative (positive) effect on book-to-market (market-to-book) ratios, pointing to a link with stock return. Furthermore, Galema et al. (2008) also

implement a four-factor model at the stock level to display that return outperformance is not significant for stocks screened on strength and distress scores for several DSI ratings criteria. In addition, Brammer, Brooks and Pavelin (2006) in Peiris and Evans (2010) adopts a cross-sectional Fama Macbeth approach and find that higher environmental and community relations correspond to lower returns, while employment ratings are positively related to returns, although not significantly so.

2.2 Social with company performance

The social performance of a corporation is a key factor of the company performance also in the framework of ESG performance indicators (Kocmanova and Simberova, 2012). The trend, which put emphasis on the social aspects, is the conception of Corporate Social Responsibility (Carroll, 1999). The social score usually comprises issues such as customer and product responsibility, societal aspects such as cash donations, efforts to protect public health and respecting business ethics, e.g. by avoiding corruption or by caring for human rights aspects Dorfleitner et al. (2013). In addition, this dimension contains some aspects concerning the workforce, for example, with respect to health or diversity.

Evans and Peiris (2010) in their study mentioned that Socially Responsible Investing (SRI) has grown to be an important segment of the investment market over the past decade, representing around 10% of overall managed assets in both the US and Europe (Social Investment Forum 2008). In The Social Investment Forum (2006), SRI was defined as the screening of investments on the basis of social and ethical factors, shareholder advocacy, and community investing, which directs capital toward communities that would otherwise lack such resources. In contrast to traditionally investing, SRI aims to achieve both a desirable long-term social outcome as well as an investment

return consistent with the social priorities and chosen screens of investors (Peiris and Evans, 2010).

Bassen and Kovacs (2008) study stated that a fundamental relevance within socially responsible investment (SRI) strategies, ESG measures actually bare significant importance for mainstream business valuation and investment decision-making, especially in the context of long-term performance and risk evaluation (Derwall, 2007). Due to the long-term nature of the SR activity's effect, as exemplified by the findings of Edmans (2011), Deng, Kang and Low (2013) or Guenster et al. (2011), Dorfleitner et al. (2013) consider returns from holding a stock with high (or low) E, S, or G score for a longer period, possibly for several years. The results also show that for Europe and North America a high CSP leads to positive or zero abnormal returns over short investment horizons and is rewarded in the long run for all three dimensions. Additionally, for Japan and for the Asia Pacific region, only the governance dimension and the social dimension, respectively yield positive buy-and-hold abnormal returns (BHARs), while the corresponding other dimensions show negative or insignificant BHARs (Dorfleitner et al., 2013). Moreover, the results also show that a high CSP today can save money and yield high (unexpected by the market) cash flows in future periods.

On top of that, Statman and Glushkov (2009) claim that, for the investor, it is conceivable to achieve both a high CSP and a high CFP at the same time if they follows the best-in-class approach, the results of meta-studies such as Orlitzky, Schmidt and Rynes(2003) and Margolis, Efenbein and Walsh (2009) rather relatives these findings. Indeed, earlier studies show that some dissenting evidence regarding the influence of CSP on CFP do exist (Dorfleitner et al., 2013). Konar and Cohen (2001), for instance, find a positive significant relationship, while Boyle, Higgins and Rhee (1997) find negative relationships and Hillman and Keim (2001) results does not have any conclusive

relationship. Dorfleitner et al. (2013) mentioned that several articles give clear indications of the fact that a positive CSP lowers the equity (Ghoul, Guedhami and Kwok, 2011) and debt (Chava, Livdan and Purnanandam, 2009; Goss and Roberts, 2011) cost of capital of a company, which obviously also creates value.

Cheng, Ioannou and Serafeim (2011) revealed that organizations with superior CSR performance are better positioned to acquire financing in the capital markets. In turn, relaxation of capital constraints positively affects the capability of firms to embark on profitable strategic investments that otherwise they would not, and stock market performance (e.g., Lamont, Polk, and Saa-Requejo, 2001). Thus, identifying tangible firm features that are allied to the capital constraints a firm faces. Cheng, Ioannou and Serafeim (2011) also stated that conferring to the most recent UN Global Compact – Accenture CEO study (2010), 93 percent of the 766 partaker CEOs from all over the world declared CSR as an “important” or “very important” factor in their organizations’ future success.

In addition, further latest work centres on understanding the role of capital markets as an intermediate mechanism, through which CSR can create long-term value. For example, Lee and Faff (2009) demonstrates that companies with high CSR scores have lower idiosyncratic risk, while Goss (2009) shows that establishments with low CSR scores are more to be expected to experience financial distress. On top of that, El Ghoul, Guedhami, Kwok and Mishra (2011) study focus on a sample of US firms find that firms with better CSR scores exhibit lower cost of equity capital.

Cheng, Ioannou and Serafeim (2011) conclude that, they postulate that firms with superior CSR performance will face lower idiosyncratic capital constraints because of two mechanisms: a) reduced agency costs and revenue/profit generating potential consequential from

more effective stakeholder engagement and b) reduced informational asymmetry resulting from further extended and more reliable CSR disclosure practices and transparency (Cheng, Ioannou and Serafeim, 2011).

Peiris and Evans (2010) paper confirms previous research by Brammer et al. (2006) and Galema et al. (2008) regarding lack of consistency in the relationship between ESG ratings and stock return, a clear positive relationship is found between a firm's stakeholder-related ESG ratings and its operating performance and market valuation, implying higher earnings expectations for high-rated stocks. The results also recommend that employment conditions are a more pertinent influence than other stakeholder criteria, and that a company's engrossment in more general non-stakeholder related social issues in general contributes negatively to both underlying operating performance and stock return (Peiris and Evans, 2010). The study suggests that broader ESG factors have potentially influenced a company's financial performance and are a relevant consideration in investment decision-makers.

In Dorfleitner et al. (2013) findings clearly show that financial markets are not capable of pricing different levels of corporate social performance properly in the short run and, in particular, in the long run. The researchers added that corporate social performance (CSP) is particularly promising to consider when addressing the issue of corporate financial performance (CFP) for two reasons. First, the number of socially responsible (SR) investors and their amount of money invested has been ever-increasing over the last decades through \$3.74 trillion assets under management in the United States (US SIF, 2012) and \$13.57 trillion world-wide (GSIA, 2013) in 2012. There are profit and non-profit motives for corporate social responsibility from the viewpoint of SR investors (Hong and Kacperczyk, 2009). Even if the latter could be based on the possibly

incorrect assumption of doing well while doing good (Derwall, Koedijk, and Horst, 2011). Second, corporate social responsibility is often claimed to be an issue of sustainability. Thus a long-term perspective is very apt in revealing the benefits of this kind of a company's effort (Peiris and Evans, 2010)

First of all is the upsurges transparency around the social and environmental impact of companies, and their governance structure and secondly, it may possibly change the internal control system that further progresses the compliance with regulations and the reliability of reporting (Cheng, Ioannou and Serafeim, 2011). Consequently, the increased accessibility and quality of data about the firm lessens the informational asymmetry between the corporation and investors (El Ghouli et al., 2011), leading to lower capital constrictions (Hubbard, 1998) in Cheng, Ioannou and Serafeim (2011). In summation, due to lower agency costs through stakeholder engagement and increased transparency through CSR reporting, Cheng, Ioannou and Serafeim (2011) hypothesize that an establishment with superior CSR performance will face lower capital constraints.

A Meta-analysis finding by Orlitzky et al. (2003) and Margolis et al. (2007), which aggregate results of a range of management studies, finds a significant positive relationship between Corporate Social Performance (CSP) and Corporate Financial Performance (CFP).

On top of that, study by Evans and Peiris (2010) using a multifactor framework, delivers substantiation of a significant positive relationship between particular ESG rating criteria and both return on assets and market to book value measures, supporting the stakeholder theory that Corporate Social Performance (CSP) is positive for Corporate Financial Performance (CFP).

Whilst analysis in Evans and Peiris (2010) study supported previous research by Brammer et al. (2006) and Galema et al. (2008) in relation

to the lack of a significant relationship between stakeholder ratings and stock return, a evidently positive relationship is found between total ESG rating and operating performance, henceforth supporting the stakeholder based explanation of CSP being a measure of effective management and being positive for CFP. Furthermore, a significant positive association is also found between broader ESG factors and company valuations signifying that higher rated companies are connected with higher earnings multiples (Evans and Peiris, 2010). Findings also propose that employment state of affairs are a more significant influence than other stakeholder criteria and a company's involvement in more broad-spectrum non-stakeholder related social issues commonly contributes negatively to both underlying operating performance and stock return. Therefore, the analysis acclaims that ESG factors do impact corporate financial performance and hence are a relevant deliberation for investment decision-makers.

In addition, Rees (2011) outcomes in the study of investor influence on firms' environmental, social and governance performance suggest that pension fund based block holdings have a negative effect on coordinated market economies (CMEs) the result is based on a small sample of firms and the impact will be modest. The results of the block-holdings held by financial institutions are uneven. In contrast, the results of conventional linear regression models with those from propensity score matching experimental techniques, Rees (2011) findings also add to the refinement of experimental techniques. In five cases, for leverage, corporate cross-holdings, employee/family holdings, government holdings and pension fund block holdings, the results are broadly similar whether based on regression models or propensity score matching Rees (2011).

Above and beyond, Nagy, Cogan and Sinnreich (2013) in their study mentioned that two reports by Mercer (2009) found that 20 of 36 peer-reviewed studies showed evidence of a positive relationship between

ESG factors and financial performance, while five showed mixed results and eight showed a neutral relationship. Three others found negative results. A recent Deutsche Bank study by Fulton, Kahn and Sharples (2012), of 56 peer-reviewed papers found that 89 percent linked consideration of ESG factors with market-based outperformance, and that application of exclusionary SRI screens was responsible for any negative results. These findings support an evolving view of ESG investing strategies.

2.3 Governance with company performance

Corporate Governance (CG) is defined as an intricate of structures, processes, cultures and systems which excite a successful progress of the company Keasley, Thompson and Wright (1997). Deakin (2012) said that corporate governance is about the approach of how organizations are directed and controlled. New developments in corporate governance can be seen, according to Kay and Silberston (1999) in Kocmanova and Simberova (2012), in a single common goal, which is to give the executive management the utmost possible autonomy to develop long-term business in any way that seems applicable once they will have exactly specified the responsibilities to all stakeholders involved in this business for their long-term performance. In Dorfleitner et al. (2013) stated that normally, according to UNEP Finance Initiative and UN Global Compact (2013) the governance score measures several aspects of proper behaviour concerning the board of directors as well as about the integration of financial and non-financial goals of the company and shareholder rights.

Corporate governance is the vital component in improving economic efficiency and growth, along with enhancing investors' confidence. It encompasses a set of associations between the company's management, its board of directors, its shareholders, and its stakeholders (Kocmanova and Simberova, 2012).

ECCE (2007a) in Bassen and Kovacs (2008) highlighted that financial analysts consider corporate governance issues to constitute a classic examination area within corporate valuation, whereas issues such as social or environmental impact experience incremental consideration. This situation could be attributed to the historically determined higher regulatory agenda regarding corporate governance matters as opposed to the more recently acknowledged the impact of social and environmental aspects by investment professionals (Bassen and Kovacs, 2008).

In some region around the world, there has been growth in the implementation of government regulations that focus on creating greater disclosure around ESG issues (Smith, 2011). The Dodd-Frank Wall Street Reform and Consumer Protection Act, passed in the United States in July 2010, is among a broad range of regulations that will have direct effects on the financial industry there (Smith, 2011).

Galbreath (2013) study found that there is evidence to suggest that institutional pressure to respond to ESG issues is higher in some industries in Australia than others. For example, recently, a carbon tax was introduced by the lower house of Parliament, becoming a law shortly thereafter. In general, the carbon-pricing scheme will impact those industries that are large carbon polluters (e.g., energy, transportation, oil, and gas) more than others (Maher 2012).

Kocmanova and Simberova (2012) in their study found that extensive surveys of British and American corporations directed in the late 1990s display that the relationship between the quality of corporate governance and its financial performance is neither clear-cut nor systematic (Kakabatse, Kakabatse and Kouzmin, 2001). Conversely, loads of new research has surfaced, documenting the fact that the relation between the quality of corporate governance and performance

indicators actually does exist (Bradley, 2004). It was stated by Maly, Theodor and Peklo, 2002) that the proposition of positive correlation between the quality of governance and the achievement of a business as evidenced by a rising value for the shareholders has been confirmed by a number of empirical analyses.

Gompers, Ishill and Metrick (2003) supported by Core, Guay, and Rusticus (2006) and Bhagat and Bolton (2008) provide evidence on the fact that weak governance leads to weak operating performance, but not automatically weak stock returns as the market partly seems to be able to price governance aspects. Dorfleitner et al. (2013) mentioned that a high CSP with respect to governance often yields an additional value which can be explained by the fact that many governance aspects are directly in favour of the shareholders, as conflicting to the remainder of the stakeholders. It can also be expected that more ability within the markets to price this aspect correctly when compared to the other dimensions, even if the value creation may work more directly (Dorfleitner et al., 2013).

According to Gompers et al, (2003) and also mentioned in Kocmanova and Simberova (2012), the supremacy of sharing relationship between investors and managers is well-defined by the rules of corporate governance. Through the listing of 24 governance rules, they constructed a "Governance Index" reflecting the level of shareholders' rights in about 1500 large firms during the 1990s. Gompers et al, (2003) evaluated the empirical affiliation of this index with corporate performance and determined that corporate governance show a relationship strongly with stock returns during the 1990s. The corporations with sturdier shareholder rights had a higher value, profits, and higher growth in sales, lower capital expenditures, and made lesser corporate acquisitions. If the 11.4 % point difference incorporation value was even partially "caused" by each supplementary governance provision, then the long-term benefits of eradicating

numerous provisions would be enormous (Kocmanova and Simberova (2012)).

Hayashi (2013) point out that Guyatt (2006) conducted a questionnaire survey of ESG investors and found that more than 80% of respondents agreed or strongly agreed that good corporate governance and good corporate responsibility will bring long-term value and therefore long-run investment returns

Based on research done by Dorfleitner et al., (2013), it was found that on the fact that European and North American stock portfolios with high E, S, and G scores show a significant financial outperformance in the long run with the exception of the combination of governance and Europe. Investing in the top stocks and shorting those with low E, S, G scores implies even higher abnormal returns for the investor (Dorfleitner et al., 2013). Therefore, Dorfleitner et al. (2013) conclude that in the conforming countries, activities of firms to increase their E, S, or G score are long-term investments, which are not priced by the market before they lead to tangible outcomes.

Dorfleitner et al. (2013) added that, for the G score there are significant positive abnormal returns, their absolute value is much smaller than the significant figures of the European and North American portfolios. For the E and S score, no five-year abnormal return is significant while in some shorter holding periods there are small positive or negative returns (Dorfleitner et al., 2013). In the Asia Pacific region, researcher observe a significant positive long-run abnormal return only regarding the S score, while for E and G the outperformance is significantly negative (Dorfleitner et al., 2013). Besides that, corporate governance research by Gompers et al. (2003) and Bebchuk and Cohen (2005) found indication that higher levels of governance leading to significantly higher returns, valuation

(e.g., price-to-book ratios), and operating performance when measured by a net profit margin and sales growth.

Dorfleitner et al. (2013) in their study stated that Barber (2006) utilizes the Carhart (1997) model to contemplate the implication of governance factors in the context of institutional activism, finding evidence of a positive alpha for a portfolio of stocks targeted by Calpers (as part of their active engagement with company management) over the period 1992-1995. On top of that, Barber (2006) also finds alphas are not significantly different from zero (due to the effect of high standard errors).

Rees (2011) in his study, using a range of estimation techniques the results robustly suggest that government block-holdings and higher levels of debt are positively associated with environmental, social and governance performance. The results are also strongly consistent with entrenched equity holders, be they employees/family or corporate cross-holdings, being negatively associated with scores (Rees, 2011).

Furthermore, Rees (2011) also mentioned that conventional agency theory suggests that the separation of ownership from control or the exploitation of minority shareholdings by entrenched blocks will lead to sub-optimal performance where optimal is assumed to be wealth maximisation. Mackenzie and Rees (2011) also analyse investor characteristics and conclude that entrenched undiversified owners resist ESG investment and tentatively suggest that leverage is positively associated with ESG scores.

2.4 Summary of Literature Review

Previous Research	Author and Year
There is generally a positive relationship between environmental aspect and firm value.	Semenova and Hassel (2008)

ESG in Focus

The market seems to completely acknowledge the financial benefits of eco-efficiency only with a delay	Guenster, Bauer, Derwall, and Koedijk (2011)
In the environmental dimension, it is argued that firms with a high Corporate Social Performance (CSP) are prepared in a better way if regulatory changes are implemented and the company may profit from a better reputation.	Dorfleitner et al. (2013)
Corporate Financial Performance (CFP) can also be influenced positively through treating the employees as stakeholders well, who in turn will perform better in their jobs.	Dorfleitner et al. (2013)
ESG rating (for diversity, environmental standards, and product) has a significant negative (positive) effect on book-to-market (market-to-book) ratios, pointing to a link with stock return.	Galema, Platinga, and Scholtens (2008)
Return outperformance is not significant for stocks screened on strength and distress scores for several Domini Social Index (DSI) ratings criteria	Galema et al. (2008)
Higher environmental and community relations correspond to lower returns, while employment ratings are positively related to returns, although not significantly so.	Brammer, Brooks and Pavelin (2006)
The social performance of a corporation is a key factor of the company performance also in the framework of ESG performance indicators.	Kocmanova and Simberova (2012).
For Europe and North America a high CSP leads to positive or zero abnormal returns over short investment horizons and is rewarded in the long run for all three dimensions	Dorfleitner et al. (2013)
For Japan and for the Asia Pacific region, only the governance dimension and the social dimension respectively yield positive buy-and-hold abnormal returns (BHARs), while the corresponding other dimensions show negative or insignificant BHARs	Dorfleitner et al. (2013)
A high CSP can save money and yield high (unexpected by the market) cash flows in future periods.	Dorfleitner et al. (2013)
There is a positive significant relationship between CSP and CFP	Konar and Cohen (2001)
There is negative relationships of CSP on CFP	Boyle, Higgins and Rhee (1997)

ESG in Focus

There is no conclusive relationship o CSP on CFP	Hillman and Keim (2001)
A positive CSP lowers the equity and debt cost of capital of a company, which obviously also creates value.	Dorfleitner et al. (2013)
Organizations with superior CSR performance are better positioned to acquire financing in the capital markets	Cheng, Ioannou and Serafeim (2011)
Firms that engage in CSR activities face lower capital constraints, thus identifying tangible firm features that are allied to the capital constraints a firm faces.	Cheng, Ioannou and Serafeim (2011)
Companies with high CSR scores have lower idiosyncratic risk	Lee and Faff (2009)
Establishments with low CSR scores are more to be expected to experience financial distress	Goss (2009)
There is positive effect of CSR on sell-side analysts' recommendations	Ioannou and Serafeim (2010)
Corporations with the worst CSR scores pay between 7 and 18 basis points more on their bank debt compared to corporations with greater scores.	Goss and Roberts (2011)
The voluntary disclosure of CSR undertakings leads to a reduction in the firms cost of capital, while attracting devoted institutional investors and analyst coverage	Dhaliwal, Li, Tsang, and Yang (2011)
Firms with better CSR scores exhibit lower cost of equity capital.	El Ghoul, Guedhami, Kwok and Mishra (2011)
There is lack of consistency in the relationship between ESG ratings and stock return.	Peiris and Evans (2010), Brammer et al. (2006) and Galema et al. (2008)
There is positive relationship between a firm's stakeholder-related ESG ratings and its operating performance and market valuation, implying higher earnings expectations for higher-rated stocks	Peiris and Evans (2010)
Broader ESG factors do potentially influence a company's financial performance and are a relevant consideration for investment decision-makers.	Peiris and Evans (2010)

ESG in Focus

Greater CSR performance is linked to better stakeholder commitment, restraining the possibility of short-term opportunistic behavior and as a result decreasing the whole contracting costs.	Cheng, Ioannou and Serafeim (2011)
There is a significant positive relationship between Corporate Social Performance (CSP) and Corporate Financial Performance (CFP).	Orlitzky et al. (2003) and Margolis et al. (2007)
There is a significant positive relationship between particular ESG rating criteria and both return on assets and market to book value measures, supporting the stakeholder theory that Corporate Social Performance (CSP) is positive for Corporate Financial Performance (CFP).	Evans and Peiris (2010)
Employment settings are a more relevant influence than other stakeholder criteria and a company's involvement in more general non-stakeholder related social issues contributes negatively to both operating performance and stock return	Evans and Peiris (2010).
The relationship between the quality of corporate governance and its financial performance is neither clear-cut nor systematic	Kakabadse, Kakabadse and Kouzmin (2001)
The relation between the quality of corporate governance and performance indicators actually does exist	Bradley (2004)
Proposition of positive correlation between the quality of governance and the achievement of a business as evidenced by a rising value for the shareholders has been confirmed by a number of empirical analyses	Maly, Theodor and Peklo (2002)
Weak governance leads to weak operating performance, but not automatically weak stock returns as the market partly seems to be able to price governance aspects	Gompers, Ishill and Metrick (2003), Core, Guay, and Rusticus (2006) and Bhagat and Bolton (2008)
A high CSP with respect to governance often yields an additional value which can be explained by the fact that many governance aspects are directly in favor of the shareholders, as conflicting to the remainder of the stakeholders.	Dorfleitner et al. (2013)
Corporate governance shows a relationship strongly with stock returns during the 1990s	Gompers et al. (2003)

ESG in Focus

Good corporate governance and good corporate responsibility will bring long-term value and therefore long-run investment returns	Guyatt (2006)
Stock portfolios with high E, S, and G scores show a significant financial outperformance in the long run with the exception of the combination of governance and Europe.	Dorflleitner et al. (2013)
Higher levels of governance leading to significantly higher returns, valuation (e.g., price-to-book ratios), and operating performance when measured by a net profit margin and sales growth.	Gompers et al. (2003) and Bebchuk and Cohen (2005)
Government block-holdings and higher levels of debt are positively associated with environmental, social and governance performance	Rees (2011).
Leverage is positively associated with ESG scores.	Mackenzie and Rees (2011)
20 of 36 peer-reviewed studies showed evidence of a positive relationship between ESG factors and financial performance, while five showed mixed results and eight showed a neutral relationship. Three others found negative results	Mercer (2009)

CHAPTER 3

RESEARCH METHODOLOGY

3. Introduction

This chapter will discuss about the research methodology and how the data were obtained. For the purpose of this study, there are several tasks had been done and first of all is on how research design has been developed. This chapter consists of data collection method and framework. It also exposed on how the measurement has been done and lastly is the proposed of data analysis.

This study seeks to critically evaluate whether the environmental, social governance (ESG) performance plays the important role in the profitability of the institution or not. Furthermore, this paper also wants to investigate the relationship between the environmental, social, score (ESG) performance and the ownership of the company. In order to achieve these objectives, two models will be tested and discussed later.

3.1. Specification of the Model

Basically, model specification mentions to the purpose of which explanatory variables should include in or excluded from a regression equation (Patrick, 1997). Generally, the specification of a regression model should be constructed mainly on theoretical thoughts rather than empirical or methodological.

In this research, the researcher applied positivist paradigm or in other word is a quantitative method because the researcher wanted to check the validity of finding in a new context. Mostly, the previous research

used different aspects such as a sources of main data, theoretical framework, the length of time period study and countries. Furthermore, the study wanted to ensure the validity of finding or concepts with the previous research and it is not surprising if the result might be different with this study due to these different aspects.

There has two theoretical framework or model for this study. The first and second theoretical framework as shown in Figure 3.1 (a) and (b), respectively.

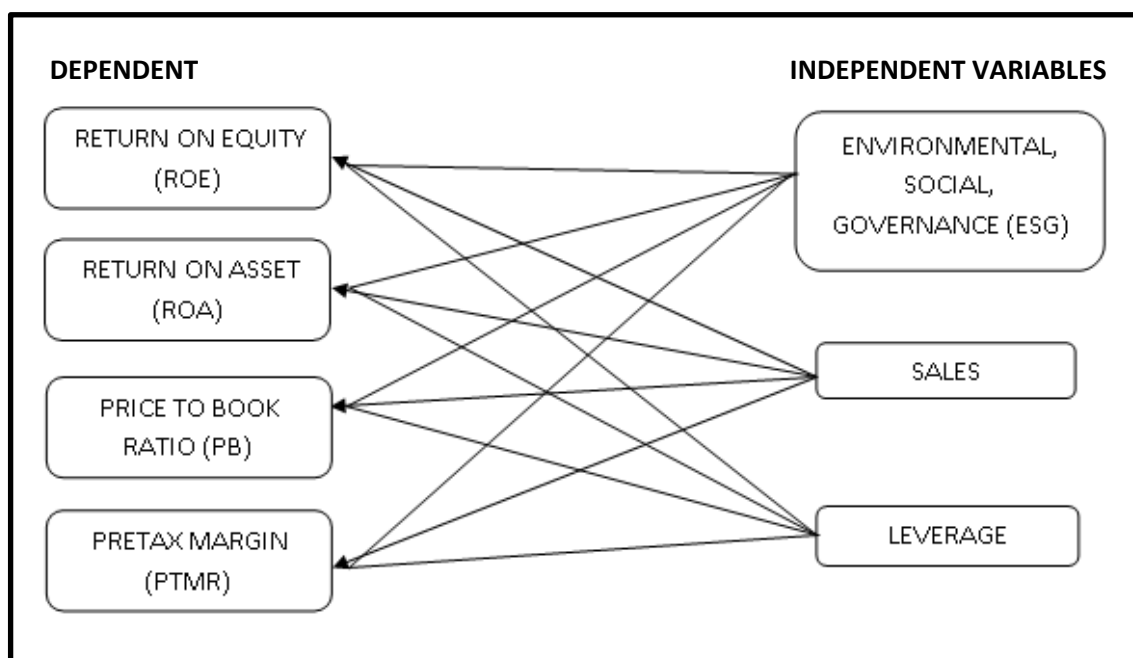


Figure 3.1 (a) First Model: Company Performances and ESG

There have four equations for the first model, to ensure the validity of the result after the regression takes place. This model was tested for answering the first research question which is, *“The performance of a company that declared in the annual report, are they subjective with changing of ESG, while the sales and leverage remain the same?”*. The model has been tested in a number of different provisions.

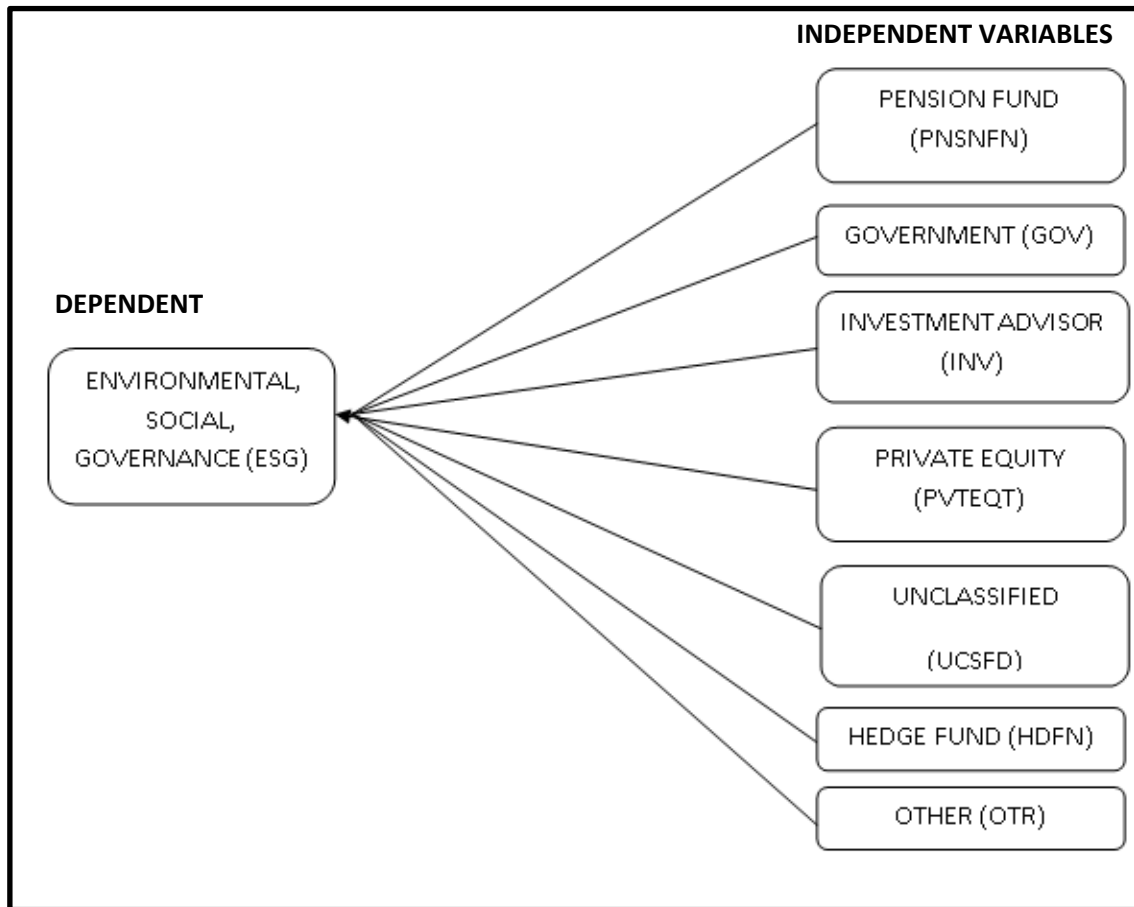


Figure 1.1 (b) Second Model: ESG and Ownership

The second model was applied to answer the second research question, *“Is there any impact on environmental, social, governance (ESG) if there any changes in component of an ownership?”*.

3.2. Statement Of Hypothesis

A hypothesis is a proposition statement that is shown in testable form and tries to measure a relationship between dependent and independent variables. Some statement created in the hypothesis can be either supported or rejected through research. There are two types of hypothesis which is null (negative) and alternate (positive) hypothesis.

Since the objectives of this paper; 1) seek to critically evaluate whether the environmental, social governance (ESG) performance plays the important role in the profitability of the institution or not, 2) investigate the relationship between the ownership of the company and the environmental, social, score (ESG) performance, the study creates a set of testable hypothesis.

Hypothesis 1(a):

H_0 : There is no significant link between return on equity and environmental, social, governance (ESG)

H_1 : There is a significant link between return on equity and environmental, social, governance (ESG)

Hypothesis 1(b):

H_0 : There is no significant link between return on asset and environmental, social, governance (ESG)

H_1 : There is a significant link between return on asset and environmental, social, governance (ESG)

Hypothesis 1(c):

H_0 : There is no significant link between pretax margin and environmental, social, governance (ESG)

H_1 : There is a significant link between pretax margin and environmental, social, governance (ESG)

Hypothesis 1(d):

H_0 : There is no significant link between price to book ratio and environmental, social, governance (ESG)

H_1 : There is a significant link between price to book ratio and environmental, social, governance (ESG)

Hypothesis 2 (a):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the pension fund

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the pension fund

Hypothesis 2 (b):

H_0 : There is no link relationship between environmental, social, governance (ESG) and the government

H_1 : There is a significant link between environmental, social, governance (ESG) and the government

Hypothesis 2 (c):

H_0 : There is no significant link between environmental, social, governance (ESG) and the investment advisor

H_1 : There is a significant link between environmental, social, governance (ESG) and the investment advisor

Hypothesis 2 (d):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the private equity

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the private equity

Hypothesis 2 (e):

H₀ : There is no significant relationship between environmental, social, governance (ESG) and unclassified

H₁ : There is a significant relationship between environmental, social, governance (ESG) and the classified

Hypothesis 2 (f):

H₀ : There is no significant relationship between environmental, social, governance (ESG) and the hedge fund

H₁ : There is a significant relationship between environmental, social, governance (ESG) and the hedge fund

Hypothesis 2 (g):

H₀ : There is no significant relationship between environmental, social, governance (ESG) and the others

H₁ : There is a significant relationship between environmental, social, governance (ESG) and the others

3.3. Validity and Reliability

“An item, sample or instrument measures or describes what it is supposed to measure or describe” (Bell, J, 2005, p117), can be called as validity. It can be divided into two which are external or internal. For internal validity can be referred to “to the extent to which the stated interpretation of the result is true” (Anderson J, 2000); while external validity is to simplifying sample results to the whole population.

The word of reliability, in study, denotes to “the extent to which a test or procedure produces similar results under constant conditions on all occasions” (Bell, 2005). In the other ways to understand, this denotes to

the consistency in measurement.

3.4. Technique for Data Analysis

3.4.1. Multiple Linear Regression Model

The method used in the study is the Multiple Linear Regression Model. This method of analysis is designed to determine the simultaneous effects of the ESG score on the performance of companies and also to see the relationship between ESG and the component of ownership of the company.

$$Y_{it} = \beta_{0it} + \beta_{1it}X_{1it} + \beta_{2it}X_{2it} + \beta_{3it}X_{3it} + \mu$$

Based on the equation above, Y_{it} is the effect on ESG scores for a certain company and period of time either they get greater profitability or suffer losses. β_{it} is the reaction coefficient measuring the impact, in other words, it can be explained by the value of changes on Y_{it} if there any increase or decrease in X_{it} plus the value of β_{0it} , though μ is error term which disturbance of the model. Below are the following multiple regressions that have been used in this study:

$$\begin{aligned}
 ROE_{it} & \\
 &= \beta_0 + \beta_{1it}(ESG_{it} + \beta_{2it} \log(SALES_{it}) + \beta_{3it}LEVERAGE_{it} \\
 &+ \mu \dots \dots \dots (1a)
 \end{aligned}$$

$$\begin{aligned}
 ROA_{it} & \\
 &= \beta_0 + \beta_{1it}ESG_{it} + \beta_{2it} \log(SALES_{it}) + \beta_{3it}LEVERAGE_{it} \\
 &+ \mu \dots \dots \dots (1b)
 \end{aligned}$$

$$\begin{aligned}
 PTMR_{it} & \\
 &= \beta_0 + \beta_{1it}ESG_{it} + \beta_{2it} \log(SALES_{it}) + \beta_{3it}LEVERAGE_{it} \\
 &+ \mu \dots \dots \dots (1c)
 \end{aligned}$$

$$PB_{it} = \beta_0 + \beta_{1it}ESG_{it} + \beta_{2it} \log(SALES_{it}) + \beta_{1it}LEVERAGE_{it} + \mu \dots \dots \dots (1d)$$

$$ESG_i = \beta_0 + \beta_{1i}PNSNFN_i + \beta_{2i}GOV_i + \beta_{3i}INV_i + \beta_{4i}PVTEQT_i + \beta_{5i}UCSFD_i + \beta_{6i}HDFN_i + \beta_{7i}OTR_i + \mu \dots \dots \dots (2)$$

The equation 1(a) to 1(d) is to show how strength the relationship between company performance and ESG even using different measurement for company performance. Indirectly, it will increase the reliability and validity of this study. Meanwhile, the equation 2 is to identify whether ownership the company is significant or not an ESG, if yes, which components that give high impact.

Eviews one of the popular software used by the researcher to run a regression, same as well as my study to examine the value of the coefficient either it is positive or negative. The data were combined between time series and panel procedures and for the panel data, there consists of two methods which are fixed effect or random effect. In order to identify which final is valid to be used in this study, two tests had been used, which are:

- Likelihood Test
It is also known as Redundant Fixed Effect Test. This test used to analyse whether the regression result should used Ordinary Least Square (OLS) method or not. The null hypothesis for this test is accepted the Ordinary Least Square method, while the alternative hypothesis do not accept Ordinary Least Square method. If the result is rejected the null hypothesis, then another will be used which is Hausman Test.

- Hausman Test

It is also known as Correlated Random Effect Test. This test is used when the null hypothesis was rejected in Likelihood Test to confirm either random or fixed effect will be used in regression analysis. The null hypothesis for this test is to accept random effect, while the alternative hypothesis does not accept random effect, thus the fixed effect will be used.

3.4.2. Coefficient of Determination (R^2)

It is the test of goodness of fit. It is used to determine how well the regression line fits the data. The proportion of total variation in the dependent variable is denoted as R^2 and the value is ranging between 0 to 1. The higher the value of R^2 , the higher the explanatory power of the estimated equation and it is more accurate for forecasting purposes. It determines how well that all the regression line fits the data. In other words, the value of R^2 is explained that how significant the explanatory variable influences the dependent variable. If R^2 shows the value of 1, it indicates that all the changes in the dependent variable are explained. It shows that there is a strong correlation between dependent and independent variables, but if the R^2 shows the value of 0, it indicates that the changes in the variation of the independent variable do not explain by the independent variables.

$$r_p = \alpha_p + \beta_p * r_{index}$$

3.4.3. Individual Testing (T - Test)

T-test analysis is the formula for a test statistic that either exactly follows or closely approximates a t-distribution under the null hypothesis is given. Each of these statistics can be used

to carry out either a one-tailed or two-tailed test. The null hypothesis between independent and dependent variable ($H_0 : \beta_1 = 0$) is tested against the alternative hypothesis ($H_1 : \beta_1 \neq 0$) by using the t - test approach.

3.4.4. Overall or Joint Testing (F - Test)

It is also the test of the overall explanatory power of regression. It analyses the variance; this uses the F-statistics or F-ratio. The F-statistic is used to test various statistical hypotheses about the mean of the distribution from which a sample or a set of sample has been drawn. If the calculated F-value is higher, it shows there is a significant outcome among the explanatory and dependent variables.

$$F = \frac{S1^2}{S2^2}$$

FINDINGS AND ANALYSIS

4. Introduction

This study has been mentioned earlier is about the link between environmental, social and governance (ESG) and dependent variable, company performance, where performance of a company being measured and comprises both accounting and market performance, and is denoted by profitability ratios, containing of three measures, and one measure for equity valuation (Balatbat, 2012). This chapter will explain about overall of empirical study by using the methodology that has been mentioned before. The analysis and findings of empirical study can be obtained by using the Eviews 7.

4.1. Data Collection and Sample Period

Data collection can be defined as how the researcher collects the data also related with nature of data to be gathered. Under this section also, there will be discussed further in population and sample.

The main data used in this research was acquired from Bloomberg Terminal in yearly basis to produce quantitative analysis, while for supporting data were taken from web sites, journals and previous reports relating to this study focus, and it's called as secondary data. Bloomberg Terminal was chosen as the method to gather the environmental, social, governance (ESG) data because there has only a small number of research from previous researcher used it. Mostly, the researchers used FTSE4Good, Asset4, Goldman Sachs, KLD dataset or Dow Jones Sustainability World Index (Galbreath, 2013). "Bloomberg collects more than 100 data points related to ESG. For each company, Bloomberg calculates a score that ranges from 1 for companies that disclose the minimum number of data points to 100 for those that disclose every data point collected and incorporated into the scoring model by Bloomberg",

(Bloomberg, 2011, p. 12). Besides, to ensure it is appropriate for corporate in a different industry sector, the score is designed for achieving this aim.

The range of period covered by the research starting from year 2009 to 2012, which is four years for the first model and only one year, 2012 for the second model and it covers five countries which are United Kingdom, France and Germany from developed countries and the other two are China and Malaysia from developing countries¹. The reason for limiting this range of period was that the latest data for the research was obtainable. Furthermore, to ensure no bias and increase the validity of the result, the data was standardised in Great Britain Pound Sterling currency because the currency is one of the strongest currencies in the world. Hence, this paper used the panel data because there has combination of time-series and cross-section data for analysing the first research question which is, *“The performance of a company that declared in the annual report, are they subjective with changing of ESG, while the sales and leverage remain the same?”*. Meanwhile, in answering the second research question which is, *“Is there any impact on environmental, social, governance (ESG) if there any changes in component of an ownership?”*, cross-section data will be used.

Population discusses to a whole group of people, events, or things of interest that the researcher demands to study. Selecting a partial of the population is known as sampling and there have various techniques; random, systematic, stratified, convenience, judgement, quota and snowball sampling. A portion of the population can be called as a sample. The purpose of using the sample, general conclusions can be created by the researcher for a whole population concern. The population for my study includes all listed companies from five countries which are United Kingdom, Germany and France represent for developed countries; while China and Malaysia for developing countries is 500 companies. On

¹ Please refer Appendix for list of Developed and Developing countries

the other hand, the sample of my study consisted only 306 companies have taken randomly after the companies fulfilled some requirement such as the company should be listed during the period of this study; Year 2009 to Year 2012 or not to be delisting during that period and there has not too much of missing data. It also to reduce sample error, as well as increase the internal validity.

4.2. Variable Definition

- Return on Equity (ROE):

The amount of net income returned as a percentage of shareholders' equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The ROE is useful for comparing the profitability of a company to that of other firms in the same industry.

$$= \text{Net Income} / \text{Shareholder's Equity}^2$$

- Return on Asset (ROA):

An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Sometimes this is referred to as "return on investment". The assets of the company are comprised of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest in net income. The higher the ROA number, the better, because the company is earning more money on less investment.

$$= \frac{\text{Net Income}}{\text{Total Assets}}^3$$

² Investopedia Website

³ Investopedia Website

- **Pretax Margin (PTMR)**
A company's earnings before tax as a percentage of total sales or revenues. The higher the pre-tax profit margin, the more profitable the company. The trend of the pretax profit margin is as important as the figure itself, since it provides an indication of which way the company's profitability is headed.⁴
- **Price to Book Ratio (PB)**
A ratio used to compare a stock's market value to its book value. Also known as the "price-equity ratio". A lower P/B ratio could mean that the stock is undervalued. However, it could also mean that something is fundamentally wrong with the company.⁵
$$= \text{CURRENT PRICE} / \text{BOOK VALUE PER SHARE}$$
- **Environmental, Social, Governance (ESG)**
"Proprietary Bloomberg score based on the extent of a company's Environmental, Social, and Governance (ESG) disclosure. The score ranges from 0.1 for companies that disclose a minimum amount of ESG data to 100 for those that disclose every data point collected by Bloomberg", (Bloomberg, 2011)

4.3. Descriptive Analysis

4.3.1. Model 1: Company Performance and ESG

⁴ Investopedia Website

⁵ Investopedia Website

ESG in Focus

	Mean	Maximum	Minimum	Std. Dev.
ESG	0.329796	0.723140	0.090909	0.159462
ROE	0.098944	3.148787	-0.951689	0.367274
ROA	0.055058	0.529492	-0.121178	0.061600
PTMR	15.85658	277.1499	-123.3111	22.00396
PB	3.497902	157.3917	0.272100	6.412314
SALES	14935.99	294786.4	6.888200	32414.47
LEVERAGE	24.64759	73.54960	0.000000	15.79870

Table 4.3.1 Descriptive Statistics for First Model

From the Table 4.3.1 above, the range value of ESG is between 1% to 72%. It means that the minimum ESG score from the sample is 1%, which can be explained by the company disclosed the minimum data while the maximum ESG score is around 72% of disclosed data. The gap between minimum and maximum is big and it is good for this research to see the impact of ESG score disclosure towards on the company performance and it has a variety of data. Roughly, most of the companies have around 33% of data disclosure. The risk of the companies does not disclose the data is around 16%. It might be certain data is private of confidential or company policy.

The average of equity return for this study is 9.9%, which explained that roughly 9.9% of the profit will be generated from the 1% of shareholders' investment. The maximum value of equity return will be produced by the shareholders' investment is almost 315%, while the minimum value is -95%. The risk that shareholders have to face not earn profit from their investment is around 36.7%. This level of risk is categorized as low risk and the shareholders are risk taker because they are willing to bear the losses.

The mean of an asset's return is 5.5%, it shows that from the 1% of the assets, the company can generate 5.5% of the profit. The range of an asset's return is between -12% to 53%, it means that the company can face the loss of 12% or generate the profit until 53% from the total assets. The return of assets as a measurement how efficient the managers of the company managed their total assets, so from this result, we can say that the managers quite good at managing their assets because the higher return on assets, the better management, the company is producing extra money for a small investment. Furthermore, they only faced 6.2% of risk not getting any income from their assets.

Mostly the companies from this study has around 15.86% pretax margin. The range of minimum and maximum value for pretax margin is around -123.31% to 277.15%. It shows that some of the companies well performed and some are not. Even they are from different countries, this pretax margin still reliable to use because the pretax margin is before the deduction of the country tax since the tax is might be different. The risk that they have to face not getting any profit is 22%.

The most interesting part of this descriptive statistic is the range of leverage is between 0% to 73.54%. It shows that there has one of the company do not use debt in their business. While the average leverage is only around 25%. It is good for the company when the level of leverage is not too high because it will give higher risk to the company if they cannot well manage their debts.

4.3.2. Model 2: ESG and Company Ownership

ESG in Focus

	Mean	Maximum	Minimum	Std. Dev.
ESG	0.340175	0.714286	0.099174	0.151853
PNSNFN	2.3213	12.463	0	2.036461
GOV	7.374637	76.286	0.054	9.651897
INV	44.21823	99.391	0.016	32.05483
PVTEQT	0.360878	5.403	0.001	1.17275
UNCLASSIFIED	4.248649	68.109	0	8.516764
HDFN	0.966827	12.527	0	1.787797
OTHER	6.541726	59.647	0	10.75659

Table 4.3.2 Descriptive Statistics for Second Model

For the second model, there does not have extreme value. For pension fund and hedge fund, the range of minimum and maximum value is ranging from 0 to 12.6. The ownership of the company mostly from investment advisor which is around 44.22, while the lowest contribution for ownership is private equity, only 0.36. This can explain that mostly the ownership of the firms in this study was contributed from investment advisor which also known as a financial advisor, the person that make any recommendation for investment.

4.4. Regression Analysis

Regression analysis is basically used to measure the relationship between dependent and independent variables. From the regression below, the Hypothesis Testing for Individual, Joint Hypothesis Testing for overall, and the Goodness of Fit Test will be seen, but before we finalised the result, we have tested the four equations in first model using Likelihood and Hausman Test.

4.4.1. Likelihood Test

4.4.1.1. First Equation

Effects Test	Statistic	d.f.	Prob.
Period F	57.950031	(3,893)	0.0000
Period Chi-square	160.091249	3	0.0000

Table 4.4.1.1 Likelihood Test for First Equation

Here is the first equation has to be tested, which is the relationship between equity return or return on equity (ROE) and ESG. From the probability, we can say that the null hypothesis is rejected because the value of probability of Period F is 0.00% less than 10% significance level, so it means that we rejected OLS. After knowing this result, the regression will be tested using Hausman Test to verify whether it should be appropriate to use fixed or random effect or random analysis.

4.4.1.2. Second Equation

Effects Test	Statistic	d.f.	Prob.
Period F	3.676386	(3,1181)	0.0118
Period Chi-square	11.043046	3	0.0115

Table 4.4.1.2 Likelihood Test for Second Equation

Next is the second equation need to be tested, which is the relationship between return on asset (ROA) and ESG. The result showed that the probability for Period is 1.18%, which less than 10% of significance level, therefore we can reject the null hypothesis or in other words we reject the OLS. Consequently, we have to do next test which is Hausman Test.

4.4.1.3. Third Equation

ESG in Focus

Effects Test	Statistic	d.f.	Prob.
Period F	2.491694	(3,1181)	0.0587
Period Chi-square	7.495691	3	0.0577

Table 4.4.1.3 Likelihood Test for Third Equation

The third equation has been tested, which is the relationship between pretax margin (PTMR) and ESG. The result still same as the previous equation, OLS has been rejected due to the null hypothesis, not accepted, as the probability is less than 10% of significance level ($5.87\% < 10\%$). Therefore, the Hausman Test has to be tested on this regression to identify whether fixed or random effect will be used in this regression.

4.4.1.4. Fourth Equation

Effects Test	Statistic	d.f.	Prob.
Period F	1.863704	(3,1178)	0.1339
Period Chi-square	5.611032	3	0.1321

Table 4.4.1.4 Likelihood Test for Fourth Equation

The last equation need to be tested, which is the relationship between price to book ratio (PB) and ESG. Contrary to previous equations, the probability for Period F is 13.39%, which is more than 10% of significance level. We can conclude that this equation will be used OLS since the null hypothesis has been accepted and no need to be verified by using Hausmant Test. The data can only be pooled together and OLS employed.

4.4.2. Hausman Test

4.4.2.1. First Equation

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	173.850076	3	0.0000

Table 4.4.2.1 Hausman Test for First Equation

This is the result of Hausman Test for the first equation; the relationship between return on equity (ROE) and ESG. It showed that the probability is 0.00%, which is less than 10% of significance level, therefore the null hypothesis has been rejected. When this situation occurred, the regression most appropriate to use the fixed effect for period since we rejected the random effect.

4.4.2.2. Second Equation

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	11.029159	3	0.0116

Table 4.4.2.2 Hausman Test for Second Equation

For the second regression, the result of the relationship between return on assets (ROA) and ESG explained that the probability is less than 10% of significance level (1.16% < 10%). In conclusion, we rejected the null hypothesis which means we rejected random effect. Hence, we also used the fixed effect for period in this regression.

4.4.2.3. Third Equation

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	7.475082	3	0.0582

Table 4.4.2.3 Hausman Test for Third Equation

The last Hausman Test is between the pretax margin (PTMR) and ESG. The probability of this test is 5.82%, less than 10% of significance level. It means that, this test rejected the null hypothesis, directly rejected the random effect. In conclusion, the fixed effect for period will be used in regression analysis to see the effect of ESG towards on pretax margin.

In summary, for equation one to three, there will be used fixed effect method for period in regression analysis, while in fourth equation, there will be used Ordinary Least Square (OLS) method. This is for increasing the validity of the result.

4.4.3. Individual Testing (T-test)

First of all, the hypothesis for individual is:-

$$H_0 : \beta_i = 0$$

$$H_1 : \beta_i \neq 0$$

$$i = \text{ESG, LOG(SALES), LEVERAGE}$$

The individual testing is to see the individual effect the explanatory variables on the dependent variable. The significance level in this study is 10%. If the probability for T-stat is less than significant level, then the null hypothesis is rejected or vice versa.

4.4.3.1. First Model

The result for first equation; the relationship between return on equity and ESG as shown in Table 4.4.3.1 (a) It showed that all the probability of independent variables which are ESG, sales and leverage less than 10% of significance level. It means that all the null hypotheses has been rejected. Therefore, it is the significance or can affect the performance of the return on equity (ROE).

Variables	First Equation : ROE		
	Coefficient	t-stat (prob)	Hypothesis
Alpha (α)	0.185707	0.0003	-
ESG	0.190058	0.0596	Reject null hypothesis
LOG(SALES)	-0.013549	0.0954	Reject null hypothesis
LEVERAGE	-0.001789	0.0124	Reject null hypothesis

Table 4.4.3.1 (a) Regression Result for First Model

$$\begin{aligned}
 ROE_{it} &= 0.1857 + 0.19(ESG_{it}) - 0.0135 \log(SALES_{it}) \\
 &\quad - 0.0018LEVERAGE_{it} + \mu \dots \dots \dots (1a)
 \end{aligned}$$

The first equation above can be explained by:

- ESG
 In this research, the p-value for ESG is 0.0596 and the null hypothesis is rejected, which means the ESG significance of equity

ESG in Focus

return (ROE) at the 10 % significance level. If the ESG increases by one per cent, the equity return of the company will increase by 0.19 per cent.

- Sales

While the probability of sales is 0.0954. The null hypothesis is rejected at 10% of significance level, which explained that sales is negative significant with ROE. If the sales is decreased by one per cent, the profitability will increase by 0.0135 per cent.

- Leverage

The p-value of leverage in this research is 0.0124. It means the null hypothesis is rejected; therefore leverage is negative significant towards ROE at 10% significance level. It means that there has negative relationship between leverage and ROE, one per cent increase in leverage, 0.0018 per cent of ROE will decrease.

The second equation above can be explained by:

Variables	Second Equation : ROA		
	Coefficient	t-stat (prob)	Hypothesis
Alpha (α)	0.121698	0.0000	-
ESG	0.074062	0.0000	Reject null hypothesis
LOG(SALES)	-0.009044	0.0000	Reject null hypothesis
LEVERAGE	-0.000727	0.0000	Reject null hypothesis

Table 4.4.3.1 (b) Regression Result for First Model

$$\begin{aligned}
 ROA_{it} &= 0.1217 + 0.0741ESG_{it} - 0.009\log(SALES_{it}) \\
 &\quad - 0.0007LEVERAGE_{it} + \mu \dots \dots \dots (1b)
 \end{aligned}$$

ESG in Focus

- ESG

In this research, the probability (t-stat) for ESG is 0.0000 and the null hypothesis is rejected, which means the ESG significance of return on assets (ROA) at the 10 % significance level. If the ESG increases by one per cent, the return on assets (ROA) of the company will increase by 0.0741 per cent.

- Sales

While the probability of sales is 0.0000. The null hypothesis is rejected at 10% of significance level, which explained that sales is negative significant with ROE. If the sales is decreased by one per cent, the profitability will increase by 0.009 per cent.

- Leverage

The probability (t-stat) of leverage in this research is 0.0000. It means the null hypothesis is rejected; therefore leverage is negative significant towards ROA at 10% significance level. It means that there has negative relationship between leverage and ROA, one per cent increase in leverage, 0.0007 per cent of ROA will decrease.

Variables	Third Equation : PTMR		
	Coefficient	t-stat (prob)	Hypothesis

ESG in Focus

Alpha (α)	41.86070	0.0000	-
ESG	35.34619	0.0000	Reject null hypothesis
LOG(SALES)	-4.300148	0.0000	Reject null hypothesis
LEVERAGE	-0.129518	0.0008	Reject null hypothesis

Table 4.4.3.1 (c) Regression Result for First Model

$$\begin{aligned}
 PTMR_{it} &= 41.8607 + 3.3462ESG_{it} - 4.3001 \log(SALES_{it}) \\
 &\quad - 0.1295LEVERAGE_{it} + \mu \quad \dots \dots \dots (1c)
 \end{aligned}$$

The third equation above can be explained by:

- ESG

The probability (t-stat) for ESG is 0.0000 and the null hypothesis is rejected, which means the ESG significance of pretax margin (PTMR) at the 10 % significance level. If the ESG increases by one per cent, the pretax margin of the company will increase by 35.35 per cent.

- Sales

While the probability of sales is 0.0000. The null hypothesis is rejected at 10% of significance level, which explained that sales is negative significant with PTMR. If the sales is decreased by one per cent, the profitability will increase by 4.3 per cent.

- Leverage

ESG in Focus

The probability (t-stat) of leverage in this research is 0.0008. It means the null hypothesis is rejected; therefore leverage is negatively significant towards PTMR at 10% significance level. It means that there has negative relationship between leverage and PTMR, one per cent increase in leverage, 0.1295 per cent of PTMR will be decreasing.

Variables	Forth Equation : PB		
	Coefficient	t-stat (prob)	Hypothesis
Alpha (α)	8.547187	0.0000	-
ESG	5.989743	0.0004	Reject null hypothesis
LOG(SALES)	-0.958941	0.0000	Reject null hypothesis
LEVERAGE	0.027724	0.0179	Reject null hypothesis

Table 4.4.3.1 (d) Regression Result for First Model

$$PB_{it} = 8.5472 + 5.9897ESG_{it} - 0.9589 \log(SALES_{it}) - 0.0277LEVERAGE_{it} + \mu \dots \dots \dots (1d)$$

The fourth equation above can be explained by:

- ESG

In this research, the probability (t-stat) for ESG is 0.0004 and the null hypothesis is rejected, which means the ESG significance of price to book ratio (PB) at the 10 % significance level. If the ESG increases by one per cent, the price to book ratio (PB) of the company will increase by 5.99 per cent.

- Sales

While the probability of sales is 0.0000. The null hypothesis is rejected at 10% of significance level, which explained that sales is negative significant with PB. If the sales is decreased by one per cent, the profitability will increase by 0.96 per cent.

- Leverage

The probability (t-stat) of leverage in this research is 0.0179. It means the null hypothesis is rejected; therefore leverage is negative significant towards PB at 10% significance level. It means that there has negative relationship between leverage and PB, one per cent increase in leverage, 0.028 per cent of PB will be decreasing.

In conclusion, the result for this showed that there has positively significant between the performance of the companies; return on equity (ROE), return on assets (ROA), pretax margin (PTMR) and price to book ratio (PB) and environmental, social governance (ESG). It explained that ESG disclosure will influence the performance of the companies. This indicates that the ESG disclosure is a positive indicator for return which could be linked to the corporate governance. This result was supported from previous study such as Mercer (2009), Gompers et al (2003), Bebchuk and Cohen (2005) state that higher lever of ESG will lead higher of return of the firms. Furthermore, in Evans and Peiris (2010) also found that significant positive relationship between ESG disclosure and firm performances; return on assets and market to book value. This finding backup the stakeholder theory which is Corporate Social Performance (CSP) direct relationship for Corporate Financial Performance (CFP) in

Orlitzky et al (2003) and Margolis et al. (2007) study. In addition, it will increase the potential investors in considering to make an investment when the ESG disclosure is higher.

Leverage is negatively correlated to ROE, ROA, and PTMR except for PB, there has negative relationship. Firm's performance can be affected if the value of leverage is too high when the investors are afraid to invest in the firm, thus the market price of the firm will be decreased. It is proven by the negative relationship between price book ratio (PB) and leverage. However, sometime high level of leverage is good when the firms want to expand their business and well managed by the manager. Indirectly, it also will increase the return on equity.

The surprising result was found in this study when the sale has an indirect relationship with the firm's performance. This result might be affected due to the data was used were from different countries. Besides, the period of the data is from Year 2009 to 2012, there has recession occurred starting Year 2008 until 2009 and Malaysia and UK were affected⁶. In addition, most of the previous studies were not used sales in their research as explanatory variables. They used the total asset in measuring the size of the companies. This reason might be why the sales were negative relationship with firm performance.

4.4.3.2. Second Model

⁶ Further information about recession can visit this website : http://www.forbes.com/2009/01/14/global-recession-2009-oped-cx_nr_0115roubini.html . There has other countries affected by recession but in this study was focus only in Malaysia and UK.

Variables	Equation : ESG		
	Coefficient	t-stat (prob)	Hypothesis
Alpha (α)	0.555383	0.0969	-
PNSNFN	-0.138577	0.6901	Failed to reject the null hypothesis
GOV	0.031849	0.5292	Failed to reject the null hypothesis
INV	-0.004284	0.4140	Failed to reject the null hypothesis
PVTEQT	4.334201	0.9286	Failed to reject the null hypothesis
UNSD	0.057829	0.3841	Failed to reject the null hypothesis
HDFN	-0.227135	0.5168	Failed to reject the null hypothesis

Table 4.4.3.2 Regression Result for Second Model

$$ESG_i = \beta_0 + \beta_{1i}PNSNFN_i + \beta_{2i}GOV_i + \beta_{3i}INV_i + \beta_{4i}PVTEQT_i + \beta_{5i}UCSFD_i + \beta_{6i}HDFN_i + \beta_{7i}OTR_i + \mu \dots \dots \dots (2)$$

From the Table 4.4.3.2, we can say that the ownership has strongly not significant to ESG disclosure since the null hypothesis was failed to reject for all explanatory variables. Government, private equity and unclassified have a positive relationship with ESG, but not significant, while, pension fund, investment advisor and hedge fund have positive relationship but also not significant. For the study by Rees (2011), the

pension fund has negatively significant on environmental, social and governance (ESG) score which is in line with this study. In addition, Rees (2011) also found that government has a positive significant relationship with social and environmental score while insignificant positive impacts on governance. It might support this finding in this study since the test on ESG is not based on individual score but as overall score. However, based on the previous study mention that, this relationship still unclear and was debated by the researcher (Rees, 2011).

4.4.4. Joint or Overall Testing (F-test)

The test for overall explanatory power of regression is called an F - test. The basic is same with the T-test and the difference only for T-test is for individual Explanatory. The hypothesis to F-test is:-

$$H_0 : \beta_1 = 0$$

$$H_1 : \beta_2 \neq 0$$

For the first model, the probability for all equations in Table 4.4.4 (a) are less than significant level which is 10%. It means the null hypotheses are rejected and it is strongly significant. In other words, it explained that all the explanatory variables; ESG, sales and leverage are strongly significant or influence on company performance; ROE, ROA, PTMR and PB.

Contrary in the second model, the probability is 53.67% as shown in Table 4.4.4 (b) which higher than 10% of significance level. Thus, the null hypothesis is failed to be rejected and it shows that the explanatory variables; PNSNFN, GOV, INV,

ESG in Focus

PVTEQT, UNSD, HDFN will not give any impact towards ESG. It is strongly not significant on ESG.

	First Equation	Second Equation	Third Equation	Forth Equation
Number of obs.	900	1188	1188	1185
F	30.60041	19.64273	20.22344	19.81391
Prob > F	0.000000	0.000000	0.000000	0.000000
R - squared	0.170539	0.090739	0.093171	0.047920
Adj R - squared	0.164966	0.086119	0.088564	0.045501

Table 4.4.4 (a) F-Test and R² Result for First Model

	Equation
Number of obs.	9
F	0.615834
Prob > F	-0.536666
R - squared	0.534346
Adj R - squared	0.766444

Table 4.4.4 (b) F-Test and R² Result for Second Model

4.4.5. Goodness of Fit Test (R²)

To test the goodness of fit, in other words, determine the variable whether the dependent variable can be explained by explanatory variables or not, we look at the R² or adjusted R².

In the first model in Table 4.4.4 (a), for the first equation, there is 17.05% of dependent variables, equity return (ROE) explained by the explanatory variables, while the second equation is around 9.07% of return on assets (ROA) is explained by the independent variables. The next equation is 9.32% of pretax margin (PTMR) can be explained by ESG, sales and leverage. For the last equation, 4.79% of price to book ratio (PB) is explained

by the explanatory variables. The value of R^2 of these models is low because there has other factors can be influenced the performance of the company such as macro or micro economics factor.

For the second model as shown in Table 4.4.4 (b), even the value of R^2 is 53.43 which can be categorised as high, unfortunately the T-test and F-test is not significant. It means that, the explanatory variables cannot be used to explain the dependent variable, ESG if anything changing in the explanatory variables.

4.5. Summary

To summarize, the hypotheses for this study:

Hypothesis 1(a):

H_0 : There is no significant link between return on equity and environmental, social, governance (ESG)

H_1 : There is a significant link between return on equity and environmental, social, governance (ESG)

The alternative hypothesis was accepted, it means that ESG will positively influence or give impact on the return on equity (ROE).

Hypothesis 1(b):

H_0 : There is no significant link between return on asset and environmental, social, governance (ESG)

H_1 : There is a significant link between return on asset and environmental, social, governance (ESG)

The alternative hypothesis was accepted, it means that ESG will positively influence or give impact on the return on assets (ROA).

Hypothesis 1(c):

H_0 : There is no significant link between pretax margin and environmental, social, governance (ESG)

H_1 : There is a significant link between pretax margin and environmental, social, governance (ESG)

The alternative hypothesis was accepted, it means that ESG will positively influence or give impact on the pretax margin (PTMR).

Hypothesis 1(d):

H_0 : There is no significant link between price to book ratio and environmental, social, governance (ESG)

H_1 : There is a significant link between price to book ratio and environmental, social, governance (ESG)

The alternative hypothesis was accepted, it means that ESG will positively influence or give impact on the price to book ratio (PB).

Hypothesis 2 (a):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the pension fund

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the pension fund

The null hypothesis was accepted, it means that the pension fund in ownership will not give impact or influence in ESG.

Hypothesis 2 (b):

H_0 : There is no link relationship between environmental, social, governance (ESG) and the government

H_1 : There is a significant link between environmental, social, governance (ESG) and the government

The null hypothesis was accepted, it means that the government in ownership will not give impact or influence in ESG.

Hypothesis 2 (c):

H_0 : There is no significant link between environmental, social, governance (ESG) and the investment advisor

H_1 : There is a significant link between environmental, social, governance (ESG) and the investment advisor

The null hypothesis was accepted, it means that the investment advisor in ownership will not give impact or influence in ESG.

Hypothesis 2 (d):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the private equity

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the private equity

The null hypothesis was accepted, it means that the private equity in ownership will not give impact or influence in ESG.

Hypothesis 2 (e):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and unclassified

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the classified

The null hypothesis was accepted, it means that the classified in ownership will not give impact or influence in ESG.

Hypothesis 2 (f):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the hedge fund

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the hedge fund

The null hypothesis was accepted, it means that the hedge fund in ownership will not give impact or influence in ESG.

Hypothesis 2 (g):

H_0 : There is no significant relationship between environmental, social, governance (ESG) and the others

H_1 : There is a significant relationship between environmental, social, governance (ESG) and the others

The null hypothesis was accepted, it means that the others in ownership will not give impact or influence in ESG.

The hypotheses 1 (a) to (d) are to answer the first research question which is *“The performance of a company that declared in the annual report, are they subjective with changing of ESG, while the sales and leverage remain the same?”*, is achieved when the ESG disclosure positively significant on firms performance. While, the hypotheses 2 (a) to 2 (g) to answer the second research question which is, *“Is there any impact on environmental, social, governance (ESG) if there any changes in component of an ownership?”*, is answered when the findings show the ownership of the firms will not give any impact or strongly not significant to ESG disclosure..

CONCLUSIONS AND RECOMMENDATION

5. Introduction

5.1. Conclusions

This study seeks to critically evaluate whether the environmental, social governance (ESG) performance plays the important role in the profitability of the institution or not. Furthermore, this paper also wants to investigate the relationship between the environmental, social, score (ESG) performance and the ownership of the company. In order to achieve these objectives, two models have already tested based on Bloomberg Terminal data from five countries which are UK, France, Germany, China and Malaysia in the period of four years starting from Year 2009 to 2012. Indirectly, this study will able to answer the research questions for this study, which are, firstly, *“The performance of a company that declared in the annual report, are they subjective with changing of ESG, while the sales and leverage remain the same?”*, and secondly, *“Is there any impact on environmental, social, governance (ESG) if there any changes in component of an ownership?”*.

The result of the findings from this study is the environmental, social, governance (ESG) disclosure has positively significant on firm performance; return on equity (ROE), return on asset (ROA), pretax margin (PTMR) and price to book ratio (PB) in the first model. This finding in line with the previous study, Mercer (2009), Gompers et al (2003), Bebchuk and Cohen (2005) state that higher lever of ESG will lead higher of return of the firms. Furthermore, in Evans and Peiris (2010) also found that significant positive relationship between ESG disclosure and firm performances; return on assets and market to book value. This finding backup the stakeholder theory which is Corporate Social Performance (CSP) direct relationship for Corporate Financial Performance (CFP) in Orlitzky et al (2003) and Margolis et al.

(2007) study. In addition, it will increase the potential investors in considering to make an investment when the ESG disclosure is higher. The first research question and aim were achieved from the first finding. The other two independent variables which are sales and leverage also significant with the firm's performance.

Unfortunately, for the second finding, they were found a positive relationship between government (GOV), private equity (PVTEQT) and unclassified with the environmental, social, governance disclosure, however it is not significant. The other ownership of firms such as the pension fund (PNSN), hedge fund (HDFN) and investment advisor (INV) were found to have a negative relationship with ESG disclosure and also not significant. There is no evidence support was found that supports the findings of this study.

In a nutshell, from this study, we can say that firm performance can be influenced by the ESG disclosure. The higher ESG disclosure of the firm, the higher their firm's performance. It might affect from the investors seeks additional information about the company before they make any investment decision making. It will attract the investors when the there any disclose information regarding their environmental, social, governance. This is answered the first research question, yes the ESG disclosure will affect the firm performance. In another model, the finding was shown that the ownership of the company is not significant on the ESG disclosure. This finding is answered the second research question for this study, no, the ownership will not affect the ESG disclosure.

5.2. Recommendations

There has a lot improvement can make it done in future research. For the researcher, they can improvise this study by using the same data and method, but different resources such as, Bloomberg, FTSE4Good, Asset4 and KLD. It will increase the validity and reliability of the findings. Besides, we can see whether the result will come out similar or not when using the different sources, then we can conclude that either different sources will influence the findings or not.

Furthermore, the researcher can also test the data individually based on the country because the country might be faced different issue in the certain years. It also might impact the findings to be different with the previous research. In addition, the future researcher may be can add up the related variables such as Return on Equity, the size of the company using total assets as controller in the second model. Moreover, adding up the period of the study for second model might have different results because this study only focused on Year 2012 for the second model.. So, the hypothesis 2 (a) to (g) can reject the null hypothesis.

For the firms, they should increase their environmental, social, governance disclosure because it is easier the potential investors or firms to make decision making before they invested since this study found a positive significant relationship between ESG disclosure and firm performance.

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APPENDICES

List of companies

ESG in Focus

1	AAL LN	43	IMT LN	85	STAN LN
2	ABF LN	44	ITRK LN	86	SVT LN
3	ADM LN	45	ITV LN	87	TATE LN
4	ADN LN	46	JMAT LN	88	TLW LN
5	AGK LN	47	KGF LN	89	TPK LN
6	AHT LN	48	LAND LN	90	TSCO LN
7	AMEC LN	49	LGEM LN	91	TT/ LN
8	ANTO LN	50	LLOY LN	92	ULVR LN
9	ARM LN	51	LSE LN	93	UU/ LN
10	AV/ LN	52	MGGT LN	94	VOD LN
11	AZN LN	53	MKS LN	95	WEIR LN
12	BA/ LN	54	MNDI LN	96	WMH LN
13	BAB LN	55	MRO LN	97	WOS LN
14	BARC LN	56	MRW LN	98	WPP LN
15	BATS LN	57	NG/ LN	99	WTB LN
16	BG/ LN	58	NXT LN	100	ADS GY
17	BLND LN	59	OML LN	101	ALV GY
18	BLT LN	60	PFC LN	102	BAS GY
19	BNZL LN	61	PRU LN	103	BAYN GY
20	BP/ LN	62	PSN LN	104	BEI GY
21	BRBY LN	63	PERSON LN	105	BMW GY
22	BSY LN	64	RB/ LN	106	CBK GY
23	BT/A LN	65	RBS LN	107	CON GY
24	CCL LN	66	RDSA LN	108	DAI GY
25	CNA LN	67	RDSB LN	109	DB1 GY
26	CPG LN	68	REL LN	110	DBK GY
27	CPI LN	69	REX LN	111	DPW GY
28	CRH LN	70	RIO LN	112	DTE GY
29	DGE LN	71	RR/ LN	113	EOAN GY
30	EXPN LN	72	RRS LN	114	FME GY
31	EZJ LN	73	RSA LN	115	FRE GY
32	FRES LN	74	RSL LN	116	HEI GY
33	GFS LN	75	SAB LN	117	HEN3 GY
34	GKN LN	76	SBRY LN	118	IFX GY
35	GLEN LN	77	SDR LN	119	LHA GY
36	GSK LN	78	SGE LN	120	LIN GY
37	HL/ LN	79	SHP LN	121	LXS GY
38	HMSO LN	80	SL/ LN	122	MRK GY
39	HSBA LN	81	SMIN LN	123	MUV2 GY
40	IAG LN	82	SN/ LN	124	RWE GY
41	IHG LN	83	SPD LN	125	SAP GY
42	IMI LN	84	SSE LN	126	SDF GY
127	SIE GY				
128	TKA GY				
129	VOW3 GY				
130	AC FP				

ESG in Focus

131 ACA FP
132 AI FP
133 AIR FP
134 ALO FP
135 ALU FP
136 BN FP
137 BNP FP
138 CA FP
139 CAP FP
140 CS FP
141 DG FP
142 EDF FP
143 EI FP
144 EN FP
145 FP FP
146 GLE FP
147 GSZ FP
148 GTO NA
149 KER FP
150 LG FP
151 LR FP
152 MC FP
153 ML FP
154 MT NA
155 OR FP
156 ORA FP
157 PUB FP
158 RI FP
159 RNO FP
160 SAF FP
161 SAN FP
162 SGO FP
163 SOLB BB
164 SU FP
165 TEC FP
166 UL NA
167 VIE FP
168 VIV FP
169 VK FP
600000
170 CH

	600004		600050		
171	CH	196	CH	221	CH
	600005		600055		600113
172	CH	197	CH	222	CH
		198	600056	223	600115

ESG in Focus

		CH		CH
	600007		600058	600116
173	CH	199	CH	224 CH
	600008		600059	600118
174	CH	200	CH	225 CH
	600009		600060	600123
175	CH	201	CH	226 CH
	600010		600062	600125
176	CH	202	CH	227 CH
	600011		600063	600132
177	CH	203	CH	228 CH
	600012		600066	600138
178	CH	204	CH	229 CH
	600015		600068	600141
179	CH	205	CH	230 CH
	600016		600071	600143
180	CH	206	CH	231 CH
	600017		600072	600150
181	CH	207	CH	232 CH
	600018		600079	600151
182	CH	208	CH	233 CH
	600019		600085	600153
183	CH	209	CH	234 CH
	600022		600086	600157
184	CH	210	CH	235 CH
	600026		600089	600158
185	CH	211	CH	236 CH
	600027		600094	600160
186	CH	212	CH	237 CH
	600028		600096	600161
187	CH	213	CH	238 CH
	600029		600098	600163
188	CH	214	CH	239 CH
	600030		600100	600166
189	CH	215	CH	240 CH
	600031		600104	600169
190	CH	216	CH	241 CH
	600033		600108	600170
191	CH	217	CH	242 CH
	600036		600109	600171
192	CH	218	CH	243 CH
	600037		600110	600176
193	CH	219	CH	244 CH
	600038		600111	600177
194	CH	220	CH	245 CH
	600048		600112	
	600183		600261	
246	CH	271	CH	297 PEP MK
	600187		600266	
247	CH	272	CH	298 PETD MK
248	600188	273	600267	299 PTG MK

ESG in Focus

	CH		CH		
	600190		600269		
249	CH	274	CH	300	RHBC MK
	600193		600270		
250	CH	275	CH	301	ROTH MK
	600195		600271		
251	CH	276	CH	302	SIME MK
	600196		600276		
252	CH	277	CH	303	T MK
	600197		600277		
253	CH	278	CH	304	TNB MK
	600199		600282		UMWH
254	CH	279	CH	305	MK
	600206		600288		
255	CH	280	CH	306	YTL MK
	600208		600290		
256	CH	281	CH		
	600216		600298		
257	CH	282	CH		
	600218		600300		
258	CH	283	CH		
	600219				
259	CH	284	AMM MK		
	600221		AXIATA		
260	CH	285	MK		
	600227				
261	CH	286	CIMB MK		
	600236				
262	CH	287	DIGI MK		
	600243				
263	CH	288	GENM MK		
	600246				
264	CH	289	GENT MK		
	600251				
265	CH	290	HLBK MK		
	600252				
266	CH	291	IOI MK		
	600255				
267	CH	292	KLK MK		
	600256		MAXIS		
268	CH	293	MK		
	600259				
269	CH	294	MAY MK		
	600260				
270	CH	295	MISC MK		
		296	PBK MK		

Likelihood Test

Redundant Fixed Effects Tests

Equation: EQ1ROE

Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	57.950031	(3,893)	0.0000
Period Chi-square	160.091249	3	0.0000

Period fixed effects test equation:

Dependent Variable: ROE

Method: Panel Least Squares

Date: 04/24/14 Time: 23:04

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 900

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.181572	0.055947	3.245456	0.0012
ESG	0.165756	0.109856	1.508848	0.1317
LOG(SALES)	-0.012157	0.008849	-1.373915	0.1698
LEVERAGE	-0.001749	0.000776	-2.252454	0.0245

R-squared	0.009058	Mean dependent var	0.095617
Adjusted R-squared	0.005741	S.D. dependent var	0.368276
S.E. of regression	0.367217	Akaike info criterion	0.838708
Sum squared resid	120.8243	Schwarz criterion	0.860052
Log likelihood	-373.4188	Hannan-Quinn criter.	0.846862
F-statistic	2.730188	Durbin-Watson stat	2.146652
Prob(F-statistic)	0.042859		

Redundant Fixed Effects Tests

Equation: EQ1ROA

Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	3.676386	(3,1181)	0.0118
Period Chi-square	11.043046	3	0.0115

Period fixed effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 04/24/14 Time: 23:07

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 1188

ESG in Focus

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.121883	0.007822	15.58284	0.0000
ESG	0.074221	0.015820	4.691600	0.0000
LOG(SALES)	-0.009045	0.001262	-7.168128	0.0000
LEVERAGE	-0.000736	0.000110	-6.707141	0.0000
R-squared	0.082247	Mean dependent var		0.055260
Adjusted R-squared	0.079922	S.D. dependent var		0.062036
S.E. of regression	0.059505	Akaike info criterion		-2.802151
Sum squared resid	4.192361	Schwarz criterion		-2.785047
Log likelihood	1668.478	Hannan-Quinn criter.		-2.795705
F-statistic	35.36922	Durbin-Watson stat		0.454874
Prob(F-statistic)	0.000000			

Redundant Fixed Effects Tests

Equation: EQ1PTMR

Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	2.491694	(3,1181)	0.0587
Period Chi-square	7.495691	3	0.0577

Period fixed effects test equation:

Dependent Variable: PTMR

Method: Panel Least Squares

Date: 04/24/14 Time: 23:11

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 1188

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.93655	2.751444	15.24165	0.0000
ESG	35.33438	5.555610	6.360126	0.0000
LOG(SALES)	-4.300160	0.443194	-9.702651	0.0000
LEVERAGE	-0.132423	0.038552	-3.434939	0.0006
R-squared	0.087431	Mean dependent var		15.65116
Adjusted R-squared	0.085119	S.D. dependent var		21.85761
S.E. of regression	20.90667	Akaike info criterion		8.921375
Sum squared resid	517513.3	Schwarz criterion		8.938480
Log likelihood	-5295.297	Hannan-Quinn criter.		8.927821
F-statistic	37.81227	Durbin-Watson stat		0.756308
Prob(F-statistic)	0.000000			

ESG in Focus

Redundant Fixed Effects Tests

Equation: EQ1PB

Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	1.863704	(3,1178)	0.1339
Period Chi-square	5.611032	3	0.1321

Period fixed effects test equation:

Dependent Variable: PB

Method: Panel Least Squares

Date: 04/24/14 Time: 23:13

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 1185

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.547187	0.837482	10.20582	0.0000
ESG	5.989743	1.693311	3.537296	0.0004
LOG(SALES)	-0.958941	0.135255	-7.089866	0.0000
LEVERAGE	0.027724	0.011695	2.370608	0.0179
R-squared	0.047920	Mean dependent var		3.483041
Adjusted R-squared	0.045501	S.D. dependent var		6.488749
S.E. of regression	6.339407	Akaike info criterion		6.534817
Sum squared resid	47462.13	Schwarz criterion		6.551957
Log likelihood	-3867.879	Hannan-Quinn criter.		6.541278
F-statistic	19.81391	Durbin-Watson stat		0.898775
Prob(F-statistic)	0.000000			

Hausman Test

Correlated Random Effects - Hausman Test

Equation: EQ1ROE

Test period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	173.850076	3	0.0000

Period random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ESG	0.190058	0.165756	0.000018	0.0000
LOG(SALES)	-0.013549	-0.012157	0.000000	0.0000
LEVERAGE	-0.001789	-0.001749	0.000000	0.5140

Period random effects test equation:

ESG in Focus

Dependent Variable: ROE
 Method: Panel Least Squares
 Date: 04/24/14 Time: 23:05
 Sample: 2009 2012
 Periods included: 4
 Cross-sections included: 306
 Total panel (unbalanced) observations: 900

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.185707	0.051388	3.613836	0.0003
ESG	0.190058	0.100768	1.886092	0.0596
LOG(SALES)	-0.013549	0.008115	-1.669531	0.0954
LEVERAGE	-0.001789	0.000714	-2.504957	0.0124

Effects Specification

Period fixed (dummy variables)

R-squared	0.170539	Mean dependent var	0.095617
Adjusted R-squared	0.164966	S.D. dependent var	0.368276
S.E. of regression	0.336531	Akaike info criterion	0.667496
Sum squared resid	101.1352	Schwarz criterion	0.704848
Log likelihood	-293.3732	Hannan-Quinn criter.	0.681765
F-statistic	30.60041	Durbin-Watson stat	1.695628
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test

Equation: EQ1ROA

Test period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	11.029159	3	0.0116

Period random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ESG	0.074062	0.074221	0.000001	0.8241
LOG(SALES)	-0.009044	-0.009045	0.000000	0.9813
LEVERAGE	-0.000727	-0.000736	0.000000	0.0034

Period random effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 04/24/14 Time: 23:08

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 1188

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.121698	0.007797	15.60839	0.0000
ESG	0.074062	0.015783	4.692588	0.0000

ESG in Focus

LOG(SALES)	-0.009044	0.001258	-7.191550	0.0000
LEVERAGE	-0.000727	0.000109	-6.640159	0.0000

Effects Specification

Period fixed (dummy variables)

R-squared	0.090739	Mean dependent var	0.055260
Adjusted R-squared	0.086119	S.D. dependent var	0.062036
S.E. of regression	0.059304	Akaike info criterion	-2.806396
Sum squared resid	4.153571	Schwarz criterion	-2.776464
Log likelihood	1673.999	Hannan-Quinn criter.	-2.795115
F-statistic	19.64273	Durbin-Watson stat	0.430427

Correlated Random Effects - Hausman Test

Equation: EQ1PTMR

Test period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	7.475082	3	0.0582

** WARNING: estimated period random effects variance is zero.

Period random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
ESG	35.346189	35.334380	0.064733	0.9630
LOG(SALES)	-4.300148	-4.300160	0.000035	0.9984
LEVERAGE	-0.129518	-0.132423	0.000001	0.0109

Period random effects test equation:

Dependent Variable: PTMR

Method: Panel Least Squares

Date: 04/24/14 Time: 23:11

Sample: 2009 2012

Periods included: 4

Cross-sections included: 306

Total panel (unbalanced) observations: 1188

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.86070	2.746829	15.23965	0.0000
ESG	35.34619	5.550975	6.367565	0.0000
LOG(SALES)	-4.300148	0.442398	-9.720085	0.0000
LEVERAGE	-0.129518	0.038496	-3.364455	0.0008

Effects Specification

Period fixed (dummy variables)

R-squared	0.093171	Mean dependent var	15.65116
Adjusted R-squared	0.088564	S.D. dependent var	21.85761
S.E. of regression	20.86727	Akaike info criterion	8.920116
Sum squared resid	514258.4	Schwarz criterion	8.950049
Log likelihood	-5291.549	Hannan-Quinn criter.	8.931397

ESG in Focus

F-statistic	20.22344	Durbin-Watson stat	0.743516
Prob(F-statistic)	0.000000		

Descriptive Statistics for First Model

	ESG	ROE	ROA	PTMR	PB	SALES	LEVERAGE
Mean	0.329796	0.098944	0.055058	15.85658	3.497902	14935.99	24.64759
Median	0.301653	0.065034	0.044082	10.68120	2.188550	3244.632	23.23275
Maximum	0.723140	3.148787	0.529492	277.1499	157.3917	294786.4	73.54960
Minimum	0.090909	-0.951689	-0.121178	-123.3111	0.272100	6.888200	0.000000
Std. Dev.	0.159462	0.367274	0.061600	22.00396	6.412314	32414.47	15.79870
Skewness	0.303019	1.523403	2.459942	3.854847	14.07843	5.002041	0.475564
Kurtosis	1.937398	10.10711	15.11591	41.81460	295.6974	35.03305	2.847912
Jarque-Bera	74.13439	2282.140	8678.273	79801.39	4395283.	57436.08	47.31658
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	392.1272	90.63298	67.06029	19392.60	4267.441	18281649	30168.66
Sum Sq. Dev.	30.20868	123.4245	4.617984	591661.2	50122.56	1.29E+12	305259.5
Observations	1189	916	1218	1223	1220	1224	1224

Regression Analysis for First Model

Dependent Variable: ROE
 Method: Panel Least Squares
 Date: 04/24/14 Time: 23:05
 Sample: 2009 2012
 Periods included: 4
 Cross-sections included: 306
 Total panel (unbalanced) observations: 900

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.185707	0.051388	3.613836	0.0003
ESG	0.190058	0.100768	1.886092	0.0596
LOG(SALES)	-0.013549	0.008115	-1.669531	0.0954
LEVERAGE	-0.001789	0.000714	-2.504957	0.0124

Effects Specification

Period fixed (dummy variables)

R-squared	0.170539	Mean dependent var	0.095617
Adjusted R-squared	0.164966	S.D. dependent var	0.368276
S.E. of regression	0.336531	Akaike info criterion	0.667496
Sum squared resid	101.1352	Schwarz criterion	0.704848
Log likelihood	-293.3732	Hannan-Quinn criter.	0.681765
F-statistic	30.60041	Durbin-Watson stat	1.695628
Prob(F-statistic)	0.000000		

ESG in Focus

Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 04/24/14 Time: 23:09
 Sample: 2009 2012
 Periods included: 4
 Cross-sections included: 306
 Total panel (unbalanced) observations: 1188

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.121698	0.007797	15.60839	0.0000
ESG	0.074062	0.015783	4.692588	0.0000
LOG(SALES)	-0.009044	0.001258	-7.191550	0.0000
LEVERAGE	-0.000727	0.000109	-6.640159	0.0000

Effects Specification

Period fixed (dummy variables)

R-squared	0.090739	Mean dependent var	0.055260
Adjusted R-squared	0.086119	S.D. dependent var	0.062036
S.E. of regression	0.059304	Akaike info criterion	-2.806396
Sum squared resid	4.153571	Schwarz criterion	-2.776464
Log likelihood	1673.999	Hannan-Quinn criter.	-2.795115
F-statistic	19.64273	Durbin-Watson stat	0.430427
Prob(F-statistic)	0.000000		

Dependent Variable: PTMR
 Method: Panel Least Squares
 Date: 04/24/14 Time: 23:12
 Sample: 2009 2012
 Periods included: 4
 Cross-sections included: 306
 Total panel (unbalanced) observations: 1188

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	41.86070	2.746829	15.23965	0.0000
ESG	35.34619	5.550975	6.367565	0.0000
LOG(SALES)	-4.300148	0.442398	-9.720085	0.0000
LEVERAGE	-0.129518	0.038496	-3.364455	0.0008

Effects Specification

Period fixed (dummy variables)

R-squared	0.093171	Mean dependent var	15.65116
Adjusted R-squared	0.088564	S.D. dependent var	21.85761
S.E. of regression	20.86727	Akaike info criterion	8.920116
Sum squared resid	514258.4	Schwarz criterion	8.950049
Log likelihood	-5291.549	Hannan-Quinn criter.	8.931397
F-statistic	20.22344	Durbin-Watson stat	0.743516

ESG in Focus

Dependent Variable: PB
 Method: Panel Least Squares
 Date: 04/24/14 Time: 23:14
 Sample: 2009 2012
 Periods included: 4
 Cross-sections included: 306
 Total panel (unbalanced) observations: 1185

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.547187	0.837482	10.20582	0.0000
ESG	5.989743	1.693311	3.537296	0.0004
LOG(SALES)	-0.958941	0.135255	-7.089866	0.0000
LEVERAGE	0.027724	0.011695	2.370608	0.0179
R-squared	0.047920	Mean dependent var		3.483041
Adjusted R-squared	0.045501	S.D. dependent var		6.488749
S.E. of regression	6.339407	Akaike info criterion		6.534817
Sum squared resid	47462.13	Schwarz criterion		6.551957
Log likelihood	-3867.879	Hannan-Quinn criter.		6.541278
F-statistic	19.81391	Durbin-Watson stat		0.898775
Prob(F-statistic)	0.000000			

Descriptive Statistics for Second Model

Date: 04/26/14
 Time: 20:21
 Sample: 1 306

	ESG	PNSNFN	GOV	INV	PVTEQT
Mean	0.340175	2.321300	7.374637	44.21823	0.360878
Median	0.301653	2.232000	4.854000	47.74300	0.006000
Maximum	0.714286	12.46300	76.28600	99.39100	5.403000
Minimum	0.099174	0.000000	0.054000	0.016000	0.001000
Std. Dev.	0.151853	2.036461	9.651897	32.05483	1.172750
Skewness	0.418044	2.468047	3.670078	-0.032880	3.461055
Kurtosis	1.909474	12.54142	20.01424	1.407122	13.84719
Jarque-Bera	23.44629	528.9335	3390.701	28.27514	338.0532
Probability	0.000008	0.000000	0.000000	0.000001	0.000000
Sum	101.3720	255.3430	1747.789	11806.27	17.68300
Sum Sq. Dev.	6.848625	452.0418	21985.55	273318.2	66.01647
Observations	298	110	237	267	49

ESG in Focus

Regression Analysis for Second Model

Dependent Variable: ESG

Method: Least Squares

Date: 04/26/14 Time: 20:25

Sample (adjusted): 101 152

Included observations: 9 after adjustments

ESG=C(1)+C(2)*PNSNFN+C(3)*GOV+C(4)* INV+C(5)*PVTEQT+C(6)
UNCLASSIFIED+C(7) HDFN

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.555383	0.186789	2.973314	0.0969
C(2)	-0.138577	0.300611	-0.460984	0.6901
C(3)	0.031849	0.042198	0.754759	0.5292
C(4)	-0.004284	0.004189	-1.022810	0.4140
C(5)	4.334201	42.82770	0.101201	0.9286
C(6)	0.057829	0.052301	1.105712	0.3841
C(7)	-0.227135	0.290973	-0.780604	0.5168
R-squared	0.615834	Mean dependent var		0.533525
Adjusted R-squared	-0.536666	S.D. dependent var		0.144022
S.E. of regression	0.178533	Akaike info criterion		-0.556603
Sum squared resid	0.063748	Schwarz criterion		-0.403206
Log likelihood	9.504714	Hannan-Quinn criter.		-0.887633
F-statistic	0.534346	Durbin-Watson stat		3.116192
Prob(F-statistic)	0.766444			